Solar Energy Technical Training Directory

George Corcoleotes
Katherine Kramer
Kevin O'Connor

Solar Energy Research Institute
June 1979

Prepared for the
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Preface

This Directory was prepared as part of Task #4228, Vocational Training Programs, of the Academic Programs Branch of the Solar Energy Research Institute (SERI). The report reflects the current status of available solar energy educational offerings in the technical training area. The completeness of the Directory reflects the most thorough effort to gather national information on solar educational courses, programs and curricula.

Approved for:
Solar Energy Research Institute

George Warfield
Director for
Technology Dissemination

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Introduction
The Solar Energy Technical Training Directory is prepared by the Solar Energy Research Institute (SERI) as a subset of the first edition of the National Solar Energy Education Directory. This technical training directory is intended to be a quick reference for students, counselors, researchers, and others having an interest in solar technical training programs.

Most institutions currently reporting technical training programs are vocational-technical schools and community or junior colleges. Information was gathered from a 1978 national survey of post-secondary institutions. Only those institutions which indicated offering solar technical training activities are included in the Solar Energy Technical Training Directory.

All survey information is maintained in the computerized Education Data Base produced by SERI's Academic and International Programs and Information Systems Divisions in cooperation with the Office of U.S. Congressman George E. Brown, Jr., and the Congressional Solar Coalition. The Education Data Base is one of many data bases being developed for the Solar Energy Information Data Bank, mandated by Congress to provide solar information to Government, the scientific and educational communities, and the private sector. SERI is leading the development of the Solar Energy Information Data Bank on behalf of the U.S. Department of Energy.

Note to Users
Secondary sources of information used in this report are indicated by an asterisk (*) in the directory text. The list of institutions to which the surveys were addressed was obtained from the National Center for Education Statistics. Revisions or additions to be included in future editions of this publication may be addressed to Academic Programs Branch, Attn: George Corcoleotes, Solar Energy Research Institute, 1536 Cole Blvd., Golden CO 80401. Telephone (303) 231-1831
Numbers in parentheses to the right of institution names are for identification and should be used when submitting revisions or additions.

Directory Organization
The Directory lists institutions alphabetically by state. Each listing includes an institution address and telephone number, solar programs or curricula offered and detailed solar course information. An alphabetical index of institutions appears at the back of the Directory.

ARIZONA

Yavapai College  [1079]
Prescott, Arizona 86301
(602) 445-7300

Programs and Curricula
Solar Energy Technology
Contact: Minkler, L./ Beverly, G./ Strom, L.
(602) 445-7300

Students Taking or Completing Offering:
Do-it-yourself Homeowner, Installer-Residential (Solar Systems)

Solar Related Courses

Here Comes the Sun
Instructor: Minkler, Lyle
(602) 445-5264
Course Number: PAS100
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 15
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 28

Methane, Wind-Electricity, Wood-Alternate Energy
Instructor: Beverly, Gary
(602) 445-7300
Course Number: PHS109
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Electric Generation, Small Scale
Number of Times Taught: 4
Average Enrollment: 14

Solar Cookers
Instructor: Minkler, Lyle
(602) 445-5264
Course Number: PHS105
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Solar Collector Evaluation/Design

Solar Greenhouse
Instructor: Beverly, Gary
(602) 445-7300
Course Number: PHS107
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Systems Design; Space Heating
Number of Times Taught: 5
Average Enrollment: 16

Solar Heating, Air and Water Systems
Instructor: Minkler, Lyle
(602) 445-5264
Course Number: PHS101
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Appropriate Technology; Energy Storage; Solar System Components; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 15

Solar Heating, Passive and Hybrid Systems
Instructor: Frerking, Mike
Course Number: PHS102
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 9

Solar Heating, Retrofit Systems
Instructor: Minkler, Lyle
(602) 445-7300
Course Number: PHS104
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating

Solar Hot Water
Instructor: Beverly, Gary
(602) 445-7300
Course Number: PHS103
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 4

Solar Laboratory 121
Instructor: Minkler, Lyle
(602) 445-7300
Course Number: PHS121
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Duration: 6 Weeks, 4.5 hrs per week
Contact Hours: 27
Classroom: 6
Laboratory: 21
Topics Covered Extensively: Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 25
### Solar Laboratory 122
- **Instructor:** Minkler, Lyle
- **Course Number:** PHS122
- **Department:** Science
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 1
- **Duration:** 6 Weeks, 4.5 hrs per week
- **Contact Hours:** 27
- **Classroom:** 6
- **Laboratory:** 21

**Topics Covered Extensively:** Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

**Number of Times Taught:** 1
**Average Enrollment:** 25

### Solar Laboratory 123
- **Instructor:** Minkler, Lyle
- **Course Number:** PHS123
- **Department:** Science
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 1
- **Duration:** 6 Weeks, 4.5 hrs per week
- **Contact Hours:** 27
- **Classroom:** 6
- **Laboratory:** 21

**Topics Covered Extensively:** Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

**Number of Times Taught:** 1
**Average Enrollment:** 25

### Solar Laboratory 124
- **Instructor:** Minkler, Lyle
- **Course Number:** PHS124
- **Department:** Science
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 1
- **Duration:** 6 Weeks, 4.5 hrs per week
- **Contact Hours:** 27
- **Classroom:** 6
- **Laboratory:** 21

**Topics Covered Extensively:** Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

**Number of Times Taught:** 1
**Average Enrollment:** 25

### Solar Laboratory 125
- **Instructor:** Minkler, Lyle
- **Course Number:** PHS125
- **Department:** Science
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 1
- **Duration:** 6 Weeks, 4.5 hrs per week
- **Contact Hours:** 27
- **Classroom:** 6
- **Laboratory:** 21

**Topics Covered Extensively:** Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

**Number of Times Taught:** 1
**Average Enrollment:** 25
Solar Technology II Lab
Instructor: Benson, C.M.
Course Number: 50201
Department: Applied Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Elect1 Generation, Central; Elect1 Generation, Small Scale; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

Solar Technology III
Instructor: Benson, C.M.
Course Number: 58401
Department: Applied Science
Program or Curriculum: Solar Energy Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Photovoltaics; Solar Economics; Solar System Design; Solar Systems Testing and Evaluation; Elect1 Generation, Central; Elect1 Generation, Small Scale; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

Solar Technology III Laboratory
Instructor: Benson, C.M.
Course Number: 58401
Department: Applied Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Laboratory: 30
Topics Covered Extensively: Energy Storage; Photovoltaics; Solar Economics; Solar System Design; Domestic Hot Water; Elect1 Generation, Central; Elect1 Generation, Small Scale; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

Solar Topics
Instructor: Benson, C.M.
Course Number: 58700
Department: Applied Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Classroom: 15
Laboratory: 15
Number of Times Taught: 1
Average Enrollment: 5

CALIFORNIA
Antioch University West [90520]
650 Pine Street
San Francisco, California 94108

Programs and Curricula
*Solar Energy and Design*
Degree: BA, MS, Environmental Studies and Appropriate Technology
Contact: Nelson, Lynn (415) 956-1688

Solar Related Courses
*Courses in Design; Construction of Solar Systems*
Instructor: Olkowski, Helga
Department: Farallones Institute
Program or Curriculum: Solar Energy and Design
Topics Covered Extensively: Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Collector Evaluation/Design; Solar Systems Design; Needs Heating; Space Cooling

 Cabrillo College [1124]
Aptos, California 95003
(408) 425-6000

Programs and Curricula
Solar Technology
Degree: AD, Science
Contact: Burton, Dave (408) 425-6304
Students Taking or Completing Offering: Solar Technician

Solar Related Courses
Alternate Energy Systems (Solar Technology)
Course Number: CET60ABCD
Program or Curriculum: Solar Technology
Credits: 8
Student Level: All Levels
Duration: 16 Weeks, 15.0 hrs per week
Contact Hours: 240
Classroom: 80
Laboratory: 160
Topics Covered Extensively: Alternate Energy Sources; Materials Research; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation

Applications of Solar Energy in Agriculture
Course Number: CET61
Program or Curriculum: Solar Technology
Credits: 3
Student Level: All Levels
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80
Classroom: 32
Laboratory: 40
Topics Covered Extensively: Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar...
Solar Architecture
Course Number: CET62
Program or Curriculum: Solar Technology
Credits: 3
Student Level: All Levels
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80
Classroom: 42
Laboratory: 48
Topics Covered Extensively: Energy Conservation; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating

Solar Electronics
Course Number: CET53
Program or Curriculum: Solar Technology
Credits: 2
Student Level: All Levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Photovoltaics; Solar System Components; Domestic Hot Water; Electricity Generation, Central; Electricity Generation, Small Scale

Solar Energy in Agriculture
Course Number: CET54
Program or Curriculum: Solar Technology
Credits: 3
Student Level: All Levels
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 32
Laboratory: 32
Topics Covered Extensively: Biomass Conversion; Intro. to Solar Energy; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Process Heat, Agricultural; Space Heating

Solar Energy in Building Design
Course Number: CET52
Department: Industrial - Electrical Technology
Program or Curriculum: Solar Technology
Credits: 3
Student Level: All Levels
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design

Solar Energy Technology and Fabrication
Course Number: CET50ABCD
Department: Industrial - Electrical Technology
Program or Curriculum: Solar Technology
Credits: 8
Student Level: All Levels
Duration: 16 Weeks, 12.0 hrs per week
Contact Hours: 192
Laboratory: 192
Topics Covered Extensively: Solar System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating

Solar Retrofitting and Weatherizing
Course Number: CET51
Department: Industrial - Electrical Technology
Program or Curriculum: Solar Technology
Credits: 2
Student Level: All Levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conversion; Energy Storage; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation

California State University-Sonoma [1156]
Rohnert Park, California 94928
(707) 664-2880

Programs and Curricula
Solar Energy Technical Training Program
Degree: Certificate
Contact: Roy Irving
Students Taking or Completing Offering: Solar Technician

Solar Related Courses
Independent Studies in Solar Energy
Program or Curriculum: Solar Energy Technical Training Program
Credits: 3
Student Level: Junior or Senior
Duration: 15 weeks, 12 hrs per week
Contact Hours: 180
Independent Studies: 180
Number of Times Taught: 2
Average Enrollment: 20

Solar Energy, Direct Uses
Program or Curriculum: Solar Energy Technician
Credits: 4
Student Level: Junior or Senior
Duration: 15 weeks, 3 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Domestic Hot Water; Space Heating
Number of Times Taught: 14
Average Enrollment: 35

Advanced Solar Energy Seminar
Program or Curriculum: Solar Energy Technical Training Program
Credits: 3
Student Level: Junior or Senior
Duration: 15 weeks, 3 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer; Passive Solar Technology; Solar Economics; Solar Law/Legislation; Solar System Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 28

Center for Employment Training [90350]
425 So. Market St.
San Jose, California 95113

Solar Related Courses
"Building Maintenance
Program or Curriculum: Solar Technology
Credits: 2
Student Level: All Levels
Duration: 6 Weeks
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation

**Cerro Coso Community College**
Ridgecrest, California 93555
(714) 375-5001

**Programs and Curricula**
*Solar Engineering Technology*
Degree: AD, Applied Science - Solar Engineering Technology
Contact: Dodge, Dick
(714) 375-5001
Students Taking or Completing Offering: Solar Technician

**Chaffey College**
Alta Loma, California 91701
(714) 987-1737

**Solar Related Courses**
*Solar Energy I*
Instructor: Rothwell, Robert
Course Number: 507
Department: Indus. Tech.
Duration: 12 Weeks, 6.0 hrs per week
Contact Hours: 72
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

*Solar Energy II*
Instructor: Rothwell, Robert
Course Number: 508
Department: Indus. Tech.
Duration: 12 Weeks, 6.0 hrs per week
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation

**Coastline Community College**
Fountain Valley, California 92708
(714) 963-0811

**Programs and Curricula**
*Solar Technician*
Students Taking or Completing Offering: Solar Technician

**Chesapeake College**
Rock Hall, Maryland 21661
(410) 745-3600

**Programs and Curricula**
*Solar Technology*
Students Taking or Completing Offering: Solar Technician

**Solar Related Courses**
*Solar Seminar*
Program or Curriculum: Solar Technician

**Cosumnes River College**
Sacramento, California
(916) 421-1000

**Programs and Curricula**
Environmental Design-Introduction to Solar Energy Systems
Degree: AD, Environmental Design
Contact: Papousek, Connie
Students Taking or Completing Offering: Installer-Residential (Solar System); installer-Commercial (Solar System); Solar Technician

**Solar Related Courses**
ED47, Alternate Energy Systems
Instructor: House, Harold
Course Number: 3198-01
Department: Environmental Design

**Evergreen Valley College**
San Jose, California 95121
(408) 274-7900

**Programs and Curricula**
*Solar Technician*
Students Taking or Completing Offering: Solar Technician

**Solar Related Courses**
*Solar and Energy Seminar*
*Solar House*
*Two Courses on Solar*
Program or Curriculum: Solar Technician

**Long Beach City College**
Long Beach, California 90808
(213) 420-4111

**Programs and Curricula**
*Air Conditioning and Refrigeration*
*Solar Related Courses*
*Solar Segment*
Department: Air Cond. & Refrig.
Program or Curriculum: Air Cond. & Refrig.
Solar Related Courses

Solar Energy Applications

Instructor: Wilson, E. William
Course Number: PS368
Degree: Certificate-Solar
Department: Dept. Engineering, Physical Science and Mathematics
Program or Curriculum: External - Project Sunrise
Credits: 3
Student Level: All Levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 42
Laboratory: 6
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Domestic Hot Water; Space Heating; Space Cooling; Wind Power; Small Systems
Number of Times Taught: 4
Average Enrollment: 35

Monterey Peninsula College [1242]
Monterey, California 93940
(408) 649-8000

Programs and Curricula

Solar Collector Fabrication
Degree: Certificate-Solar Collectors
Contact: Owen, Patrick
(408) 649-1150

Solar Related Courses

Introduction to Solar and Alternate Energy Sources
Instructor: Dick Lee
Course Number: 30295-40
Department: Engineering
Program or Curriculum: Solar Collector Fabrication
Credits: 3
Student Level: All Levels
Duration: 18 weeks, 3 hrs per week
Contact Hours: 54
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Energy Storage; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 26

Mount San Antonio College [1245]
Walnut, California 91789
(714) 598-2811

Programs and Curricula

Air Conditioning, Heating and Ventilation
Degree: AD: Air Conditioning, Heating and Refrigeration
Contact: Dillon, Clifford
(714) 594-5611

Students Taking or Completing Offering: Electrician, Solar Technician, Installer-Residential (Solar System), Installer-Commercial (Solar System), Plumber

Solar Related Courses

Solar and Alternate Energy Sources
Instructor: Bormann, Jay
Course Number: 70
Department: Electronics
Program or Curriculum: Air Cond., Heat., and Vent.
Credits: 3
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Laboratory: 54
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Economics; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Space Heating

Solar Energy Systems Installation
Instructor: Bormann, Jay
Course Number: 71/71L
Department: Electronics
Program or Curriculum: Air Cond., Heat., and Vent.
Credits: 3
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 6.0 hrs per week
Contact Hours: 108
Classroom: 54
Laboratory: 54

Office of Appropriate Technology [90530]
1530 10th Street
Sacramento, California 95814

Programs and Curricula

Training Program for Installers
Contact: Jan Philbin
(916) 445-1803

Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System)

Redwoods, College of the [1185]
Eureka, California 95501
(707) 443-8411

Solar Related Courses

Solar Heating A
Instructor: Mills, David
Course Number: ENSC 20A
Department: Env. Sci.
Credits: 1
Student Level: All levels
Duration: 12 Weeks, 1.0 hrs per week
Contact Hours: 12
Classroom: 12
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 1
Average Enrollment: 50
Solar Heating B
Instructor: Mills, David
(707) 443-8411
Course Number: ENSC 20B
Department: Env. Sci.
Credits: 1
Student Level: All levels
Duration: 12 Weeks, 1.0 hrs per week
Contact Hours: 12
Classroom: 12
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 1
Average Enrollment: 50

Solar Heating C
Instructor: Mills, David
(707) 443-8411
Course Number: ENSC 20C
Department: Env. Sci.
Credits: 1
Student Level: All levels
Duration: 12 Weeks, 1.0 hrs per week
Contact Hours: 12
Classroom: 12
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 1
Average Enrollment: 50

San Diego Community College — City College
San Diego, California 92101
(714) 238-1181
Programs and Curricula
*Solar Energy, Maintenance and Technology
Degree: AD, Advanced Degree
Solar Related Courses
*Two Courses on Solar Energy Maintenance, Technology
Program or Curriculum: *Solar Ener. Maint. and Tech.
San Diego Community College — Evening College [7478]
San Diego, California 92101
(714) 238-1181
Programs and Curricula
Air Conditioning, Heating, Refrigeration & Solar Heating Technology
Degree: AD, OTHER, Air Conditioning & Heating, Refrigeration & Solar Technology
Contact: Belker, Loren
(714) 238-1811
Students Taking or Completing Offering: Solar Technician, Trade Specialty

San Jose City College [1282]
San Jose, California 95128
(408) 298-2181
Programs and Curricula
*Solar Technician
Degree: AD, Science
Contact: Herrick, Clyde N./Upton, Si
Students Taking or Completing Offering: Solar Technician

Solar Related Courses
Advanced Solar Service Maintenance & Technology
Instructor: Faris, Theodore
Department: City Campus
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 3
Average Enrollment: 35

Solar Service Maintenance and Technology
Instructor: Faris, Theodore
Department: City Campus
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 3
Average Enrollment: 35

Air Conditioning, Heating, Refrigeration and Solar Energy
Instructor: Farris, Theodore
Department: City Campus
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 6.0 hrs per week
Contact Hours: 108
Classroom: 54
Laboratory: 54
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 3
Average Enrollment: 35

San Jose City College — City College
San Jose, California 95128
(408) 298-2181
Programs and Curricula
*Solar Technician
Degree: AD, Science
Contact: Herrick, Clyde N./Upton, Si
Students Taking or Completing Offering: Solar Technician

Solar Related Courses
Advanced Solar Service Maintenance & Technology
Instructor: Faris, Theodore
Department: City Campus
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 3
Average Enrollment: 35
Solar Technician
Degree: OTHER, Certificate of Achievement
Contact: Herrick, Clyde/Upton, Si
Students Taking or Completing Offering: Solar Technician

Solar Related Courses
*Solar Energy — Industrial Applications
Instructor: Upton, Si
Course Number: SOL 114
Department: Solar Technology
Program or Curriculum: Solar Technology
Credits: 3

*Solar Energy — Residential Applications
Instructor: Upton, Si
Course Number: SOL 113
Department: Solar Technology
Program or Curriculum: Solar Technology
Credits: 3

*Solar Photoelectric Conversion
Instructor: Upton, Si
Course Number: SOL 116
Department: Solar Technology
Program or Curriculum: Solar Technology
Credits: 2

*Solar Theory
Instructor: Upton, Si
Course Number: PHYSIC121
Program or Curriculum: Solar Technology
Credits: 3

Solar Technician Training Program — Office of Appropriate Technology
1322 "O" Street
Sacramento, California 95814

Programs and Curricula
*Solar Technician Training Program
Contact: Trujillo, JoAnn
(916) 322-7190
Students Taking or Completing Offering: Solar Technician

Solarcon
[90490]
PO Box 14875
San Francisco, California 94114

Solar Related Courses
*Installers Workshop
Department: Karellen Educational Services
Topics Covered Extensively: Solar Systems Installation

COLORADO
Colorado Technical College [10148]
Colorado Springs, Colorado 80907
(303) 598-0200

Programs and Curricula
Solar Engineering Technology
Degree: BS, AD, Applied Science
Contact: Christensen, Edward
(303) 598-0200
Students Taking or Completing offering: Solar Engineer, Solar Technician

Solar Related Courses
Associate Seminar
Instructor: Christensen, Edward
(303) 598-0200
Course Number: SOL 250
Department: Solar Engineering Technology
Program or Curriculum: Solar Engineering Technology
Credits: 1
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 1.0 hrs per week
Contact Hours: 11
Topics Covered Extensively: Alternate Energy Sources

Directed Practice
Instructor: Christensen, Edward
(303) 598-0200
Course Number: SOL 299
Department: Solar Engineering Technology
Program or Curriculum: Solar Engineering Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 6.0 hrs per week
Classroom: 66
Number of Times Taught: 14
Average Enrollment: 6

Introduction to Energy
Instructor: Sabo, Julius J.
(303) 598-0200
Course Number: SOL 100
Department: Solar Engineering Technology
Program or Curriculum: Solar Engineering Technology
Credits: 3
Student Level: All levels
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Number of Times Taught: 10
Average Enrollment: 15

Solar Design I
Instructor: Christensen, Edward
(303) 598-0200
Course Number: SOL 220
Department: Solar Engineering Technology
Program or Curriculum: Solar Engineering Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 22
Laboratory: 44
Number of Times Taught: 9
Average Enrollment: 8

Solar Design II
Instructor: Christensen, Edward
(303) 598-0200
Course Number: SOL 221
Department: Solar Engineering Technology
Program or Curriculum: Solar Engineering Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 22
Laboratory: 44
Number of Times Taught: 9
Average Enrollment: 8
Basic Solar Systems
Instructor: Hilton, Craig
Course Number: SOM 220
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation: Intro. to Solar Energy; Plumbing Techniques; Solar Home Construction; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 6
Average Enrollment: 20

Blueprint Reading For Construction Trades
Instructor: Feister, Clarence
Course Number: BTR 125
Department: Industrial Div.
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 4
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 68
Classroom: 45
Laboratory: 23
Number of Times Taught: 6
Average Enrollment: 20

Bricklaying For Construction Trades
Instructor: Gale, Bud
Course Number: BRI 120
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Number of Times Taught: 8
Average Enrollment: 20

Carpentry for Construction Trades
Instructor: Hinz, Tim
Course Number: CAR 120
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 8
Average Enrollment: 20

Domestic Hot Water
Instructor: Hilton, Craig
Course Number: SOM 227
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Solar Systems Installation; Domestic Hot Water
Number of Times Taught: 6
Average Enrollment: 20
Number of Times Taught: 4
Average Enrollment: 25

**Hot Water Heating-Installation and Maintenance**
Instructor: Hilton, Robert
Course Number: PLU 206
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Plumbing Techniques
Number of Times Taught: 25
Average Enrollment: 25

**Introduction to Photovoltaic and Wind Energy**
Instructor: Hilton, Robert
Course Number: SOM 239
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Alternate Energy Sources; Photovoltaics; Solar Systems Installation; Electric Generation; Small Scale; Wind Power; Small Systems

**Orientation of Tools, Basic Plumbing, and Drawing**
Instructor: Hilton, Robert
Course Number: PLU 100
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Plumbing Techniques
Number of Times Taught: 25
Average Enrollment: 25

**Passive Solar Systems**
Instructor: Shippee, Paul
Course Number: SOM 237
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Heat and Energy Transfer; Passive Solar Technology; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 25

**Solar Engineering Technology I**
Instructor: Haugseth, Larry
Course Number: SOM 221
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 4
Student Level: All levels
Duration: 15 Weeks, 4.5 hrs per week
Contact Hours: 68
Classroom: 45
Laboratory: 23
Topics Covered Extensively: Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 4
Average Enrollment: 25

**Solar Engineering Technology II**
Instructor: Dahl, Mike
Course Number: SOM 222
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 4
Student Level: All levels
Duration: 15 Weeks, 4.5 hrs per week
Contact Hours: 68
Classroom: 45
Laboratory: 23
Topics Covered Extensively: Solar Economics; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 25

**Solar Panel Arrays**
Instructor: Hilton, Craig
Course Number: SOM 226
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Solar System Components
Number of Times Taught: 6
Average Enrollment: 20

**Solar Panel Installations**
Instructor: Hilton, Craig
Course Number: SOM 228
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Solar Home Construction; Solar Systems Installation

**Solar System Design and Layout**
Instructor: Hilton, Craig
Course Number: SOM 225
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 6
Average Enrollment: 25

**Solar System Maintenance**
Instructor: Hilton, Craig
Course Number: SOM 228
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Solar System Components; Solar Systems Maintenance
Number of Times Taught: 2
Average Enrollment: 25

Water Piping Methods
Instructor: Hilton, Robert
(303) 988-6161
Course Number: PLU 107
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instal. and Main.
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Plumbing Techniques
Number of Times Taught: 25
Average Enrollment: 25

Otero Junior College [1362]
La Junta, Colorado 81050
(303) 384-4443

Programs and Curricula
Architecture Technology — Solar Heating Option
Degree: AD, Applied Science
Contact: Nilsen, E. W.
(303) 384-4443
Students Taking or Completing Offering:
Solar Technician, Trade Specialty
Solar Related Courses
Architecture Technology — Solar Heating Option
Instructor: Nilsen, E. W.
(303) 384-4443
Department: Construction & Manufacturing
Program or Curriculum: Arch. Tech. — Solar Heating Option
Student Level: Freshman or Sophomore
Duration: 30 Weeks, 12.0 hrs per week
Contact Hours: 360
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 0

CONNECTICUT
None

DELAWARE
Newcastle County Vocational Technical School
1417 Newport Rd.
Wilmington, Delaware 19804
(90370)

Programs and Curricula
*Solar Heating of Buildings
Solar Related Courses
*Solar Heating of Buildings
Program or Curriculum: *Solar Heating of Buildings
Contact Hours: 60

DISTRICT OF COLUMBIA
National Training Fund [90360]
1900 "L" Street NW, Suite 405,
Washington, District of Columbia 20036

Programs and Curricula
*Sheet Metal — Apprentice, Journeyman
Contact: Harrington, Mr. David
(202) 833-9543

FLORIDA
Brevard Community College [1470]
Cocoa, Florida 32922
(305) 632-1111

Programs and Curricula
Solar Engineering Technology
Degree: AD, Applied Science — Solar Engineering Technology
Contact: Donnell, Nelson
(305) 532-1111
Students Taking or Completing Offering:
Solar Technician

Florida Solar Energy Center [90100]
300 State Rd. 401
Cape Canaveral, Florida 32920

Programs and Curricula
*Short Courses, Workshops, Seminars

Gulf Coast Community College [1490]
Panama City, Florida 32401
(904) 769-1551

Programs and Curricula
Solar Engineering Technology
Degree: AD, Science
Contact: Jones, Robert C.
(904) 769-1551

Solar Related Courses
Solar Energy Solar Systems
Instructor: Stotz, Robert/ Jones, Robert
(904) 769-1551
Course Number: ETM-1101
Program or Curriculum: Solar Energy Solar Systems
Credits: 3
Student Level: All levels
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Topics Covered Extensively: Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 24

Solar Systems
Instructor: Stotz, Robert/ Jones, Robert
(904) 769-1551
Course Number: ETM 2102
Program or Curriculum: Solar Energy Solar Systems
Credits: 3
Student Level: All levels
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Topics Covered Extensively: Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 24
Miami-Dade Community College [1506]
Miami, Florida 33176
(305) 596-1211

Programs and Curricula
Air Conditioning Engineering Technology
Degree: AD, Science
Contact: Succop, William
(305) 685-4564

Students Taking or Completing Offering: Architect, Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician

Solar Related Courses
Solar Energy Fundamentals
Instructor: Cleland, George
(305) 685-4206
Course Number: ETM 2706
Department: Air Conditioning Engineering Technology
Program or Curriculum: Air Conditioning Engineering Technology
Credits: 3
Student Level: High School Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating

Solar Energy Systems, Commercial
Instructor: Cleland, George
(305) 685-4206
Course Number: ETM 2758 C
Department: Air Conditioning Engineering Technology
Program or Curriculum: Air Conditioning Engineering Technology
Credits: 3
Student Level: High School Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating

Solar Energy Systems, Residential
Instructor: Cleland, George
(305) 685-4206
Course Number: ETM 2758 C
Department: Air Conditioning Engineering Technology
Program or Curriculum: Air Conditioning Engineering Technology
Credits: 3
Student Level: High School Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating

Pensacola Junior College [1513]
Pensacola, Florida 32504
(904) 476-5410

Programs and Curricula
Solar Energy Technology
Degree: AD, Energy Technology — Certificate of Completion
Contact: Lowery, Stanley
(904) 476-5410

Solar Related Courses
Residential Design and Installation
Instructor: Lowery, Stanley
Department: Industrial Technology
Program or Curriculum: Solar Energy Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 32
Laboratory: 32
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

South Florida Technical Institute [90020]
201 W. Sunrise Blvd.
Ft. Lauderdale, Florida 33311
(305) 764-3432

Programs and Curricula
Energy Conversion Systems
Contact: Linne, William L.
(305) 764-3432
Students Taking or Completing Offering: Mechanical or Electrical Contractor, Installer-Residential (Solar System), Trade Specialty

Solar Related Courses
Air Conditioning, Refrigeration & Major Appliances
Instructor: Appleman, Louis
(305) 764-3432
Department: Training
Program or Curriculum: Energy Conversion Systems
Student Level: High School Graduate
Duration: 5 Weeks, 30.0 hrs per week
Contact Hours: 150
Classroom: 100
Laboratory: 50
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 10
GEORGIA
Dekalb Community College [1562]
Clarkston, Georgia 30021
(404) 292-3994

Programs and Curricula
Solar Heating
Degree: Solar Heating
Contact: Erickson, Glenn
(404) 292-1525

Students Taking or Completing Offering: Installer-
Residential (Solar System), Solar Technician, Electrician,
Plumber, Sheet Metal Worker

Solar Related Courses
Solar Heating
Instructor: Penland, William D.
(404) 292-1525
Department: Heating/Air Conditioning
Program or Curriculum: Solar Heating
Student Level: All levels
Duration: 14 Weeks, 24.0 hrs per week
Contact Hours: 300
Classroom: 200
Laboratory: 100

HAWAII, IDAHO
None

ILLINOIS
Illinois Eastern Community College — [1742]
Olney Central College
Olney, Illinois 62450
(618) 395-4351

Programs and Curricula
Construction Energy Program
Degree: AD, Applied Science
Contact: Marrs, Steve
(618) 395-4351

Students Taking or Completing Offering: Installer-
Residential (Solar System), Solar Technician

Solar Related Courses
Energy Conservation Theory
Instructor: Culver, Ray
(618) 395-4351
Department: Physics
Program or Curriculum: Construction Energy Program
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36

Topics Covered Extensively: Alternate Energy Sources;
Appropriate Technology; Biomass Conversion; Energy
Conversion; Energy Storage; Heat and Energy Transfer;
Intro. to Solar Energy; Passive Solar Technology;
Photovoltaics; Solar System Components; Solar Systems
Design

Energy Systems in Construction
Instructor: Parish, William
(618) 395-4351
Department: Construction Trades
Program or Curriculum: Construction Energy Program
Credits: 3
Student Level: Freshman or Sophomore

Solar Energy I and II
Instructor: Sidles, Paul
(515) 286-6841

INDIANA
None

IOWA
Des Moines Area Community College [8735]
Ankery, Iowa 50021
(515) 964-6200

Programs and Curricula
Solar Energy I and II
Degree: Adult Ed.
Contact: Rowe, Gordon N.
(515) 964-6266

Solar Related Courses
Man and Energy
Instructor: Trumpy, Frank
(515) 964-6292

Course Number: PHYS 110
Department: Math/Science
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36

Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 9
Average Enrollment: 19

Solar Energy I — General Overview
Instructor: Skees, Kurt
(515) 296-6844

Course Number: BLDG: 519
Department: Adult Ed.
Muscatine Community College [1882]  
Muscatine, Iowa 52761  
(319) 263-8250

Programs and Curricula

Solar Carpentry
Degree: BS, Industrial Education  
Contact: Melander, Harry  
(319) 263-8250

Students Taking or Completing Offering:  
Installer-Residential (Solar System)

Use of Solar Energy — Homeowners, Builders
Degree: Certificate of Completion  
Contact: Ohlendorf, Vernon  
(319) 263-8250

Students Taking or Completing Offering:  
Do-it-yourself Homeowner

Solar Related Courses

Solar Carpentry
Instructor: Melander, Harry  
(319) 263-8250

Department: Trades  
Program or Curriculum: Solar Carpentry  
Credits: 61  
Student Level: High School Graduate  
Duration: 48 Weeks, 28.0 hrs per week  
Topics Covered Extensively: Energy Conservation; Energy Conversion; Passive Solar Technology; Domestic Hot Water

Number of Times Taught: 1  
Average Enrollment: 10

Use of Solar Energy — Homeowners, Builders
Instructor: Ohlendorf, Vernon  
(319) 263-8250

Department: Community Services-Cont. Ed.  
Program or Curriculum: Use of Solar Energy — Homeowners, Builders  
Student Level: All levels  
Duration: 10 Weeks, 3.0 hrs per week  
Contact Hours: 30  
Classroom: 20  
Laboratory: 10  
Number of Times Taught: 2  
Average Enrollment: 15

Scott Community College [4074]  
Bettendorf, Iowa 52722  
(319) 359-7531

Programs and Curricula

*Solar Energetics Technology*
Degree: AD, Solar Energetics Technology  
(319) 359-7531

Students Taking or Completing Offering: Architect, Researcher, Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician

Solar Related Courses

*Courses: Installation, Repair — Heating, Refrigeration and Air Conditioning*

Program or Curriculum: *Solar Energetics Technology*
Topics Covered Extensively: Energy Storage; Photovoltaics; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Studios Installed; Solar Studios Maintenance; Solar Studios Testing and Evaluation; Domestic Hot Water; Process Heat, Industrial; Space Heating; Space Cooling

Western Iowa Tech [7316]  
Sioux City, Iowa 51102  
(712) 276-0380

Programs and Curricula

Solar Systems Technology
Degree: AD, Applied Science in Solar Systems Technology  
Contact: Chadwick, Richard  
(712) 276-0380

Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician, Other

Solar Related Courses

Blueprint Reading
Instructor: Forsling, M. G.  
(712) 276-0380

Course Number: 274-3005  
Department: Trades & Industry  
Program or Curriculum: Solar Systems Technology  
Credits: 4  
Student Level: Freshman or Sophomore  
Duration: 12 Weeks, 5.0 hrs per week  
Contact Hours: 80  
Classroom: 36  
Laboratory: 24  
Topics Covered Extensively: Passive Solar Technology; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Studios Design; Solar Studios Testing and Evaluation; Domestic Hot Water; Space Heating

Average Enrollment: 11

Building Design for Solar Systems
Instructor: Forsling, M. G.  
(712) 276-0380

Course Number: 274-3010  
Department: Trades & Industry  
Program or Curriculum: Solar Systems Technology  
Credits: 4  
Student Level: Freshman or Sophomore  
Duration: 12 Weeks, 6.0 hrs per week  
Contact Hours: 72  
Classroom: 24  
Laboratory: 48  
Topics Covered Extensively: Energy Conservation; Energy Storage; Passive Solar Technology; Solar Home Construction

Average Enrollment: 11
Integrated Solar Science II
Instructor: Forsling, M. G.
(712) 276-0380
Course Number: 274-3006
Department: Trades & Industry
Program or Curriculum: Solar Systems Technology
Credits: 5
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 72
Classroom: 48
Laboratory: 24
Topics Covered Extensively: Energy Conversion; Elec’tl Generation, Small Scale; Space Heating; Space Cooling
Average Enrollment: 11

Introduction to Solar Systems
Instructor: Forsling, M. G.
(712) 276-0380
Course Number: 274-3000
Department: Trades & Industry
Program or Curriculum: Solar Systems Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Average Enrollment: 11

Solar Feasability Cost Analysis
Instructor: Forsling, M. G.
(712) 276-0380
Course Number: 274-3012
Department: Trades & Industry
Program or Curriculum: Solar Systems Technology
Credits: 5
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 60
Classroom: 60
Average Enrollment: 11

Solar Systems Applications I
Instructor: Forsling, M. G.
(712) 276-0380
Course Number: 274-3002
Department: Trades & Industry
Program or Curriculum: Solar Systems Technology
Credits: 9
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 13.0 hrs per week
Contact Hours: 156
Classroom: 50
Laboratory: 96
Topics Covered Extensively: Solar Economics
Average Enrollment: 11

Solar Systems Applications II
Instructor: Forsling, M. G.
(712) 276-0380
Course Number: 274-3007
Department: Trades & Industry
Program or Curriculum: Solar Systems Technology
Credits: 8
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 11.0 hrs per week
Contact Hours: 132
Classroom: 60
Laboratory: 72
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Plumbing Techniques; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Testing and Evaluation; Space Heating
Average Enrollment: 11

Solar Systems Maintenance
Instructor: Forsling, M. G.
(712) 276-0380
Course Number: 274-3013
Department: Trades & Industry
Program or Curriculum: Solar Systems Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 6.0 hrs per week
Contact Hours: 72
Classroom: 24
Laboratory: 48
Topics Covered Extensively: Energy Storage; Solar System Components; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Average Enrollment: 11

Systems Design Engineering
Instructor: Forsling, M. G.
(712) 276-0380
Course Number: 274-3011
Department: Trades & Industry
Program or Curriculum: Solar Systems Technology
Credits: 6
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 8.0 hrs per week
Contact Hours: 96
Classroom: 48
Laboratory: 48
Average Enrollment: 11

KANSAS
Barton County Community Junior College
Great Bend, Kansas 67530 [4608]
(316) 792-2701
Programs and Curricula
Solar Energy Technology
Degree: AD, Applied Science
Contact: Greer, Neil
(316) 792-2701
Students Taking or Completing Offering: Trade Specialty
Solar Related Courses
Solar Energy and Applied Science I
Instructor: Greer, Neil
(316) 792-2701
Course Number: 6900
Department: Applied Sciences
Program or Curriculum: Solar Energy Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 17 Weeks, 6.0 hrs per week
Contact Hours: 102
Classroom: 51
Laboratory: 51
Topics Covered Extensively: Appropriate Technology; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 7

Kansas Technical Institute [4611]
Salina, Kansas 67401
(913) 825-0275
Programs and Curricula
Mechanical Engineering Technology — Solar Option
Degree: AD, Science
Contact: Ashburn, M. H.
(913) 825-0275

Students Taking or Completing Offering: Solar Technician

Solar Related Courses

Solar System Design Technology I
Instructor: Ashburn, M.
Course Number: MT2832
Department: Mechanical Technology
Program or Curriculum: Mech. Engineering Tech. — Solar Option
Credits: 2
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 16
Laboratory: 48

Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

Solar System Design Technology II
Instructor: Ashburn, M.
Course Number: MT2844
Department: Mechanical Technology
Program or Curriculum: Mech. Engineering Tech. — Solar Option
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 8.0 hrs per week
Contact Hours: 128
Classroom: 42
Laboratory: 86

Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

Shelter Institute
58 Center Street
Bath, Maine 04530

Solar Related Courses

Passive Solar Design
Instructor: Hennin, Patsy
(207) 443-7938
Duration: 15 Weeks
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction

Maryland
RETS Technical Center [90050]
511 Russell Street
Baltimore, Maryland 21230
(301) 727-6369

Programs and Curricula

Refrigeration Climate Control and Clean Air
Degree: Refrigeration — Climate Control — Clean Air
Contact: Tickler, Earl M.
(301) 727-6863

Students Taking or Completing Offering: Installer-Residential (Solar System), Solar Technician, Trade Specialty

Solar Related Courses

Refrigeration — Climate Control — Clean Air
Instructor: Tickler, Earl M.
(301) 727-6863

Program or Curriculum: Refriger., Climate Control and Clean Air
Student Level: High School Graduate
Duration: 6 Weeks, 30.0 hrs per week
Contact Hours: 180
Classroom: 90
Laboratory: 60

Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy
Transfer; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Installation; Solar Systems Maintenance; Solar System Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

MASSACHUSETTS
The Cambridge School — Weston Center For Open Education  [90200] Weston, Massachusetts

Solar Related Courses
*Adapting Heating Systems for Solar Use
Topics Covered Extensively: Space Heating

(617) 965-5428

*Advanced Studies in Solar Heating
Topics Covered Extensively: Space Heating

(617) 965-5428

*Basic Solar Heating
Topics Covered Extensively: Space Heating

(617) 965-5428

*Biomass for Energy
Topics Covered Extensively: Biomass Conversion

(617) 965-5428

*Designing Your Own Solar System
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar System Design; Space Heating

(617) 965-5428

*Photovoltaics
Topics Covered Extensively: Photovoltaics

(617) 965-5428

*Power from the Sea
Topics Covered Extensively: Photovoltaics

(617) 965-5428

*Small Wind Mills
Topics Covered Extensively: Wind Power, Small Systems

(617) 965-5428

*Solar Heating Added to Your House
Topics Covered Extensively: Space Heating

(617) 965-5420

*Solar Heating System Design
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

(617) 965-5428

*Wind Machines
Topics Covered Extensively: Wind Power, Central Systems; Wind Power, Small Systems

(617) 965-5420

Cape Cod Community College [2168]
West Barnstable, Massachusetts
(617) 362-2131

Programs and Curricula

Energy Systems Technology

Degree: AD, Science
Contact: Panitz, Ted
(617) 362-2131

Students Taking or Completing Offering: Solar Technician

Solar Related Courses

Energy Systems I - A Survey of Energy Alternatives
Instructor: Panitz, Ted
(617) 362-2131

Course Number: TE 130
Department: Industry Related Technology
Program or Curriculum: Energy Systems Technology
Credits: 4

Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 45
Laboratory: 15

Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 3
Average Enrollment: 15

Energy Systems II — Solar Energy I
Instructor: Panitz, Ted
(617) 362-2131

Course Number: TE 131
Department: Industry Related Technologies
Program or Curriculum: Energy Systems Technology
Credits: 4

Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 45
Laboratory: 15

Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 35

Energy Systems III — Solar Energy II
Instructor: Panitz, Ted
(617) 362-2131

Course Number: TE 132
Department: Industry Related Technologies
Program or Curriculum: Energy Systems Technology
Credits: 4

Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 45
Laboratory: 15

Topics Covered Extensively: Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 18

New England Fuel Institute [90230]
20 Summer St. Box 888
Watertown, Massachusetts 02172

Solar Related Courses

*Basic Solar Heating Technology
Topics Covered Extensively: Space Heating

*Solar Installation and Maintenance
Instructor: Tavino, R. / Taylor, R.
(617) 924-1000

Student Level: All levels
Duration: 4 Weeks, 40.0 hrs per week
Contact Hours: 160
Classroom: 80
Laboratory: 80

Topics Covered Extensively: Solar System Components; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 18

Northeast Institute of Industrial Technology
41 Phillips St. [90060]
Boston, Massachusetts 02114

Programs and Curricula

Installing Solar Water Heaters
Degree: Solar Water Systems
Contact: Galvin, G. M.
(617) 523-2813
Solar Related Courses

Installing Solar Water Heating
Instructor: Smith, Robert O./ Lannon, E. (617) 523-2813
Department: Air Conditioning, Refrig. Tech.
Program or Curriculum: Installing Solar Water Heaters
Student Level: College Graduate
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Classroom: 30
Number of Times Taught: 4
Average Enrollment: 30

Springfield Technical Community College
Springfield, Massachusetts [8078] (413) 781-6470

Programs and Curricula

*Solar Energy Option
Degree: AD, Solar Energy
Contact: Murray, Carl (413) 781-6470

Solar Related Courses

*Courses in Solar Technology
Department: Eng'r. Tech
Program or Curriculum: *Solar Energy Option
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating

Michigan

Charles S. Mott Community College [2261]
Flint, Michigan 48503 (313) 762-0200

Programs and Curricula

Energy Technology
Degree: AD, Applied Science, Alternate Energy
Contact: Lanne, Douglas E. (313) 762-0278
Students Taking or Completing Offering: Trade Specialty

Solar Related Courses

Solar Heating and Cooling
Instructor: Lanne, Douglas E. (616) 762-0278
Course Number: PHYSCI-113
Department: Science and Mathematics
Program or Curriculum: Energy Technology
Credits: 2
Student Level: All levels
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Classroom: 32
Number of Times Taught: 2
Average Enrollment: 20

Ferris State College [2260]
Big Rapids, Michigan 49307 (616) 796-9971

Programs and Curricula
Refrigeration, Heating and Air Conditioning Technology
Degree: AD, Applied Science in Refrig., Heating, and Air Conditioning
Contact: Shane, James B. (616) 796-9971
Students Taking or Completing Offering: Installer-Commercial (Solar System), Installer-Residential (Solar System), Solar Technician, Trade Specialty

Solar Related Courses

Advanced Air Conditioning
Instructor: Nott, Joe (616) 796-9971
Course Number: RHA 263
Department: Construction
Program or Curriculum: Refriger., Heating and Air Conditioning Technology
Credits: 9
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 20.0 hrs per week
Contact Hours: 200
Classroom: 50
Laboratory: 150
Average Enrollment: 18

Energy Conservation in Building Design
Instructor: Kantor, Mel (616) 796-9971
Course Number: A-U 302
Department: Construction
Program or Curriculum: Refriger., Heating and Air Conditioning Technology
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 50
Laboratory: 20
Topics Covered Extensively: Energy Conservation; Passive Solar Technology; Solar Home Construction; Space Heating

Energy Use and Conservation
Instructor: Erion, John (616) 796-9971
Course Number: BCT 302
Department: Construction
Program or Curriculum: Refriger., Heating and Air Conditioning Technology
Credits: 4
Student Level: All levels
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 30
Laboratory: 20
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Solar System Components; Solar Economics; Solar Systems Installation; Domestic Hot Water; Space Heating

Heating
Instructor: Stovont, Russ (616) 796-9971
Course Number: RHA 262
Department: Construction
Program or Curriculum: Refriger., Heating, and Air Conditioning Technology
Credits: 9
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 20.0 hrs per week
Contact Hours: 200
Classroom: 50
Laboratory: 150
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Systems Maintenance; Space Heating
Average Enrollment: 18

Summer Air Conditioning
Instructor: Lawrence, Fred/ Shaw, Dick (616) 796-9971
**Grand Rapids Junior College [2287]**

Grand Rapids, Michigan 49502
(616) 456-4895

**Programs and Curricula**

**Architectural Drafting**

Degree: AD, Architectural Drafting

Contact: Boyer, Don

**Student Taking or Completing Offering:** Architect

**Solar Related Courses**

**Solar Systems — Collector Design and Construction**

Instructor: Larson, L.  
(616) 456-4860

Course Number: TE 245  
Department: Technology

Program or Curriculum: Arch. Draft. and Heat., Vent., A/C

Student Level: Freshman or Sophomore

Duration: 16 Weeks, 4.0 hrs per week

Contact Hours: 64

Classroom: 16

Laboratory: 32

Topics Covered Extensively: Appropriate Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

**Solar Dwelling Design Concepts**

Instructor: Larson, L.  
(616) 456-4860

Course Number: TE 243  
Department: Technology

Program or Curriculum: Arch. Draft. and Heat., Vent., A/C

Student Level: Freshman or Sophomore

Duration: 16 Weeks, 4.0 hrs per week

Contact Hours: 64

Classroom: 32

Laboratory: 32

Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Passive Solar Technology; Solar Home Construction; Domestic Hot Water; Space Heating; Space Cooling

**Solar Theory & Design**

Instructor: Larson, L.  
(616) 456-4860

Course Number: TE 142  
Department: Technology

Program or Curriculum: Arch. Draft. and Heat., Vent., A/C

Credits: 2

Student Level: Freshman or Sophomore

Duration: 16 Weeks, 2.0 hrs per week

Contact Hours: 32

Classroom: 28

Laboratory: 4

Topics Covered Extensively: Energy Conversion; Intro. to Solar Energy; Domestic Hot Water; Space Heating

Number of Times Taught: 2

Average Enrollment: 18

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**Lansing Community College [2278]**

Lansing, Michigan 48901  
(517) 373-7400

**Solar Related Courses**

*Alternate Sources of Energy*

Course Number: ATG150  
Department: Eng’r Tech.

Topics Covered Extensively: Alternate Energy Sources

*Building a Solar Furnace*

Course Number: ATG151  
Department: Eng’r Tech.

Topics Covered Extensively: Space Heating

*Building a Solar Water Heater*

Course Number: ATG152  
Department: Eng’r Tech.

Topics Covered Extensively: Domestic Hot Water

*Passive Solar Design*

Course Number: AT211  
Department: Eng’r Tech.

Topics Covered Extensively: Passive Solar Technology

*Passive Solar II*

Course Number: AT215  
Department: Eng’r Tech.

Topics Covered Extensively: Passive Solar Technology

*Principles of Solar Energy Collection*

Course Number: AT201  
Department: Eng’r Tech.

Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design

*Residential Solar Heating System Design*

Course Number: AT203  
Department: Eng’r Tech.

Topics Covered Extensively: Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating

*Solar Housing*

Course Number: AT200  
Department: Eng’r Tech.

*Solar Site Seminar*

Course Number: AT208  
Department: Eng’r Tech.

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**MINNESOTA, MISSISSIPPI, MISSOURI, MONTANA**

None

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**NEBRASKA**

Metropolitan Technical Community College  
Omaha, Nebraska 68137  
(402) 457-5100

**Programs and Curricula**

**Solar Technical Training Program**

Degree: Solar Systems

Contact: Kafka, Janies J.  
(402) 457-5100

Students Taking or Completing Offering: Solar Technician

**Solar Related Courses**

Survey of Solar Energy

Instructor: Reinmuth, Larry  
(402) 457-5100

Department: Continuing Education

Program or Curriculum: Solar Technician Training Program

Student Level: All levels

Duration: 8 Weeks, 2.5 hrs per week

Contact Hours: 20

Classroom: 12

Laboratory: 8
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling; Wind Power; Small Systems

Number of Times Taught: 3
Average Enrollment: 8

NEVADA
Clark County Community College [10362]
Las Vegas, Nevada 89030
(702) 643-6060

Programs and Curricula
Solar Energy Technology
Degree: AD, OT, Solar Energy Technology
Applied Science
Contact: Comarow, David
(702) 643-6060
Students Taking or Completing Offering: Solar Technician, Sheet Metal Worker, Electrician, Plumber

Solar Related Courses
Advanced Solar Energy Technology
Instructor: Comarow, David
(702) 643-6060
Course Number: SOL 201
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Classroom: 45
Laboratory: 45
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Materials Research; Plumbing Techniques; Solar System Components; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

Introduction to Solar Technology
Instructor: Comarow, David
(702) 643-6060
Course Number: SOL 119
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 9.0 hrs per week
Contact Hours: 135
Classroom: 90
Laboratory: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

Passive Solar Heating and Cooling Technology
Instructor: Comarow, David
(702) 643-6060
Course Number: SOL 130
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 3
Student Level: Freshman or Sophomore

Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar Economics; Solar Home Construction; Space Heating; Space Cooling

Practicum in Solar Technology
Instructor: Comarow, David
(702) 643-6060
Course Number: SOL 1210
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 9.0 hrs per week
Contact Hours: 135
Topics Covered Extensively: Domestic Hot Water; Swimming Pool Heating; Process Heat, Industrial; Space Heating; Space Cooling

Solar Energy Technology — Home Owner
Instructor: Comarow, David
(702) 643-6060
Course Number: ENV 1183
Department: Science
Program or Curriculum: Solar Energy Technology
Student Level: All levels
Duration: 1 Week, 15.0 hrs per week
Contact Hours: 15
Classroom: 15
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 7
Average Enrollment: 100

NEW HAMPSHIRE
New Hampshire Vocational Technical College — Manchester [2582]
Manchester, New Hampshire
(603) 668-6706

Programs and Curricula
Solar Energy Certificate Program
Degree: Solar Energy
Contact: Magnon, David
(603) 668-6706
Students Taking or Completing Offering: Educator, Do-it-yourself Homeowner

Solar Related Courses
Energy Conservation — Principles
Instructor: Magnon, David
(603) 668-6706
Course Number: M941EV
Department: Evening
Program or Curriculum: Solar Energy Certificate Program
Credits: 3
Student Level: All levels
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Topics Covered Extensively: Energy Conservation
Number of Times Taught: 1
Average Enrollment: 20

Energy Survey & Alternative Systems
Instructor: Magnon, David
(603) 668-6706
Course Number: M940EV
### Department of Evening School
**Program or Curriculum: Solar Energy Certificate Program**
- **Credits:** 3
- **Student Level:** All levels
- **Duration:** 12 Weeks, 3.0 hrs per week
- **Contact Hours:** 36
- **Topics Covered Extensively:** Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology

#### Average Enrollment: 20

**Solar Seminar — Integrated Projects**
- **Instructor:** Magnon, David
- **Course Number:** M945EV
- **Department:** Evening Extension
- **Program or Curriculum:** Solar Energy Certificate Program
- **Credits:** 3
- **Student Level:** All levels
- **Duration:** 12 Weeks, 3.0 hrs per week
- **Contact Hours:** 36

### Department of Evening Extension
**Program or Curriculum: Solar Energy Theory — Heating, Ventilation, A/C**
- **Credits:** 3
- **Student Level:** All levels
- **Duration:** 12 Weeks, 4.0 hrs per week
- **Contact Hours:** 48
- **Topics Covered Extensively:** Plumbing Techniques; Solar System Components; Solar Systems Installation; Solar Systems Maintenance; Solar Collector Evaluation/Design; Space Heating

#### Solar Heating Systems
- **Instructor:** Byrne, E.
- **Course Number:** 404
- **Department:** HVAC
- **Credits:** 4
- **Student Level:** All levels
- **Duration:** 12 Weeks, 4.0 hrs per week
- **Contact Hours:** 48
- **Topics Covered Extensively:** Plumbing Techniques; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

#### Solar Seminar — Integrated Projects
- **Instructor:** Magnon, David
- **Course Number:** M945EV
- **Department:** Evening Extension
- **Program or Curriculum:** Solar Energy Certificate Program
- **Credits:** 3
- **Student Level:** All levels
- **Duration:** 12 Weeks, 3.0 hrs per week
- **Contact Hours:** 36

### Ocean County Vocational Technical Schools
**Program or Curriculum: Solar Energy Workshop**
- **Department:** Ocean County Vocational Technical Schools
- **Credits:** 3
- **Student Level:** All levels
- **Topics Covered Extensively:** Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water

### Address and Contact Information
**Essex County Technical Careers Center**
91 West Market St.
Newark, New Jersey 07102
- **Program or Curriculum: Solar Energy Theory — Heating, Ventilation, A/C**
- **Degree:** Certificate
- **Contact Hours:** 300
- **Topics Covered Extensively:** Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling

**New Jersey**
*Day Program — Solar Heating Systems*
- **Department:** Adult Education
- **Program or Curriculum:** Day Program — So. Heat. Systems
- **Contact Hours:** 120
- **Topics Covered Extensively:** Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling

**Mercer County Area Vocational Technical Schools**
- **Program or Curriculum:** Night Program — Sol. Heat. Systems
- **Contact Hours:** 15 Weeks
- **Topics Covered Extensively:** Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling

**Ocean County Vocational Technical Schools**
- **Program or Curriculum:** Day Program — So. Heat. Systems
- **Contact Hours:** 15 Weeks
- **Topics Covered Extensively:** Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating
Southern New Jersey OIC [90070]
Camden, New Jersey

Programs and Curricula

Solar Energy Unit Installer Program
Degree: Completion Certificate
Contact: Keene, Joseph P. (609) 944-2545
Students Taking or Completing Offering:
Installer-Residential (Solar System)

Solar Related Courses
Solar Energy Installer
Instructor: Keene, Joseph P. (609) 966-2545

Programs and Curricula

Seminar in Solar Energy
Degree: Heating Certificate
Contact: Harrington, Charles (518) 747-0274
Students Taking or Completing Offering:
Solar Technician

Environmental Design I
Instructor: Farkas, Stanley (212) 239-1662
Course Number: EC 110
Department: Environmental Control Technology
Program or Curriculum: Environmental Control Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45

Number of Times Taught: 70
Average Enrollment: 25

Environmental Design Laboratory
Instructor: Farkas, Stanley (212) 239-1662
Course Number: EC 430
Department: Environmental Control Technology
Program or Curriculum: Environmental Control Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 60
Classroom: 60

Number of Times Taught: 16
Average Enrollment: 18

Hydronic Systems Design
Instructor: Pita, Edward (212) 239-1662

Cayuga County Community College [2861]
Auburn, New York 13021
(315) 253-7345

Programs and Curricula

Solar Energy Technology
Degree: Solar Energy Technology
Contact: Komanecky, William (315) 253-7345

Students Taking or Completing Offering:
Do-it-yourself Homeowner, Electrician, Plumber

Solar Related Courses
Solar Heating Energy
Instructor: Simkin, Robert (315) 364-8065
Department: Science
Program or Curriculum: Solar Energy Technology
Credits: 1
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 15

Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Space Heating
Number of Times Taught: 2
Average Enrollment: 23

CUNY New York City Community College [2696]
Brooklyn, New York 11201
(212) 643-4033

Programs and Curricula

Environmental Control Technology
Degree: AD, Applied Science
Contact: Lomask, Samuel (212) 962-0407

Solar Related Courses
Environmental Design I
Instructor: Farkas, Stanley (212) 239-1662
Course Number: EC 110
Department: Environmental Control Technology
Program or Curriculum: Environmental Control Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45

Number of Times Taught: 70
Average Enrollment: 25

Environmental Design Laboratory
Instructor: Farkas, Stanley (212) 239-1662
Course Number: EC 430
Department: Environmental Control Technology
Program or Curriculum: Environmental Control Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 60
Classroom: 60

Number of Times Taught: 16
Average Enrollment: 18

Hydronic Systems Design
Instructor: Pita, Edward (212) 239-1662

NEW MEXICO
None

NEW YORK

Adirondack Community College [2860]
Glens Falls, New York 12801
(518) 793-4491

Programs and Curricula

Seminar in Solar Energy
Degree: Heating Certificate
Contact: Harrington, Charles (518) 747-0274

Students Taking or Completing Offering:
Solar Technician

Number of Times Taught: 70
Average Enrollment: 25
<table>
<thead>
<tr>
<th>Course Number</th>
<th>EC 220</th>
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<tbody>
<tr>
<td>Department</td>
<td>Environmental Control Technology</td>
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<tr>
<td>Program or Curriculum</td>
<td>Environmental Control Technology</td>
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<td>Credits</td>
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<tr>
<td>Student Level</td>
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<tr>
<td>Duration</td>
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<tr>
<td>Contact Hours</td>
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<td>Topics Covered Extensively</td>
<td>Heat and Energy Transfer</td>
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<td>Number of Times Taught</td>
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<td>Average Enrollment</td>
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</table>

**Solar Energy**

**Solar Energy I**

- **Instructor:** Dunnung, Francis
- **Course Number:** EC 410
- **Department:** Environmental Control Technology
- **Program or Curriculum:** Environmental Control Technology
- **Credits:** 2
- **Student Level:** Junior or Senior
- **Duration:** 15 Weeks, 2.0 hrs per week
- **Contact Hours:** 30
- **Topics Covered Extensively:** Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer

**Number of Times Taught:** 5

**Average Enrollment:** 25

**Mohawk Valley Community College**

**Programs and Curricula**

**Solar Energy Technology**

- **Degree:** Solar Energy Technology
- **Contact:** Dunnung, Francis
- **Number of Times Taught:** 16
- **Average Enrollment:** 25

**Solar Related Courses**

**Solar Energy I - Energy & Energy Construction**

- **Instructor:** Dunnung, Francis
- **Course Number:** CC 530
- **Department:** Physics and Engineering Science
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 3
- **Student Level:** All levels
- **Duration:** 10 Weeks, 3.0 hrs per week
- **Contact Hours:** 30
- **Classroom:** 10
- **Laboratory:** 20
- **Topics Covered Extensively:** Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer

**Solar Energy System Design and Analysis**

- **Instructor:** Dunnung, Francis
- **Department:** Physics
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 4
- **Student Level:** Freshman or Sophomore
- **Duration:** 10 Weeks, 5.0 hours per week
- **Contact Hours:** 50
- **Classroom:** 30
- **Laboratory:** 20
- **Topics Covered Extensively:** Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Materials Research; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

**Solar IV (Alternate Energy Sources)**

- **Instructor:** Dunnung, Francis
- **Department:** Physics
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 4
- **Student Level:** Freshman or Sophomore
- **Duration:** 10 Weeks, 5.0 hrs per week
- **Contact Hours:** 50
- **Classroom:** 30
- **Laboratory:** 20
- **Topics Covered Extensively:** Alternate Energy Sources; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar Economics; Solar Law/Legislation; Process Heat; Agricultural; Process Heat, Industrial; Wind Power; Central Systems; Wind Power, Small Systems

**Solar System Fabrication I**

- **Instructor:** Dunnung, Francis
- **Department:** Physics
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 2
- **Student Level:** Freshman or Sophomore
- **Duration:** 10 Weeks, 3.0 hrs per week
- **Contact Hours:** 30
- **Classroom:** 10
- **Laboratory:** 20
- **Topics Covered Extensively:** Appropriate Technology; Plumbing Techniques; Sheet Metal Techniques; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

**Solar System Fabrication II**

- **Instructor:** Dunnung, Francis
- **Department:** Physics
- **Program or Curriculum:** Solar Energy Technology
- **Credits:** 4
- **Student Level:** Freshman or Sophomore
- **Duration:** 10 Weeks, 7.0 hrs per week
- **Contact Hours:** 70
- **Classroom:** 10
- **Laboratory:** 60
- **Topics Covered Extensively:** Appropriate Technology; Plumbing Techniques; Sheet Metal Techniques; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
SUNY Agricultural and Technical College - Delhi
Delhi, New York 13753
(607) 746-4111

Programs and Curricula

Construction Technology/Civil Technology
Degree: Ad, Applied Science
Contact: Duncan, George
(607) 746-4225

Students Taking or Completing Offering:
Mechanical or Electrical Contractor, Contractor, Other

Solar Related Courses

General Chemistry
Instructor: Onasch, Frederick
(607) 746-4377
Course Number: 9512
Contact Hours: 75
Credit: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 90
Classroom: 30
Laboratory: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conversion; Energy Storage; Heat and Energy Transfer; Materials Research; Photovoltaics

General Chemistry 9513
Instructor: Onasch, Frederick
(607) 746-4377
Course Number: 9513
Contact Hours: 75
Credit: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 90
Classroom: 30
Laboratory: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conversion; Energy Storage; Heat and Energy Transfer; Materials Research; Photovoltaics

General Physics
Instructor: Vetter, Willard
(607) 746-4374
Course Number: 9521
Contact Hours: 60
Credit: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy
Average Enrollment: 100

General Physics 9522
Instructor: Vetter, Willard
(607) 746-4374
Course Number: 9522
Contact Hours: 60
Credit: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro to Solar Energy
Average Enrollment: 100

Intro. to Solar Energy
Average Enrollment: 100

Mechanical Equipment for Buildings
Instructor: Hampel, John
(607) 746-4386
Course Number: 3741
Contact Hours: 60
Credit: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 45
Laboratory: 30
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Plumbing Techniques
Number of Times Taught: 20
Average Enrollment: 65

Thermodynamics and Heating
Instructor: Hampel, John
(607) 746-4386
Course Number: 3711
Contact Hours: 60
Credit: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 45
Laboratory: 30
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Plumbing Techniques
Number of Times Taught: 20
Average Enrollment: 65

Water Resources
Instructor: Singer, Darrell
(607) 746-4391
Course Number: 3554
Contact Hours: 60
Credit: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 60
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conservation; Energy Storage; Heat and Energy Transfer; Plumbing Techniques
Number of Times Taught: 20
Average Enrollment: 30

NORTH CAROLINA

Cape Fear Technical Institute [5320] Wilmington, North Carolina 28401
(919) 343-0481

Programs and Curricula

General Occupational Technologies
Degree: AD, General Occupational Technologies
Contact: Stiles, W. O./ Averette, R.
(919) 343-0481

Solar Related Courses

Introduction to Energy Resources
Instructor: Bordeaux, Ralph
(919) 343-0481
Course Number: T-EGY101
Contact Hours: 60
Credit: 3
Student Level: All levels
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Alternate Energy Sources; Energy Storage; Intro. To Solar Energy
Number of Times Taught: 2
Average Enrollment: 25

Introduction to Solar Energy Systems (Electricity)
Instructor: Bordeaux, Ralph  
(919) 343-0981
Course Number: T-3GY103
Department: Engineering
Program or Curriculum: General Occupational Technologies
Credits: 5
Student Level: All levels
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 44
Laboratory: 22
Topics Covered Extensively: Appropriate Technology; Photovoltaics; Solar Energy Policy Development; Elec't Generation, Small Scale; Wind Power, Small Systems

Introduction to Solar Energy Systems (Thermal)
Instructor: Stiles, Warren O.  
(919) 256-3146
Course Number: T-EGY102
Department: G.O.'I-Evening
Program or Curriculum: General Occupational Technologies
Credits: 5
Student Level: All levels
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 44
Laboratory: 22
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage, Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water

Southwestern Technical Institute [8466]
Sylva, North Carolina 28779  
(704) 586-4091
Programs and Curricula
Solar Energy Systems-Residential and Commercial Construction
Degree: Certificate of Completion
Contact: Liming, Glenn  
(704) 586-4091
Students Taking or Completing Offering:
Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician
Solar Related Courses
Introduction to Solar Concepts
Instructor: Liming, Glenn  
(704) 586-4091
Course Number: CAR 1120
Department: Industrial/Vocational
Program or Curriculum: Solar Energy Systems-Res. and Comm. Construction
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 33
Laboratory: 33
Number of Times Taught: 1
Average Enrollment: 8
Solar Collector
Instructor: Liming, Glenn  
(704) 586-4091

Course Number: CAR 1121
Department: Industrial/Vocational
Program or Curriculum: Solar Energy Systems-Res. and Comm. Construction
Credits: 6
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 13.0 hrs per week
Contact Hours: 143
Classroom: 33
Laboratory: 110
Topics Covered Extensively: Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 8

Solar Energy Heating Systems
Instructor: Liming, Glenn  
(704) 586-4091
Course Number: CAR 1122
Department: Industrial/Vocational
Program or Curriculum: Solar Energy Systems-Res. and Comm. Construction
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 33
Laboratory: 33
Topics Covered Extensively: Intro. to Solar Energy; Swimming Pool Heating
Number of Times Taught: 1
Average Enrollment: 8

NORTH DAKOTA

Bismarck Junior College [2988]
Bismarck, North Dakota 58501  
(701) 223-4500
Programs and Curricula
Solar Heating
Degree: Certificate of Completion
Contact: McKinney, David  
(701) 255-0566
Students Taking or Completing Offering:
Plumber, Sheet Metal Worker
Solar Related Courses
Solar Energy
Instructor: McKinney, David  
(701) 255-0566
Department: Heating, Refrigeration, and Air Conditioning
Program or Curriculum: Solar Heating
Credits: 8
Student Level: Freshman or Sophomore
Duration: 8 Weeks, 32.0 hrs per week
Contact Hours: 256
Classroom: 63
Laboratory: 193
Topics Covered Extensively: Plumbing Techniques; Sheet Metal Techniques; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

North Dakota State School of Science [2996]
Wahpeton, North Dakota 58075  
(701) 671-1130
Programs and Curricula
Environmental Systems Design
Degree: Certificate, Diploma
Contact: Whitcomb, Larry  
(701) 671-2529
Students Taking or Completing Offering:
Installer-Residential (Solar System), Installer-Commercial (Solar Systems), Trade Specialty, Plumber, Sheet Metal Worker
Solar Related Courses

Systems and Equipment

Instructor: Whitcomb, Larry
(701) 671-2529
Course Number: ESD 203
Department: Environmental Systems
Credits: 3
Student Level: All levels
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 60
Classroom: 60

Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Intro. To Solar Energy; Plumbing Techniques; Sheet Metal Techniques; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Installation; Solar Systems Maintenance

Number of Times Taught: 1
Average Enrollment: 25

OHIO

North American Heating and Air Conditioning Wholesalers Association [90400]

Home Study Institute
1661 West Henderson
Columbus, Ohio 43220

Programs and Curricula

*Home Study Program

Contact: Healy, James
(614) 459-2100

Students Taking or Completing Offering: Solar Technician

OKLAHOMA

None

OREGON

Linn-Benton Community College [6938]

Albany, Oregon 97321
(503) 926-2361

Programs and Curricula

Engineering Technology - Solar Energy Option

Degree: AD, Engineering Tech
Contact: Miller, Dave
(503) 926-2361

Solar Related Courses

Alternate Energy Sources

Course Number: 3.527
Department: Engineering Technology
Program or Curriculum: Engineering Tech. - Solar Energy Option
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 33
Laboratory: 33

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design/ Elec't Generation, Small Scale; Solar Power; Small Systems

Number of Times Taught: 4
Average Enrollment: 15

Energy Systems Management

Course Number: 6.220
Department: Engineering Technology
Program or Curriculum: Engineering Tech. - Solar Energy Option
Credits: 3

Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33

Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Systems Maintenance; Solar Systems Testing and Evaluation; Elec't Generation, Central; Elec't Generation, Small Scale; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

Solar Energy

Course Number: 6.221
Department: Engineering Technology
Program or Curriculum: Engineering Tech. - Solar Energy Options
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33

Topics Covered Extensively: Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec't Generation, Small Scale; Space Heating; Wind Power, Small Systems

Number of Times Taught: 2
Average Enrollment: 12

PENNSYLVANIA

Keystone Junior College [3280]

La Plume Pennsylvania 18440
(707) 945-5141

Programs and Curricula

Solar Engineering Technology

Degree: AD, Applied Science in Solar Engineering Technology
Contact: Kutch, Dennis/Cupilleri, Tom
(717) 945-5141

Students Taking or Completing Offering: Solar Technician

Solar Related Courses

Sizing, Installation & Operation - Solar Heating (Residential Buildings)

Instructor: Kutch, Dennis
(717) 945-5141

Program or Curriculum: Solar Engineering Technology
Student Level: All levels
Duration: 2 Weeks, 36.0 hrs per week
Contact Hours: 72
Classroom: 30
Laboratory: 42

Topics Covered Extensively: Energy Conservation; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Home Construction; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating

Solar Hydronic Systems/Solar Air Systems

Instructor: Kutch, Dennis
(717) 945-5141

Program or Curriculum: Solar Engineering Technology
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Pennsylvania Institute of Technology [90180]
414 Sansom St.
Upper Darby, Pennsylvania 19082

Programs and Curricula

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<tr>
<th>Energy Technology</th>
<th>Degree: AD, Specialized Technology</th>
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<tr>
<td>Contact:</td>
<td>Thomas, Richard B.</td>
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<td>Students Taking or Completing Offering:</td>
<td>Solar Technician, Electrician</td>
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Solar Related Courses

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<th>Advanced Solar Design</th>
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<td>Program or Curriculum: Energy Technology</td>
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<td>Credits: 2</td>
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<td>Student Level: High School Graduate</td>
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<td>Duration: 12 Weeks, 40 hrs per week</td>
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<td>Contact Hours: 48</td>
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<td>Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design</td>
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<td>Number of Times Taught: 1</td>
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<td>Average Enrollment: 35</td>
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<th>Basic Solar Design</th>
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<td>Program or Curriculum: Energy Technology</td>
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<td>Credits: 1</td>
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<tr>
<td>Student Level: High School Graduate</td>
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<td>Duration: 12 Weeks, 5.0 hrs per week</td>
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<td>Contact Hours: 60</td>
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<tr>
<td>Topics Covered Extensively: Energy Storage, Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design</td>
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<td>Number of Times Taught: 1</td>
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<td>Average Enrollment: 35</td>
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<tr>
<th>Energy Conversion</th>
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<td>Course Number: B</td>
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<td>Program or Curriculum: Energy Technology</td>
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<td>Credits: 4</td>
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<td>Student Level: High School Graduate</td>
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<td>Duration: 12 Weeks, 5.0 hrs per week</td>
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<td>Contact Hours: 60</td>
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<tr>
<td>Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Intro. to Solar Energy; Wind Power, Small Systems</td>
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<td>Number of Times Taught: 1</td>
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<td>Average Enrollment: 35</td>
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Pennsylvania State University - Shenango Valley Campus [3345]
Sharon, Pennsylvania 16146
(412) 981-1640

Programs and Curricula

Solar Heating and Cooling Technology

| Degree: Short Course Certificate |
| Contact: Houlihan, John F. |
| phone: (412) 981-1640 |
| Program or Curriculum: Solar Heating and Cooling Tech. |
| Credits: 2 |
| Student Level: Freshman or Sophomore |
| Duration: 10 Weeks, 2.0 hrs per week |
| Contact Hours: 20 |
| Classroom: 15 |
| Laboratory: 5 |
| Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling; Wind Power, Central Systems |
| Number of Times Taught: 2 |
| Average Enrollment: 12 |

Introduction to Solar Energy

| Instructor: Houlihan, J. F. |
| phone: (412) 981-1640 |
| Program or Curriculum: Solar Heating and Cooling Tech. |
| Credits: 2 |
| Student Level: Freshman or Sophomore |
| Duration: 10 Weeks, 2.0 hrs per week |
| Contact Hours: 20 |
| Classroom: 28 |
| Laboratory: 2 |
| Topics Covered Extensively: Intro. to Solar Energy; Space Heating; Wind Power, Central Systems |
| Number of Times Taught: 2 |
| Average Enrollment: 15 |

Solar Heating and Cooling Technology

| Instructor: Houlihan, J. F. |
| phone: (412) 981-1640 |
| Program or Curriculum: Solar Heating and Cooling Tech. |
| Credits: 1 |
| Student Level: All levels |
| Duration: 2 Weeks, 40.0 hrs per week |
| Classroom: 60 |
| Laboratory: 12 |
| Topics Covered Extensively: Energy Conservation, Energy Storage, Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating, Space Cooling |
| Number of Times Taught: 1 |
| Average Enrollment: 30 |
Triangle Institute of Technology, Inc. [90110]
635 Smithfield St.
Pittsburgh, Pennsylvania 15222
(412) 255-6170

Programs and Curricula
Solar Energy Systems
Degree: AD, Specialized Technology
Contact: Knoyer, Ralph
(412) 255-6170

Students Taking or Completing Offering: Solar Technician; Electrician, Plumber, Sheet Metal Worker

Solar Related Courses
Solar Energy Systems
Instructor: Knoyer, Ralph
(412) 255-6170
Course Number: 400.0.
Department: Refriger.; Heat., Vent., and Air Cond.
Program or Curriculum: Solar Energy Systems
Credits: 10
Student Level: High School Graduate
Duration: 16 Weeks, 25.0 hrs per week
Contact Hours: 390
Classroom: 90
Laboratory: 300


RHODE ISLAND
None

SOUTH CAROLINA

Beaufort Technical Education Center [9910]
Beaufort, South Carolina 29902
(803) 524-3380

Programs and Curricula
Refrigeration and Air Conditioning — Solar Energy Applications
Degree: AD, Refrigeration and Air Conditioning, General Technology
Contact: Spivey, Edward F.
(803) 524-0148

Students Taking or Completing Offering: Installer-Residential (Solar System), Solar Technician, Trade Specialty

Solar Related Courses
Solar Energy Application
Instructor: Spivey, E.F.
(803) 524-0148
Course Number: ARC 240
Department: Refrigeration and Air Conditioning
Program or Curriculum: Refrigeration and Air Conditioning-Solar Energy Appl.
Credits: 4
Student Level: High School Graduate
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 33
Laboratory: 33

Topics Covered Extensively: Heat and Energy Transfer

Florence Darlington Tech [3990]
Florence, South Carolina 29502
(803) 662-8151

Programs and Curricula
Conversion of Solar Energy
Degree: Climate Control
Contact: Jackson, Edward (803) 662-8151

Solar Related Courses
Conversion of Solar Energy
Instructor: Jackson, Edward
(803) 662-8151
Course Number: ARC 204
Department: Industrial Trades - Climate Control
Program or Curriculum: Conversion of Solar Energy
Credits: 4
Student Level: High School Graduate
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 33
Laboratory: 33

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Solar Systems Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water

Trident Technical College [8818]
PO Box 10367
Charleston, South Carolina 29411
(803) 553-2375

Programs and Curricula
Air Conditioning — Refrigeration
Degree: Air Conditioning — Refrigeration
Contact: Moore, James L.
(803) 572-6180

Students Taking or Completing Offering: Installer-Residential (Solar System)

Solar Related Courses
Solar Heating
Instructor: Moore, James L.
(803) 572-6180
Department: Air Conditioning - Refrigeration
Program or Curriculum: Air Conditioning — Refrigeration
Student Level: High School Graduate
Duration: 3 Weeks, 30.0 hrs per week
Contact Hours: 90
Classroom: 30
Laboratory: 60

Topics Covered Extensively: Heat and Energy Transfer; Solar System Components; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating

York Technical College [3996]
Rock Hill, South Carolina 29730
(803) 328-3843

Programs and Curricula
Conversion of Solar Energy
Degree: Air Conditioning, Refrigeration, and Heating
Contact: White, Lacy
(803) 324-3130

Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System), Trade Specialty

Solar Related Courses
Conversion of Solar Energy
Instructor: White, Lacy
SOUTH DAKOTA

None

TENNESSEE

Motlow State Community College [6836]
Tullahoma, Tennessee 37388
(615) 455-8511

Programs and Curricula

Energy Engineering Technology
Degree: AD, Engineering Technology — Energy Engineering Emphasis
Contact: Thornton, Otis B. (615) 455-8511
Students Taking or Completing Offering: Installer-Residential (Solar System), Researcher, Solar Technician

Solar Related Courses

Solar Energy Applications
Instructor: Lowndes, Richard (615) 455-8511
Course Number: ERG 205
Department: Career Education
Program or Curriculum: Energy Engineering
Credits: 4
Student Level: All levels
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 20
Laboratory: 30
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

Solar Energy Theory
Instructor: Lowndes, Richard (615) 455-8511
Course Number: ERG 204
Department: Career Education
Program or Curriculum: Energy Engineering Technology
Credits: 4
Student Level: All levels
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 20
Laboratory: 30
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

TEXAS

Central Texas College [4003]
Killeen, Texas 76541
(817) 526-1211

Programs and Curricula

Solar Energy Systems Specialist
Degree: Certificate of Completion
Contact: Tresler, Clarence (817) 526-1236
Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician, Trade Specialty

Solar Energy Systems Technology
Degree: AD, Applied Science
Contact: Tresler, Clarence (817) 526-1236
Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician, Trade Specialty

Solar Related Courses

Principles of Solar Energy
Instructor: Tresler, Clarence (817) 526-1236
Course Number: SESY 1314
Department: Industrial Technology
Program or Curriculum: Solar Energy Systems Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 2
Average Enrollment: 25

Solar Cooling Systems
Instructor: Tresler, Clarence (817) 526-1236
Course Number: SESY 241
Department: Industrial Technology
Program or Curriculum: Solar Energy Systems Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 48
Laboratory: 48

Solar Energy Special Projects
Instructor: Tresler, Clarence (817) 523-1236
Course Number: SESY 231
Department: Industrial Technology
Program or Curriculum: Solar Energy Systems Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 16
Laboratory: 80
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

Solar Heating Systems
Instructor: Tresler, Clarence (817) 526-1236
Course Number: SESY 141
Department: Industrial Technology
Program or Curriculum: Solar Energy Systems Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 48
Laboratory: 48
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Navarro College
Corsicana, Texas 75110
(214) 874-6501

Programs and Curricula
Solar Energy Installers-Mechanics

Solar Energy Installers-Mechanics
Degree: OTHER, Solar Energy Installers, Mechanics
Contact: Kasparyk, Ernesh

Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System)

Solar Engineering Technology
Degree: AD, Applied Science — Solar Engineering Technology
Contact: Myers, Arthur
(214) 874-6501

Students Taking or Completing Offering: Solar Technician

Solar Related Courses
Collector and Energy Storage
Instructor: Myers, Arthur
(214) 874-6501

Program or Curriculum: Solar Engineering Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 32
Laboratory: 64

Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Materials Research; Passive Solar Technology; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

Collector and Energy Storage, Installation and Service
Instructor: Norman, Albion
(214) 874-6501

Course Number: SE104
Program or Curriculum: Solar Energy Installers/ Mechanics
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 32
Laboratory: 64

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Materials Research; Passive Solar Technology; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

Economics, Codes, Legal, Consumerism
Instructor: Myers, Arthur
(214) 874-6501

Department: Solar Energy
Program or Curriculum: Solar Engineering Technology
Credits: 2
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Classroom: 32

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Marketing/Market Analysis; Solar Economics; Solar Home Construction; Solar Law; Legislation; Solar Collector Evaluation/Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

Energy Science I
Instructor: Myers, Arthur
(214) 874-6501

Department: Solar Energy
Program or Curriculum: Solar Engineering Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 48
Laboratory: 48

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro to Solar Energy; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling

Energy Science II
Instructor: Myers, Arthur
(214) 874-6501

Department: Solar Energy
Program or Curriculum: Solar Engineering Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 48
Laboratory: 48

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro to Solar Energy; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling

Introduction to Solar Heating and Cooling
Instructor: Norman, Albion
(214) 874-6501

Course Number: SE1013
Department: Occupational Education
Program or Curriculum: Solar Energy Installers/ Mechanics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Intro to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Elec'1 Generation, Small Scale; Space Heating; Space Cooling

Number of Times Taught: 1
Average Enrollment: 23

Materials and Fabrication
Instructor: Vaughn, Ralph
(214) 874-6501

Course Number: SE1034
Department: Occupational Education
Program or Curriculum: Solar Energy Installers/ Mechanics
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 32
Laboratory: 64

Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Materials Research; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
### Non-residential Applications & Future Technology

**Instructor:** Myers, Arthur  
**Department:** Solar Energy  
**Program or Curriculum:** Solar Engineering Technology  
**Credits:** 3  
**Student Level:** Freshman or Sophomore  
**Duration:** 16 Weeks, 5.0 hrs per week  
**Contact Hours:** 80  
**Classroom:** 16  
**Laboratory:** 64  
**Topics Covered Extensively:** Materials Research; Plumbing Techniques; Sheet Metal Techniques; Domestic Hot Water; Space Heating; Space Cooling

### Operational Diagnosis

**Instructor:** Myers, Arthur  
**Department:** Solar Energy  
**Program or Curriculum:** Solar Engineering Technology  
**Credits:** 3  
**Student Level:** Freshman or Sophomore  
**Duration:** 16 Weeks, 5.0 hrs per week  
**Contact Hours:** 80  
**Classroom:** 32  
**Laboratory:** 48  
**Topics Covered Extensively:** Alternate Energy Sources; Appropriate Technology; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Swimming Pool Heating; Electric Generation; Central; Electric Generation; Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling

### Sizing Design and Retrofit

**Instructor:** Myers, Arthur  
**Department:** Solar Energy  
**Program or Curriculum:** Solar Engineering Technology  
**Credits:** 4  
**Student Level:** Freshman or Sophomore  
**Duration:** 16 Weeks, 6.0 hrs per week  
**Contact Hours:** 96  
**Classroom:** 48  
**Laboratory:** 48  
**Topics Covered Extensively:** Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

### Solar Heating and Cooling Systems

**Instructor:** Myers, Arthur  
**Course Number:** SE1064  
**Department:** Occupational Education  
**Program or Curriculum:** Solar Energy Installers/ Mechanics  
**Credits:** 4  
**Student Level:** Freshman or Sophomore  
**Duration:** 16 Weeks, 6.0 hrs per week  
**Contact Hours:** 96  
**Classroom:** 32  
**Laboratory:** 64

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### Solar Practicum

**Instructor:** Myers, Arthur  
**Department:** Solar Energy  
**Program or Curriculum:** Solar Engineering Technology  
**Credits:** 3  
**Student Level:** Freshman or Sophomore  
**Duration:** 16 Weeks, 3.0 hrs per week  
**Contact Hours:** 48  
**Laboratory:** 48  
**Topics Covered Extensively:** Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Materials Research; Plumbing Techniques; Sheet Metal Techniques; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

### Technical Surveys of Energy Sources

**Instructor:** Myers, Arthur  
**Department:** Solar Energy  
**Program or Curriculum:** Solar Engineering Technology  
**Credits:** 3  
**Student Level:** Freshman or Sophomore  
**Duration:** 16 Weeks, 3.0 hrs per week  
**Contact Hours:** 48  
**Classroom:** 48  
**Topics Covered Extensively:** Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Domestic Hot Water; Swimming Pool Heating; Electric Generation; Central; Electric Generation; Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

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**North Lake College [29066]**  
**Irving, Texas 75062**  
**Phone:** (214) 255-5229

### Programs and Curricula

#### Solar Energy Technician

**Degree:** AD, Solar Technology  
**Contact:** Knowles, Jim  
**Phone:** (214) 255-5260  
**Students Taking or Completing Offering:** Solar Technician

### Solar Related Courses

#### Energy Science I

**Instructor:** Knowles, Jim  
**Department:** Science/Math/Technology  
**Program or Curriculum:** Solar Energy Technician  
**Credits:** 4  
**Student Level:** Freshman or Sophomore  
**Duration:** 16 Weeks, 6.0 hrs per week  
**Contact Hours:** 96  
**Topics Covered Extensively:** Energy Conversion; Heat and Energy Transfer

#### Future Technology

**Instructor:** Knowles, Jim  
**Department:** Science/Math/Technology  
**Program or Curriculum:** Solar Energy Technician  
**Credits:** 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Domestic Hot Water; Swimming Pool Heating; Elec' Generation, Central; Elec' Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Cooling

Introduction to Solar
Instructor: Knowles, Jim
(214) 255-5260
Department: Science/Math/Technology
Program or Curriculum: Solar Energy Technician
Credits: 2
Student Level: Freshman or Sophomore
Duration: 16 Weeks; 2.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Energy Conservation; Passive Solar Technology

Materials — Material Handling
Instructor: Knowles, Jim
(214) 255-5260
Department: Science/Math/Technology
Program or Curriculum: Solar Energy Technician
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80
Classroom: 16
Laboratory: 64
Topics Covered Extensively: Plumbing Techniques; Sheet Metal Techniques

Operational Diagnosis
Instructor: Knowles, Jim
(214) 255-5260
Department: Science/Math/Technology
Program or Curriculum: Solar Energy Technician
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 32
Laboratory: 32

Sizing Design and Retrofit
Instructor: Knowles, Jim
(214) 255-5260
Department: Science/Math/Technology
Program or Curriculum: Solar Energy Technician
Credits: 5
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 7.0 hrs per week
Contact Hours: 112
Classroom: 48
Laboratory: 64
Topics Covered Extensively: Solar Systems Design; Solar Systems Installation

Solar Codes and Consumerism
Instructor: Knowles, J
(214) 255-5260
Department: Science/Math/Technology
Program or Curriculum: Solar Energy Technician
Credits: 2
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Marketing/Market Analysis; Solar Energy Policy Development; Solar Economics; Solar Law/Legislation

Solar Practicum
Instructor: Knowles, Jim
Department: Science/Math/Technology
Program or Curriculum: Solar Energy Technician
Credits: 5
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80

Technical Survey of Energy Sources
Instructor: Knowles, J
(214) 255-5260
Department: Science/Math/Technology
Program or Curriculum: Solar Energy Technician
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Wind Power, Central Systems

Odessa College [3596]
Odessa, Texas 79760
(915) 337-5381

Programs and Curricula

Solar Power
Contact: Witcher, Norman
(915) 337-5381

Students Taking or Completing Offering: Solar Technician

Solar Related Courses

Solar Power
Instructor: Witcher, Norman
(915) 337-5381

Course Number: R/AC 2300
Department: Refrigeration & Air Conditioning
Program or Curriculum: Solar Power
Credits: 6
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 10.0 hrs per week
Contact Hours: 160
Classroom: 48
Laboratory: 112
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Systems Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar System Maintenance; Space Heating
Number of Times Taught: 1
Average Enrollment: 38

Ranger Junior College [3603]
Ranger, Texas 76470
(817) 647-3234

Programs and Curricula

Air Conditioning & Refrigeration — Solar Energy Option
Degree: AD, Applied Science
Contact: Stiles, Alton
(817) 647-3234

Students Taking or Completing Offering: Solar Technician

Solar Related Courses

Air Conditioning and Refrigeration — VII
Course Number: AR 281
Department: Air Cond. & Refrig.
Program or Curriculum: A/C and Refrig. — Sol. Ener. Option
Credits: 6
Student Level: Freshman or Sophomore
Topics Covered Extensively: Heat and Energy Transfer; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling

Fundamentals of Solar Heating & Cooling
Course Number: AR 263
Department: Air Cond. & Refrig.
Program or Curriculum: A/C and Refrig. — Sol. Ener. Option
Solar Technology
Degree: Certificate of Completion
Contact: Hacking, John
(801) 673-4811

Solar Related Courses
Introduction to Applied Solar Energy
Instructor: Tait, Don
(801) 673-4811
Course Number: ST 150
Department: Engineering Tech.
Program or Curriculum: Solar Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 5.0 hrs per week
Contact Hours: 55
Classroom: 55

Solar Energy — Home Use Applications
Instructor: Tait, Don
(801) 673-4811
Course Number: ST 123
Department: Engineering Tech.
Program or Curriculum: Solar Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 16
Laboratory: 15

VERMONT, VIRGINIA
None

WASHINGTON
North Seattle Community College [9704]
Seattle, Washington 98103
(206) 634-4444

Programs and Curricula
Heating — Solar Energy
Contact: Swenson, Don
(206) 634-4419

WASHINGTON
North Seattle Community College [9704]
Seattle, Washington 98103
(206) 634-4444

Programs and Curricula
Heating — Solar Energy
Contact: Swenson, Don
(206) 634-4419

Students Taking or Completing Offering: Sheet Metal Worker
Solar Related Courses
Heating — Solar Energy
Instructor: Swenson, Don
(206) 634-4419
Department: Engineering Technology
Program or Curriculum: Heating-Solar Energy
Student Level: High School Graduate
Duration: 6 Weeks, 15.0 hrs per week
Contact Hours: 90
Classroom: 45
Laboratory: 45

Solar Energy
Instructor: Stepinich, Ivan
Phone: (206) 634-4423
Course Number: ECT 207
Department: Engineering Related Technologies
Program or Curriculum: Heating-Solar Energy
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33


Number of Times Taught: 1
Average Enrollment: 25

WEST VIRGINIA

None

WISCONSIN

Moraine Park Technical Institute [9256]
Fond Du Lac, Wisconsin 54935
Phone: (414) 922-8611

Programs and Curricula
Solar Energy
Contact: Pasch, Rodney
Phone: (414) 922-8611

Students Taking or Completing Offering: Contractor, Do-it-yourself Homeowner, Electrician, Plumber, Sheet Metal Worker

Solar Related Courses
Solar Applications for Construction Industry
Instructor: Pasch, Rodney
Phone: (414) 922-8611
Course Number: 401-479
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 2
Student Level: All levels
Duration: 1 Week, 6.0 hrs per week
Contact Hours: 6

Topics Covered Extensively: Intro to Solar Energy, Solar Home Construction

Number of Times Taught: 5
Average Enrollment: 80

Solar Energy — Air Handling Systems
Instructor: Pasch, R.
Phone: (414) 922-8611
Course Number: 401-483
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 5
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20

Topics Covered Extensively: Heat and Energy Transfer, Solar System Components, Space Heating

Number of Times Taught: 2
Average Enrollment: 20

Solar Energy for Realtors
Instructor: Pasch, R.
Phone: (414) 922-8611
Course Number: 401-425
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 3
Student Level: All levels
Duration: 2 Weeks, 5.0 hrs per week
Contact Hours: 10
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 1
Average Enrollment: 40

Solar Energy Seminar
Instructor: Pasch, R.
Phone: (414) 922-8611
Course Number: 401-482
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 1
Student Level: All levels
Duration: 1 Week, 4.0 hrs per week
Contact Hours: 4
Classroom: 4

Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 2
Average Enrollment: 100

Solar Heat and Wind
Instructor: Pasch, Rodney
Phone: (414) 922-8611
Course Number: 401-480
Department: Trade & Technical
Program or Curriculum: Solar Energy
Credits: 5
Student Level: All levels
Duration: 2 Weeks, 10.0 hrs per week
Contact Hours: 20

Topics Covered Extensively: Space Heating, Wind Power, Small Systems

Number of Times Taught: 5
Average Enrollment: 17

Wind Energy Applications
Instructor: Pasch, Rodney
Phone: (414) 922-8611
Course Number: 401-484
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 2
Student Level: All levels
Duration: 1 Week, 8.0 hrs per week
Contact Hours: 6

Topics Covered Extensively: Electric Generation, Small Scale; Wind Power, Small Systems

Number of Times Taught: 1
Average Enrollment: 40

WYOMING

Sheridan College [3930]
Sheridan, Wyoming 82801
Phone: (307) 674-6446

Program and Curricula
Solar Energy Technology
Degree: AD, Engineering Technology — Solar Option
Contact: Ohm, Kenneth R.
Phone: (307) 674-6446

Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician, Do-it-yourself Homeowner

Solar Related Courses
Energy Storage
Course Number: 152
Program or Curriculum: Solar Energy Technology
Student Level: Freshman or Sophomore


Number of Times Taught: 5
Average Enrollment: 80

Solar Energy — Air Handling Systems
Instructor: Pasch, R.
Phone: (414) 922-8611
Course Number: 401-483
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 5
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20

Topics Covered Extensively: Heat and Energy Transfer, Solar System Components, Space Heating

Number of Times Taught: 2
Average Enrollment: 20

Solar Energy for Realtors
Instructor: Pasch, R.
Phone: (414) 922-8611
Course Number: 401-425
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 3
Student Level: All levels
Duration: 2 Weeks, 5.0 hrs per week
Contact Hours: 10
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 1
Average Enrollment: 40

Solar Energy Seminar
Instructor: Pasch, R.
Phone: (414) 922-8611
Course Number: 401-482
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 1
Student Level: All levels
Duration: 1 Week, 4.0 hrs per week
Contact Hours: 4
Classroom: 4

Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 2
Average Enrollment: 100

Solar Heat and Wind
Instructor: Pasch, Rodney
Phone: (414) 922-8611
Course Number: 401-480
Department: Trade & Technical
Program or Curriculum: Solar Energy
Credits: 5
Student Level: All levels
Duration: 2 Weeks, 10.0 hrs per week
Contact Hours: 20

Topics Covered Extensively: Space Heating, Wind Power, Small Systems

Number of Times Taught: 5
Average Enrollment: 17

Wind Energy Applications
Instructor: Pasch, Rodney
Phone: (414) 922-8611
Course Number: 401-484
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 2
Student Level: All levels
Duration: 1 Week, 8.0 hrs per week
Contact Hours: 6

Topics Covered Extensively: Electric Generation, Small Scale; Wind Power, Small Systems

Number of Times Taught: 1
Average Enrollment: 40
Topics Covered Extensively: Energy Storage; Photovoltaics; Wind Power, Small Systems

Installation and Service — Solar System
Course Number: 158
Program or Curriculum: Solar Energy Technology
Student Level: Freshman or Sophomore
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Space Heating; Space Cooling

Intro. to Solar Heating & Cooling
Course Number: 150
Program or Curriculum: Solar Energy Technology
Student Level: Freshman or Sophomore
Topics Covered Extensively: Intro. to Solar Energy; Materials Research; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Electrical Generation, Small Scale; Space Heating; Space Cooling

Solar Collectors
Course Number: 151
Program or Curriculum: Solar Energy Technology
Student Level: Freshman or Sophomore

Solar Energy Fundamentals
Instructor: Ohm, Kenneth R.
(307) 674-6446
Course Number: 19-190
Department: Career/Tech
Program or Curriculum: Solar Energy Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 48
Laboratory: 12
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 35

Solar Heating and Cooling Systems
Course Number: 155
Program or Curriculum: Solar Energy Technology
Student Level: Freshman or Sophomore
Topics Covered Extensively: Energy Storage; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling

Wind Systems
Course Number: 153
Program or Curriculum: Solar Energy Technology
Student Level: Freshman or Sophomore
Topics Covered Extensively: Wind Power, Central Systems; Wind Power, Small Systems
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