SERI/SP-42-141

January 1979

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National Solar Energy Education Directory

First Edition

In cooperation with the office of
U.S. Congressman George E. Brown, Jr.,
John Kimball, Staff Assistant, and
the Congressional Solar Coalition

SERI

Prepared by

George Corcoleotes
Katherine Kramer
Kevin O'Connor
Jo Ann Silversmith

Solar Energy Research Institute

1536 Cole Boulevard
Golden, Colorado 80401

A Division of Midwest Research Institute

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NATIONAL SOLAR ENERGY EDUCATION DIRECTORY

First Edition

Prepared by

Academic Programs Branch

Kevin O'Connor
George Corcoleotes

Data Base Systems

Jo Ann Silversmith
Katherine A. Kramer

JANUARY 1979

SOLAR ENERGY RESEARCH INSTITUTE
1536 Cole Boulevard
Golden, Colorado 80401

A Division of Midwest Research Institute

Prepared for the U.S. Department of Energy
Division of Solar Technology
Under Contract EG-77-C-01-4042

Approved for:
Solar Energy Research Institute

George Warfield

George Warfield
Assistant Director
Academic and International Programs

ACKNOWLEDGEMENTS

The preparation of this report was accomplished by a combined effort of many people. In the Academic Programs Branch, Kevin O'Connor had overall project management responsibility and served as the contact person with John Kimball who coordinated the survey effort from U.S. Congressman Brown's Office. George Corcoleotes, Academic Programs, had overall responsibility for data collection. He was responsible for receiving, reviewing and editing the survey returns.

Jo Ann Silversmith, Katherine Kramer, SPIRES consultants, and the staff of the Database Systems Branch designed and built the computerized database, supervised the data input, and provided technical assistance.

FOREWORD

The production of the "1978-79 National Solar Energy Education Directory" (NSEED) represents the culmination of a project initiated in June of 1978. At the Solar Energy Research Institute (SERI), a need for an Educational Data Base (EDB) has been established. The created EDB becomes part of the Congressionally-mandated Solar Energy Information Data Bank (SEIDB).

SERI, having learned from John Kimball of the Office of U.S. Congressman George E. Brown, Jr., that they were planning a National survey of post-secondary educational institutions, agreed to become the survey information processing agent for the sponsoring organizations - Congressman Brown's Office and the Congressional Solar Coalition. Approximately 8,000 surveys were mailed to some 3,200 educational institutions in July of 1978. This Directory, along with information from other noted sources, represents information placed in the data base as of December, 1978.

We hope you find the Directory useful. We will appreciate your brief evaluation of the Directory by returning the User Evaluation Sheet on page xviii of the Directory.

1978-79 NATIONAL SOLAR ENERGY EDUCATION DIRECTORY

TABLE OF CONTENTS

USE AND INTERPRETATION OF THIS DIRECTORY

IMPORTANT NOTICE: Several important points need to be understood by the user of this Directory. The information contained in the Directory is derived from responses to a national survey of all post-secondary educational institutions. Its completeness is based on those responses and the secondary sources utilized as noted on page ix. The accuracy and reliability of the information is based on those responses and, in some cases, our best judgement on data interpretation. This is a first effort. While we feel the information should be useful to many, we know the next Directory will be more complete and accurate. Should individuals desire additional information relative to activities of particular institutions, they should call or write the institutions.

DIRECTORY ORGANIZATION: The organization of the directory lists institutions alphabetically by institution type within state. A complete alphabetical index of institutions is found in the back of the Directory along with a cross reference to program and curriculum titles. Within each institution, programs and curricula offered, if any, are listed following the institution name, ID number (found in parentheses to the right of the institution name), address and phone number. All solar-related courses are then listed alphabetically by course title. If a course is offered within a program or curriculum, the program or curriculum name with which it is associated is printed.

Institution names and addresses for mailing labels and for creating the initial computerized data base were obtained from the National Center for Education Statistics. Approximately 8,000 surveys were mailed to some 3,200 educational institutions. Of these, some 2,100 instutitions responded. Over 600 institutions indicated offering at least one solar-related course. Over 125 educational institutions indicated offering a program or curriculum. By combining the survey responses with secondary sources of information (courses, programs or curricula marked by an "*") the Directory contains entries for nearly 700 institutions.

EDITING NOTES: In the compilation of the directory of post-secondary educational institutions offering solar-related courses, programs and curricula, every reasonable effort

was made to obtain accurate and reliable information. Both phone calls and follow-up mail requests were used to gather additional information where necessary. Where information was difficult to interpret, and contact was not made with the respondent, a best judgement of the data submitted was entered into the file. Every survey instrument was read, coded and edited. In order to conform with character limitations in certain fields, some responses were abbreviated.

Specific data element responses were examined for consistency with other data elements, e.g. Did the total contact hour field represent the sum of the subfields of contact hours? In some cases, interpretations were made relative to the program/curriculum classification (page xii defines program and curriculum). The most common judgements which were made concerned the question of solar-related courses. With a slight stretch of interpretation, an institution could develop a long list of "solar-related" courses. Hence, some courses submitted which appeared only remotely related to solar were not included in the directory. In future updates, a solar-related course is defined as one in which at least one-third of the contact hours are spent teaching direct solar-related topics.

Probably the most difficult question to interpret on the survey was question 11 on the first page of the survey (see page xiii). The question reads: "Students completing the Program/Curriculum would generally be classified as...". While the attempt of this question was to elicit responses relative to the expertise obtained by the students as a result of completing the program or curriculum, the responses very often reflected the kinds of students involved in the program or curriculum. Therefore, in the Directory we have named the responses to the question with the heading "Students Taking or Completing Offering".

Institutions which only had planned courses, programs, or curricula were not included in the Directory. Relative to course topic information, only those topics taught extensively were listed in the course details.

DIRECTORY UPDATE: As the Directory is used, data errors and ommissions will be noted. If errors in the reported records are found, the pages may be copied and returned to SERI with corrections noted. If additional

programs, courses, and/or curricula should be included, the survey form on pages xiii - xv may be copied and completed. Return changes, additions, or deletions to:

Solar Energy Education Data Base
Attn: George Corcoleotes
Solar Energy Research Institute
1536 Cole Boulevard
Golden, Colorado 80401

For questions concerning updates call SERI at (303) 231-1831.

SECONDARY SOURCES UTILIZED

In addition to the responses received from the initial survey, several sources of information were utilized to make the data base more complete. Each entry derived from secondary sources has been "starred" (*) to call attention to the user that the information provided for that institution has been derived from a source other than the primary survey.

Institutions and organizations which appear in the Directory as having information supplied from secondary sources are encouraged to submit complete information on their educational offerings by completing a copy of the Survey Response Form found on pages xiii - xv.

Following is a list of secondary sources utilized in the compilation of the Directory:

1. Alternative Sources of Energy, Nos. 21 & 31, Rt. 2, Milaca, MN 56353.

2. California Educational Opportunities for Solar Energy and Energy Conservation at Institutions of Higher Education. U.S. Congressman George E. Brown, Jr., 2342 House Office Building, Washington, D.C. 20515.

3. Colleges and Universities with Solar-Related Courses, Mid-American Solar Energy Complex, 1256 Trapp Road, Eagan, MN 55121.

4. HUD Solar Status--A Special Report, September 1978, U.S. Department of Housing and Urban Development, Washington, D.C. 20410.

5. Illinois Solar Energy Education Program Directory, 1977-79, University of Illinois, Urbana, Illinois 61801.

6. National Solar Heating and Cooling Information Center, P.O. Box 1607, Rockville, MD 20850.

7. Report from California, California Community Colleges, November 2, 1978, Barbara S. Pratt, California Community Colleges, 1238 "S" Street, Sacramento, CA 95814.

8. Solar Action Office, One Ashburton Place, Boston, MA 02108.

9. Solar Energy Source Book, Christopher W. Martz, Solar Energy Institute of America, 1110 6th Street, NW, Washington, D.C. 20001.

GEORGE E. BROWN, JR.
2342 House Office Building
Washington, D.C. 20515
(202) 225-6161

COMMITTEES:
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TECHNOLOGY ASSESSMENT BOARD

Congress of the United States
House of Representatives
Washington, D.C. 20515

36TH DISTRICT OF CALIFORNIA

PLEASE REPLY TO

DISTRICT OFFICES:

☐ Vanir Tower
290 North D Street
Suite 717
San Bernardino, California 92402
(714) 825-2472

☐ Mission Inn Rotunda
3616 Main Street, Suite 500
P.O. Box 71
Riverside, California 92502
(714) 686-8863

☐ Washington Office

FIRST NATIONAL SOLAR ENERGY EDUCATION SURVEY

July, 1978

TO: Presidents of Educational Institutions, Institute Heads, Deans and Department Directors offering Educational Programs in Solar Energy

FROM: U.S. Rep. George E. Brown, Jr.
U.S. Rep. James M. Jeffords
U.S. Rep. James J. Blanchard
U.S. Senator Charles H. Percy
U.S. Senator Thomas J. McIntyre

The Congressional Solar Coalition is interested in your participation in a cooperative effort to create a data base of all solar energy-related programs and courses currently being offered by our nation's post-secondary educational institutions.

Two organizations have agreed to work with the collected information. The Solar Energy Research Institute (SERI) in Golden, Colorado will have responsibility for the creation of a computerized data base which will become part of the legislatively mandated Solar Energy Information Data Bank (SEIDB). SERI's Information Systems Branch will receive the survey returns, edit and process the data into a computerized data base, and create the appropriate retrieval, reporting, updating, and analysis mechanisms. The compilation of collected material will be made available in a published Solar Energy Educational Directory. As an interim measure, before the computerized data base at SERI is fully operational, the National Solar Heating and Cooling Information Center (NSHCIC) will have the capability of providing a listing of solar educational offerings on a state-by-state basis free of charge to anyone by calling their toll-free number: (800) 523-2929.

The suggested deadline for returning the survey is September 15, 1978. For the purpose of this survey, wind, biomass conversion, and ocean thermal energy conversion should also be considered as solar technologies. New courses, curricula, and updates will be accepted any time following the September 15th date. However, this is not preferred. Even if you do not offer solar courses, please complete and return the first page of the form.

We appreciate your participation and, for your help, the Solar Energy Research Institute will be sending you a listing of the programs in your state. We hope you will be able to use the compiled information for your own course and/or curriculum development.

We would also like to use this opportunity to make sure that you are aware of the Higher Education Act Amendments of 1976. Of particular importance is an amendment introduced by Sen. Thomas J. McIntyre, (N.H.), that allows Federal Funds to be used for solar education programs in post-secondary vocational education schools. You might want to investigate your own possible uses of federal funds for the development of new or additional solar energy curricula.

Solar Energy Educational Survey Instructions

If your institution is not offering any solar related programs, please complete only the first page of the survey, so indicating. If solar offerings are made by your institution, we would be happy to receive any additional information which you feel would be helpful.

The three-page survey form is designed to elicit information on solar-related programs, courses and/or curricula currently being offered or planned to be offered by educational institutions. Your assistance in making the form entries as complete as possible will be greatly appreciated. There are two sections to be completed: (1) Educational Institutions and (2) Course Information (2 pages). Some detailed instructions may help in answering certain questions. Note that for the purpose of this survey wind, biomass conversion, and ocean thermal energy conversion should also be considered as solar technologies.

I. Educational Institutions

Q. 4. If your institution offers or plans to offer a solar curriculum or program, answer "yes" to question 4 and complete questions 5 through 12 for each curriculum or program offered or planned. Duplicate the form if necessary.

Q. 5-12. In questions 5 through 12, information relative to solar curricula and programs is requested, as distinguished from single course offerings. A curriculum is a set of integrated courses leading toward a degree or certificate. A program is loosely defined as a formal academic experience usually combining course-work and research in applied solar technology, but not necessarily leading to a degree in solar expertise. Specialized summer programs and research institutes are examples. The answer to Q. 8, Head of Prog./Curr., should be the main contact person for someone desiring more information about the program or curriculum. Question 12 estimates the proportion of students successfully placed in solar-related jobs.

Q. 13-14. Please answer question 14, regardless of the answer given in question 13. If your institution is presently offering solar courses ("Yes" to question 13), it may also be developing additional courses.

II. Course Information

Please complete the Course Information Section (2 pages) for each separate, solar-related course, either presently offered or planned to be offered. Duplicate the Course Information Section if necessary to cover all solar courses offered. Any questions you may have concerning the survey form may be answered by George Corcoleotes at SERI (303) 231-1831 or Kevin O'Connor 231-1825.

SERI, Academic Programs
Attn: George Corcoleotes
1536 Cole Boulevard
Golden, Colorado 80401

Thank you very much for your participation.

I. Educational Data Base — Educational Institutions

1. Institution Name: _____

2. Address: _____
   Street City State Zip

3. Institution Type:

   ☐ 4 Yr. Coll./Univ./Grad. School
   ☐ Community/Junior College
   ☐ Vocational/Technical School
   ☐ Other (describe) _____

4. Does your institution offer/plan a Solar Curriculum or Program? Yes ☐ No ☐
   If "No", go to Question 13.

Please complete Questions 5-12 for each solar energy Curriculum or Program offered or planned. If more than one Program/Curriculum is offered/planned please make copies of this section and attach.

5. Is the offering a Program? ☐ Currently Offered? ☐ or Planned? ☐
   or Curriculum? ☐ Currently Offered? ☐ or Planned? ☐

6. Program/Curriculum Name: _____

7. College/Dept. offering Program/Curriculum: _____

8. Head of Prog./Curr.: _____ Phone: ( )

9. What Degree/Title/Certificate, if any, does graduating student receive?
   ☐ Ph.D. ☐ MA ☐ MS ☐ BA ☐ BS ☐ Associate Degree ☐ None
   ☐ Other (specify) _____

10. Name of Degree/Title/Certificate: _____

11. Students completing Program/Curriculum would generally be classified as (check as many as apply):

    ☐ Architect
    ☐ Educator
    ☐ Researcher
    ☐ Solar Engineer
    ☐ Mech./Elec. Contractor
    ☐ General Contractor — Specializing in solar design/installation
    ☐ Do-it-yourselfer/Homeowner
    ☐ Solar System Installer:
      ☐ Residential
      ☐ Industrial/Commercial
    ☐ Solar Technician — one trained in instrumentation, controls, design, maintenance, etc.
    ☐ Person specializing in solar from one of the following trades/skills:
      ☐ Electrical ☐ Plumbing ☐ Sheet Metal
      ☐ Other (specify) _____
    ☐ Other (specify) _____

12. Estimate what percentage of graduates of the above Prog./Curr. enters the job market in the field for which they are specifically trained: _____%

13. Is your institution presently offering solar courses? Yes ☐ No ☐

14. Are any (additional) solar courses being developed? Yes ☐ No ☐

For all courses, existing or planned, please complete the 2-page Course Information Section. Make extra copies of the section if needed. If no solar-related courses are offered or planned, complete this page only and return.

Thank you very much.

II. Educational Data Base — Course Information

1. Name of Institution: _____

2. Course Title: _____

3. Course Number: _____ 4. Is Course Currently Offered? ☐ Or Planned? ☐

5. Course Instructor/Contact: _____ Phone: (____) _____

6. College/Dept. Offering Course: _____

7. Is Course also taught in conjunction with other Colleges/Depts.? Yes ☐ No ☐

8. Most of the students in course are from what Colleges/Depts.? (Please List)

   a. _____ b. _____ c. _____
   d. _____ e. _____ f. Don't Know ☐

9. Number of Times Course Taught to Date: _____ 10. Average Enrollment _____

11. Number of Students Completing Course:
    1973 or earlier _____ 1974 _____ 1975 _____ 1976 _____
    1977 _____ 1978 (est.) _____ 1979 (est.) _____

12. Is Course Offered for Academic Credit? Yes ☐ No ☐ 13. # Credit Hours _____

14. Typical Academic Level of Student Taking Course: All Levels ☐
    High School Grad. ☐ Fresh/Soph ☐ Jr/Sr ☐ College Grad. ☐ Postdoctoral ☐

15. Duration of Course: (# of Weeks _____ Hrs./Week _____) OR (# of Days _____ Hrs./Day _____)

16. Contact Hours: Total _____ Classroom/Lecture _____ Laboratory _____
    On-the-job-training _____ Other _____ (Specify) _____

17. To what extent are the following topics covered in your course? Check only those that apply. Please specify topics not listed, but included in the course.

Extensively	Somewhat	Course Topics
☐	☐	1. Alternate Energy Sources
☐	☐	2. Appropriate Technology
☐	☐	3. Biomass Conversion
☐	☐	4. Energy Conservation
☐	☐	5. Energy Conversion
☐	☐	6. Energy Storage
☐	☐	7. Heat and Energy Transfer
☐	☐	8. Intro. to Solar Energy
☐	☐	9. Marketing/Market Analysis
☐	☐	10. Materials Research
☐	☐	11. Passive Solar Technology
☐	☐	12. Photovoltaics
☐	☐	13. Plumbing Techniques
☐	☐	14. Solar Energy Policy Development
☐	☐	15. Sheet Metal Techniques
☐	☐	16. Solar System Components
☐	☐	17. Solar Economics
☐	☐	18. Solar Home Construction
☐	☐	19. Solar Law/Legislation
☐	☐	20. Solar Collector Evaluation/Design

Extensively	Somewhat	Course Topics
☐	☐	21. Solar Systems Design
☐	☐	22. Solar Systems Installation
☐	☐	23. Solar Systems Maintenance
☐	☐	24. Solar Systems Testing and Evaluation
		Solar Applications
☐	☐	25. Domestic Hot Water
☐	☐	26. Swimming Pool Heating
☐	☐	27. Elec'l Generation, Central
☐	☐	28. Elec'l Generation, Small Scale
☐	☐	29. Process Heat, Agricultural
☐	☐	30. Process Heat, Industrial
☐	☐	31. Space Heating
☐	☐	32. Space Cooling
☐	☐	33. Wind Power, Central Systems
☐	☐	34. Wind Power, Small Systems
		Other (specify)
☐	☐	35. _____
☐	☐	36. _____

Please complete back of form for this course. Thank you.

II. Educational Data Base — Course Information (Continued)

Materials Used or Proposed for Use in this Course

18. Is a text used in this course? Yes ☐ No ☐

19. Name of text _____ 20. Author _____

The following are used in this course:

21. Slides: Yes ☐ No ☐ 22. Films: Yes ☐ No ☐ 23. Demonstrations: Yes ☐ No ☐

24. List sources of above materials or describe demonstrations.

25. Course Prerequisites (May be copied from catalog, etc.):

26. Course Description (May be copied from catalog, etc.):

Thank you very much for your participation.

SELECTED SOURCES OF INFORMATION

An abundance of reference materials and other sources of information exists in the field of solar energy. The sources of information cited here will only be highlights of some of the information which can be obtained.

a. Solar Energy Research Institute.

For information about SERI publications contact the SERI Public Information Office, 1536 Cole Boulevard, Golden, Colorado 80401, (303) 231-1000. Ask to be placed on the mailing list for the SERI Publications and Presentations Bulletin, a quarterly publication. The first issue, Volume I-1, was published in November, 1978.

b. US Department of Energy.

1) "Guide to Solar Energy Programs" (Latest Edition) DOE/ET-0036/1, US Department of Energy Assistant Secretary of Energy Technology Division of Solar Technology Washington, DC 20545

Also available from:

US Government Printing Office
Washington, DC 20402 Price: $2.40
S/N 061-000-00042-9

2) "Solar Energy Task Force Report on Technical Training" (Appropriate for Educational Institutions involved in or anticipating involvement in solar course, program, or curriculum development.) Draft report distributed at the National Energy Education, Business and Labor Conference in Washington, DC, January 15-17, 1979.

Available from:

Education Programs Division
US Department of Energy
Forrestal Building, 1000 Independence Ave., SW
Washington, DC 20585 (202) 376-9211
Also available from:

SERI, Public Information Office
1536 Cole Boulevard

Golden, CO 80401

In DOE also ask for other documents available from the Education Programs Division of Intergovernmental and Institutional Relations and the Technology Transfer Division of Conservation and Solar Applications.

3) Education materials also available from:
US Department of Energy
Technical Information Center
PO Box 62
Oak Ridge, TN 37830

c. National Solar Heating and Cooling Information Center.

Bibliographies and reference lists are available along with films and many other resources. Call toll free (800) 523-2929. In Pennsylvania call (800) 462-4983. Or write:

National Solar Heating and Cooling Information Center
PO Box 1607
Rockville, MD 20850

d. US Office of Education.

For Possible funding sources obtain:

"A Selected Guide to Federal Energy and Education Assistance"
Energy and Education Action Center
US Office of Education, Room 514
Reporters Building, 300 7th Street, SW
Washington, DC 20202 (202) 472-7777

USER EVALUATION SHEET

NATIONAL SOLAR ENERGY EDUCATION DIRECTORY

Please take a few minutes to complete the following form. Your comments will be valuable to us.

1. I found the 1978-79 NSEED:

   _____ Extremely useful _____ Useful

   _____ Not very useful, but worth having _____ Not worth printing

   Comments:_____

   _____

2. I found the information to be:

   _____ Sufficiently detailed _____ Not detailed sufficiently

   Comments: _____

   _____

3. I would like to see the following cross references in future directories:

   a. _____

   b. _____

4. I found the printing quality to be:

   _____ Satisfactory _____ Unsatisfactory

5. I recommend the continuation of an annual publication of the Solar Energy Education Directory:

   _____ Yes _____ No

6. I recommend the following additions, deletions, changes to be made in future directories:

   _____

   _____

   _____

   _____

7. I would like to see the following special reports from the data base on solar energy education:

   _____

   _____

Please return form to:

Academic Programs Branch
Attn: Kevin O'Connor
Solar Energy Research Institute
1536 Cole Boulevard
Golden, Colorado 80401

(Optional) Respondent's Name and Address

Name: _____ Phone _____
Organization: _____
Address: _____
_____
_____

Colleges/Universities

ALABAMA A & M UNIVERSITY (1002)
Patton Hall
NORMAL, Alabama 35762
(205) 859-7011

SOLAR RELATED COURSES

An Introduction to Practical Energy Systems
Instructor: Jenkins, Joseph
(705) 859-7320
Course Number: IDS 501
Department: Technology/Engineering Technology
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 8.0 hrs per week
Contact Hours: 80
Classroom: 60
Laboratory: 20
Number of Times Taught: 2
Average Enrollment: 30

Heat Transfer
Instructor: Jenkins, Joseph
(205) 859-7320
Course Number: MET 408
Department: Technology/Engineering Technology
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 4
Average Enrollment: 10

Thermodynamics
Instructor: Jenkins, Joseph
(205) 859-7320
Course Number: MET 306
Department: Technology/Engineering Technology
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Number of Times Taught: 15
Average Enrollment: 15

* * * * * * * * * *

ALABAMA IN BIRMINGHAM, U (1052)
BIRMINGHAM, Alabama 35294
(205) 934-4011

SOLAR RELATED COURSES

Ener. Crisis, Homeowners Alternatives
Instructor: Garrison, Aubrey
(205) 871-7336
Department: Special Studies
Student Level: All levels
Duration: 6 Weeks, 2.0 hrs per week
Contact Hours: 12
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Solar Home Construction
Number of Times Taught: 2
Average Enrollment: 15

Energy Crisis and the Environment
Instructor: Young, John
(204) 934-3375
Course Number: ENV 2
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Number of Times Taught: 10
Average Enrollment: 100

* * * * * * * * * *

ALABAMA IN HUNTSVILLE, U (1055)
HUNTSVILLE, Alabama 35807
(205) 895-6120

SOLAR RELATED COURSES

Solar Systems Analysis - Part I
Instructor: Humphries/ Nash
(205) 453-3629
Course Number: CE-T67
Department: Continuing Education
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Heat and Energy Transfer; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 15

Solar Systems Analysis - Part 4
Instructor: Humphries, William R.
(205) 453-3629
Course Number: CE-T74
Department: Continuing Education
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 10

Survey of Solar Heating and Cooling
Instructor: Humphries, William R.
(205) 453-3629
Course Number: CE-T49
Department: Continuing Educationn
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar

Energy; Solar Collector Evaluation/Design
Number of Times Taught: 4
Average Enrollment: 14

* * * * * * * * * *

AUBURN U AT MONTGOMERY (8310)
MONTGOMERY, Alabama 36117
(205) 279-9110

SOLAR RELATED COURSES

School Facility Planning
Instructor: Harrison, Barker (205) 279-9110
Course Number: 691
Department: Education/Administrator
Credits: 4
Student Level: College Graduate
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Classroom: 36
Laboratory: 8
Number of Times Taught: 10
Average Enrollment: 16

* * * * * * * * * *

AUBURN U MAIN CAMPUS (1009)
AUBURN, Alabama 36830
(205) 826-4000

SOLAR RELATED COURSES

Energy Conscious Design
Instructor: Paxley, Harry (205) 821-4517
Course Number: AR 495
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Number of Times Taught: 5
Average Enrollment: 15

Solar Energy Utilization
Instructor: Goodling, J. S. (205) 826-4879
Course Number: 683
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 10

Special Problems and Terminal Project
Instructor: Lechner, Norbert (205) 826-4518
Course Number: 4600490
Department: Architecture & Fine Arts
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Number of Times Taught: 2
Average Enrollment: 15

* * * * * * * * * *

MONTEVALLO,UNIVERSITY OF (1004)
MONTEVALLO, Alabama 35115
(205) 665-2521

SOLAR RELATED COURSES

Energy and Civilization
Instructor: Kwon, T.H. (205) 665-2521
Course Number: 120
Department: Physics
Credits: 4
Student Level: Freshman or Sophomore
Duration: 14 Weeks, 3.5 hrs per week
Contact Hours: 50
Classroom: 36
Laboratory: 14
Number of Times Taught: 2
Average Enrollment: 22

* * * * * * * * * *

Colleges/Universities

ALASKA METH UNIVERSITY (1061)
ANCHORAGE, Alaska 99504
(907) 276-8181

SOLAR RELATED COURSES

Alaska's Energy Resources
Instructor: Rutledge, Eugene
Course Number: PHYS 492
Department: Arts and Sciences
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 2.5 hrs per week
Contact Hours: 35
Classroom: 35
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; Solar Economics; Solar Law/Legislation; Elec'l Generation, Central; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 10

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Community/Junior Colleges

ALASKA ANCHORAGE CC, U OF (1064)
ANCHORAGE, Alaska 99504
(907) 279-6602

SOLAR RELATED COURSES

Topics on Solar and Wind Power
Instructor: Wise, James L. (907) 279-0523
Course Number: ENVS 194
Department: Natural Sciences/Mathematics
Credits: 1
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 15
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Law/Legislation; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 25

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U OF ALASKA KENAI CC (1066)
SOLDOTHNA, Alaska 99669
(907) 262-5801

SOLAR RELATED COURSES

Alternative Sources I
Instructor: Steffy, D. (907) 262-5801
Course Number: ET 211
Department: Applied Science
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conversion; Energy Storage; Heat and Energy Transfer; Plumbing Techniques; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Process Heat, Agricultural; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems

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U OF ALASKA NORTHWEST CC (13169)
NOME, Alaska 99762
(907) 443-2201

SOLAR RELATED COURSES

Environment Society
Instructor: McGuire, Nancy (907) 443-2201
Course Number: BIOL103
Department: Arts and Science
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42

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U OF ALASKA TANANA VLY CC (29093)
FAIRBANKS, Alaska 99701
(907) 479-7035

SOLAR RELATED COURSES

Const. and Analysis Ener. Eff. Homes
Instructor: Raggasch, Robert (907) 479-7880
Course Number: P.D. 193
Department: Community Interest Programs
Credits: 2
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources

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Colleges/Universities

ARIZONA STATE UNIVERSITY (1081)
TEMPE, Arizona 85281
(602) 965-9011

PROGRAMS AND CURRICULA

Energy Conversion and Power Systems
Degree: PhD, MS, BS, Mechanical Engineering
Contact: Metzger, D. E. (602) 965-3291
Students Taking or Completing Offering: Trade Specialty

SOLAR RELATED COURSES

Direct Energy Conversion 487
Course Number: MEE 487
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion and Power Systems
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conversion
Average Enrollment: 25

Direct Energy Conversion 583
Course Number: MEE 583
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion and Power Systems
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conversion
Number of Times Taught: 2
Average Enrollment: 5

Direct Energy Conversion 587
Instructor: Backus, C.E. (602) 954-3857
Course Number: MEE587
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Laboratory: 0
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Photovoltaics; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 11
Average Enrollment: 22

Heat Transfer (Convection)
Course Number: MEE 586
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion and Power Systems
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 1
Average Enrollment: 10

P-S: Energy Technology
Course Number: MEE 498
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion and Power Systems
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Number of Times Taught: 1
Average Enrollment: 15

P-S: Solar Energy Fundamentals
Course Number: MEE 498
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion and Power Systems
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Number of Times Taught: 1
Average Enrollment: 15

S: Photovoltaics
Course Number: MEE 591
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion and Power Systems
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Photovoltaics
Number of Times Taught: 1
Average Enrollment: 5

Solar Energy
Instructor: Wood, Byard D. (602) 965-7298
Course Number: MEE458
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector

Evaluation/Design; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 15

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ARIZONA, UNIVERSITY OF (1083)
TUCSON, Arizona 85721
(602) 884-2751

PROGRAMS AND CURRICULA

Energy Systems Engineering
Degree: MS, BS, Engineering
Contact: Carlite, R.N.
(602) 626-1672
Students Taking or Completing Offering:
Researcher, Solar Engineer

SOLAR RELATED COURSES

Advanced Solar Engineering
Instructor: Fazzolare, Rocco
(602) 626-2487
Course Number: 301
Department: Engineering
Program or
Curriculum: Energy Systems
Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 7

Solar Energy Engineering
Instructor: Rogers, W.L.
(602) 626-2159
Course Number: AME 267
Department: Engineering, Mines
Program or
Curriculum: Energy Systems
Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 3
Average Enrollment: 70

Solar, Wind, Biomass Ener. Util.
Instructor: Larson, D.L./ William, D.W.
(602) 626-3463
Course Number: 198
Department: Soils, Water & Engineering
Credits: 2
Student Level: All levels
Duration: 17 Weeks, 4.0 hrs per week
Contact Hours: 68
Classroom: 17
Laboratory: 51
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Intro. to Solar Energy; Solar System Components

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NORTHERN ARIZ UNIVERSITY (1082)
FLAGSTAFF, Arizona 86001
(602) 523-9011

PROGRAMS AND CURRICULA

Mechanical Engineering Technology
Degree: BS, Engineering Technology
Contact: Hepworth, H. Kent
(602) 523-5251
Students Taking or Completing Offering:
Solar Engineer

SOLAR RELATED COURSES

Direct Energy Conversion
Instructor: Hepworth, H. Kent
(602) 523-5251
Course Number: EGR 402
Department: Engineering & Technology
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Materials Research; Photovoltaics
Number of Times Taught: 10
Average Enrollment: 40

Solar Energy Technology
Instructor: Kuzma, Dennis C.
(602) 523-5251
Course Number: EGR 451
Department: Engineering and Technology
Program or
Curriculum: Mechanical Engineering 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; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 20

Solar Engineering Analysis and Design
Instructor: Kuzma, Dennis C.
(602) 523-5251
Course Number: EGR 451

Department: Engineering and Technology
Program or Curriculum: Mechanical Engineering Technology
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 33

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Community/Junior Colleges

COCHISE COLLEGE (1072)
DOUGLAS, Arizona 85607
(602) 364-7943

SOLAR RELATED COURSES

Solar Energy Systems
Instructor: Elkins, Bob
(602) 458-7110
Course Number: TI025
Department: 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; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design

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GLENDALE CMTY COLLEGE (1076)
GLENDALE, Arizona 85302
(602) 934-2211

SOLAR RELATED COURSES

Bld.-It-Yourself-Sol. Water Heating
Instructor: Pittenger
(602) 966-5488
Course Number: G 220-226
Department: Continuing Education
Student Level: All levels
Duration: 1 Weeks, 8.0 hrs per week
Contact Hours: 8
Classroom: 1
Laboratory: 7
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Home Construction; Solar Systems Installation; Domestic Hot Water
Number of Times Taught: 1

Solar Energy: A Consumer Guide
Instructor: Pittenger
(602) 966-5488
Course Number: G 192
Department: Continuing Education
Student Level: All levels
Duration: 13 Weeks, 2.0 hrs per week
Contact Hours: 26
Classroom: 20
Laboratory: 6
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Home Construction; Solar Systems Installation; Domestic Hot Water
Number of Times Taught: 1

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MOHAVE COMMUNITY COLLEGE (11864)
KINGMAN, Arizona 86401
(602) 757-4331

SOLAR RELATED COURSES

Intro. Solar Energy
Instructor: Byfield, Hal
(602) 757-4331
Course Number: PHY091
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 3
Average Enrollment: 15

Solar Energy and Survival
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
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; Solar System Components; Solar Home Construction;

Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

Special Project: Tech. of Solar Systems
Instructor: Byfield, Hal
(602) 757-4331
Course Number: PHY290
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 3
Average Enrollment: 15

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NORTHLAND PIONEER COLLEGE (11862)
HOLBROOK, Arizona 86025
(602) 524-6111

SOLAR RELATED COURSES

Solar and Alternate Energy Sources
Instructor: Plucker, Frank
(602) 289-5082
Course Number: PHY180
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Classroom: 40
Laboratory: 11
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy
Number of Times Taught: 6
Average Enrollment: 14

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RIO SALADO COMMUNITY COLLEGE (90010)
10451 Palmera Dr.
Sun City, Arizona 85373
(602) 974-9939

SOLAR RELATED COURSES

Solar Energy
Instructor: Ploeser, Wm. J.
(602) 977-7615
Course Number: PH 101-9863
Department: Physics
Credits: 1
Student Level: All levels
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Topics Covered Extensively: Intro. to Solar Energy; Plumbing Techniques; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water
Number of Times Taught: 2
Average Enrollment: 25

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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 System)

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-Elec., Wood-Alt. Ener.
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; Elec'l Generation, Small Scale
Number of Times Taught: 4
Average Enrollment: 14

Solar Cookers
Instructor: Minkler, Lyle
(602) 445-5264
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: 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 Techology
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; Plumbing Techniques; 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
(602) 445-7300
Course Number: PHS 122
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
(602) 445-7300
Course Number: PHS 123
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
(602) 445-7300
Course Number: PHS 124
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
(602) 445-7300
Course Number: PHS 125
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

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Colleges/Universities

ARKANSAS MAIN CAMPUS, U OF (1108)
FAYETTEVILLE, Arkansas 72701
(501) 575-2000

SOLAR RELATED COURSES

Introduction to Solar Energy
Instructor: Gilbrech, Donald A. (501) 575-3054
Course Number: 4303
Department: Engineering Science
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 25

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CENTRAL ARKANSAS, U OF (1092)
CONWAY, Arkansas 72032
(501) 329-2931

PROGRAMS AND CURRICULA

Solar Energy Workshop
Degree: Certificate of Completion
Contact: Feck, Vincent J./ Jordan, Ken (501) 329-2931
Students Taking or Completing Offering: Contractor, Plumber, Sheet Metal Worker

SOLAR RELATED COURSES

Workshop in Solar Energy
Instructor: Jordan, Ken/ Pray, Dr. (501) 329-2931
Department: Voc. Educ./Indus Educ./Physics
Program or Curriculum: Solar Energy Workshop
Student Level: High School Graduate
Duration: 1 Weeks, 12.0 hrs per week
Contact Hours: 12
Classroom: 8
Laboratory: 4
Topics Covered Extensively: Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 93

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Community/Junior Colleges

MISS CO CMTY COLLEGE (12860)
BLYTHEVILLE, Arkansas 72315
(501) 762-1020

PROGRAMS AND CURRICULA

Solar Energy Technology
Degree: AD, Applied Sci. in Solar Tech.
Contact: Hughes, G. Edward/ Benson, Chris (501) 762-1020
Students Taking or Completing Offering: Solar Technician

SOLAR RELATED COURSES

Solar Technology Cooperative Education
Instructor: Benson, C.M. (501) 762-1020
Course Number: 58970
Department: Applied Science
Program or Curriculum: Solar Energy Technology
Credits: 6
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Topics Covered Extensively: Plumbing Techniques; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

Solar Technology I
Instructor: Benson, C.M. (501) 762-1020
Course Number: 58003
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: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

Solar Technology I Lab.
Instructor: Benson, C.M.
(501) 762-1020
Course Number: 58001
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; Materials Research; Plumbing Techniques; Solar System Components; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

Solar Technology II
Instructor: Benson, C.M.
(501) 762-1020
Course Number: 58203
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; Heat and Energy Transfer; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

Solar Technology II Lab.
Instructor: Benson, C.M.
(501) 762-1020
Course Number: 58201
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: Materials Research; Photovoltaics; Plumbing Techniques; Solar System Components; Solar Systems Design; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

Solar Technology III
Instructor: Benson, C.M.
(501) 762-1020
Course Number: 58403
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; Plumbing Techniques; Solar Energy Policy Development; Solar Economics; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

Solar Technology III Lab.
Instructor: Benson, C.M.
(501) 762-1020
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; Materials Research; Photovoltaics; Plumbing Techniques; Solar System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

Solar Topics
Instructor: Benson, C.M.
(501) 762-1020
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
Topics Covered Extensively: Energy Storage; Photovoltaics; Plumbing Techniques; Solar Energy Policy Development; 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
Number of Times Taught: 1
Average Enrollment: 5

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Colleges/Universities

CAL INST OF TECHNOLOGY (1131)
PASADENA, California 91125
(213) 795-6811

PROGRAMS AND CURRICULA

**Research in Heating and Photovoltaics*
Contact: Cannon, R.H.

SOLAR RELATED COURSES

**Adv. Thermodynamics & Ener. Trans.*
Instructor: Acosta, A.J.
Course Number: ME 118ABC
Department: Eng'r & Appl. Sci., Mech. Eng'r.
Program or Curriculum: *Research in Heating and Photovoltaics
Topics Covered Extensively: Heat and Energy Transfer

**Heat & Energy Transfer*
Instructor: Sabersky, R.H.
Course Number: ME 19C
Department: Eng'r & Appl. Sci., Mech. Eng'r
Program or Curriculum: *Research in Heating and Photovoltaics
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy

**Prin. of Ener. Conversion and Distrib.*
Instructor: Rannie, W.D.
Course Number: ME102ABC
Department: Eng'r. & Appl. Sci., Mech. Eng'r.
Program or Curriculum: *Research in Heating and Photovoltaics

**Solid-State Electronics Lab.*
Instructor: McCaldin, J.O.
Course Number: APH 9
Department: Eng'r & Appl. Sci., Appl. Phys.
Program or Curriculum: *Research in Heating and Photovoltaics
Topics Covered Extensively: Photovoltaics; Elec'l Generation, Central; Elec'l Generation, Small Scale

**Turbomachines*
Instructor: Rannie, W.D.
Course Number: JP250ABC
Department: Eng'r. & Appl. Sci., Jet Prop.
Program or Curriculum: *Research in Heating and Photovoltaics

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CAL POLY ST UNI.- SAN LUIS OB (1143)
SAN LUIS OBISPO, California 93407
(805) 546-0111

PROGRAMS AND CURRICULA

Sol. Envirn. Systs./Envir. Engnr.
Degree: BS, Environmental Engineering
Contact: Holtz, Walter E. (805) 546-2589
Students Taking or Completing Offering: Solar Engineer, Solar Technician, Other

SOLAR RELATED COURSES

Intro to Environmental Design Sci
Instructor: Pohl, Jens G. (805) 546-2841
Course Number: EDES 221
Department: Architecture
Credits: 3
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 20
Laboratory: 10
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Solar Home Construction; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 120

Solar Energy
Instructor: Clark, W.E. (805) 546-1248
Course Number: ENVE 221
Department: Environmental Engineering
Program or Curriculum: Sol. Envirn. Systs./ Envir. Engnr.
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Space Heating
Number of Times Taught: 18
Average Enrollment: 35

Solar Energy Engineering
Instructor: Niles, Philip W. (805) 546-2643
Course Number: ENVE 322
Department: Environmental Engineering
Program or Curriculum: Sol. Envirn. Systs./ Envir. Engnr.
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 20
Laboratory: 30
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer;

Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 25

Solar Energy Systems Analysis
Instructor: Niles, P.W. (805) 546-2643
Course Number: ENVE 366
Department: Environmental Engineering
Program or Curriculum: Sol. Envirn. Sysls./ Envir. Engnr.
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 50
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Economics; Domestic Hot Water; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling

Solar Energy Systems Design
Instructor: Niles, P W. (805) 546-2643
Course Number: ENVE 367
Department: Environmental Engineering
Program or Curriculum: Sol. Envirn. Systs./ Envir. Engnr.
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 7.0 hrs per week
Contact Hours: 70
Classroom: 10
Laboratory: 60
Topics Covered Extensively: Energy Storage; Passive Solar Technology; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling

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CAL STATE C- DOMINGUEZ HLS (1141)
DOMINGUEZ HILLS, California 90747
(213) 532-4300

SOLAR RELATED COURSES

**Energy and Man: Their Future Together*
Instructor: Gash, Ken/ Rogers, Richard
Course Number: ED X403
Department: Grad. School of Education
Topics Covered Extensively: Energy Conversion; Solar Economics

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CAL STATE C- SAN BERNARDINO (1142)
SAN BERNARDINO, California 92407
(714) 887-7201

SOLAR RELATED COURSES

Energy and Its Utilization by Man
Instructor: Mantei, K. (714) 887-7344
Course Number: NS432
Department: Natural Sciences
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion
Number of Times Taught: 8

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CAL STATE COLLEGE- SONOMA (1156)
ROHNERT PARK, California 94928
(707) 664-2880

PROGRAMS AND CURRICULA

**Sol. Heat. Tech. Skills Training*
Contact: Mote, Gayla (707) 664-2577
Students Taking or Completing Offering: Solar Technician

SOLAR RELATED COURSES

**Solar Technician Train. Classes*
Program or Curriculum: *Sol. Heat. Tech. Skills Training
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Economics; Solar Law/Legislation; 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

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CAL STATE POLY U- POMONA (1144)
POMONA, California 91768
(714) 598-4726

SOLAR RELATED COURSES

Solar Energy Systems
Instructor: Biddle, John R.
(714) 598-0239
Course Number: EGR590
Department: Mechanical Engineering
Credits: 4
Student Level: College Graduate
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Appropriate Technology; Energy Storage; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation
Number of Times Taught: 1
Average Enrollment: 32

Solar Thermal Engineering
Instructor: Biddle, John R.
(714) 598-0239
Course Number: ME407
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 32

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CAL STATE U- CHICO (1146)
CHICO, California 95929
(916) 895-5011

SOLAR RELATED COURSES

Alternate Energy Systems
Instructor: O'Bannon, James E.
(916) 343-2975
Course Number: 109
Department: Industry and Technology
Credits: 3
Student Level: All levels
Duration: 3 Weeks, 17.0 hrs per week
Contact Hours: 51
Classroom: 36
Laboratory: 15
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 40

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CAL STATE U- FRESNO (1147)
FRESNO, California 93740
(209) 487-9011

SOLAR RELATED COURSES

Energy and the Environment
Instructor: Russell, Kenneth
(209) 487-2170
Course Number: NSCI 140T
Department: Natural Science
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design
Number of Times Taught: 2
Average Enrollment: 28

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CAL STATE U- FULLERTON (1137)
FULLERTON, California 92634
(714) 870-2011

SOLAR RELATED COURSES

**Solar Ener. & Eng'r. Appls.*
Instructor: Turner, Robert
Course Number: EGRG 472
Department: Mech. Eng'r.
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conversion; Energy Storage; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Space Heating; Space Cooling

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CAL STATE U- HAYWARD (1138)
HAYWARD, California 94542
(415) 881-3000

SOLAR RELATED COURSES

Energy and Environment
Instructor: Good, R. H.
(415) 881-3401
Course Number: PHY-3650
Department: Physics
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week

Contact Hours: 40
Classroom: 40
Number of Times Taught: 1
Average Enrollment: 20

Environ. Ed. using Sch. and Comm. Res.
Instructor: Railton, Esther
(415) 881-3027
Course Number: TED 6415
Department: Teacher Education
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 30
Laboratory: 20
Number of Times Taught: 6
Average Enrollment: 25

Environmental Law
Instructor: Smith, J. Malcolm
(415) 881-3221
Course Number: 3460
Department: Political Science
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Solar Law/Legislation
Number of Times Taught: 3
Average Enrollment: 23

Geography Of Energy Resources
Instructor: Pasenhart, Thomas H.
(415) 881-3159
Course Number: 4320
Department: Geography
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Energy Policy Development; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 7
Average Enrollment: 23

Public Policy and the Environment
Instructor: Lewis, Sherman
(415) 881-3221
Course Number: 4171
Department: Political Science
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Solar Energy Policy Development
Number of Times Taught: 5
Average Enrollment: 15

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CAL STATE U- LONG BEACH (1139)
LONG BEACH, California 90840
(213) 498-4121

PROGRAMS AND CURRICULA

Ener. Convs., Power Systs. Engineering
Degree: Other, Ener. Convs., Power Systs. Engineering
Contact: Unt, Millard, Jordanides
(213) 498-4407
Students Taking or Completing Offering:
Trade Specialty

SOLAR RELATED COURSES

Energy Selection and Conversion
Instructor: Dyer, J.L.
Course Number: ME411
Department: Mechanical Engineering
Program or Curriculum: Ener. Convs., Power Systs. Engineering
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Intro. to Solar Energy; Elec'l Generation, Central; Elec'l Generation, Small Scale; Wind Power, Small Systems

Special Topics in Mech. Engin.
Instructor: Sungu, Sabri
Course Number: ME405
Department: Mechanical Engineering
Program or Curriculum: Ener. Convs., Power Systs. Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling

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CAL STATE U- LOS ANGELES (1140)
LOS ANGELES, California 90032
(213) 224-0111

SOLAR RELATED COURSES

Design of Solar Systems
Instructor: Mann, George
(213) 224-2479
Department: Engineering, Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 33
Laboratory: 33
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Central; Space Heating; Space Cooling

Introduction to Solar Engineering
Instructor: Mann, George
(213) 224-2479
Department: Engineering, Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 33
Laboratory: 33
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design

Solar Energy Applications
Instructor: Manvi, Ram/ Turner, R.
(213) 224-2479
Course Number: ENGR 498
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 30
Laboratory: 10
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 2
Average Enrollment: 10

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CAL STATE U- NORTHRIDGE (1153)
NORTHRIDGE, California 91330
(213) 885-1200

SOLAR RELATED COURSES

Solar Energy for Homeowners
Instructor: Dixon, Gregg W.
(213) 885-2187
Department: Mechanical and Chemical Engineering
Student Level: All levels
Duration: 6 Weeks, 3.0 hrs per week
Contact Hours: 18
Classroom: 18
Number of Times Taught: 3
Average Enrollment: 32

Solar Energy Engineering
Instructor: Dixon, Gregg W.
(213) 885-2187
Course Number: 494S
Department: Mechanical and Chemical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 12

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CAL- BERKELEY, U OF (1312)
BERKELEY, California 94720
(415) 642-6000

PROGRAMS AND CURRICULA

Solar Engineering
Degree: BS, Sci-El. Eng. & Computer Sci.
Contact: Birdsall, Charles K.
(415) 642-4015
Students Taking or Completing Offering: Solar Engineer, Electrician

SOLAR RELATED COURSES

Approaching a Solar Society
Instructor: Berman, S./ Birdsall, C.K.
(415) 642-4015
Course Number: E298-4
Department: Engineering
Program or Curriculum: Solar Engineering
Credits: 4
Student Level: College Graduate
Duration: 20 Weeks, 3.0 hrs per week
Contact Hours: 60
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Intro. to Solar Energy; Solar Energy Policy Development

Number of Times Taught: 1
Average Enrollment: 15

Direct Energy Conversion
Instructor: Hu, Chenming
(415) 642-3393
Course Number: EEC 290 G
Department: Elec. Eng. and Computer Sciences
Program or Curriculum: Solar Engineering
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 35
Classroom: 30
Topics Covered Extensively: Energy Conversion; Intro. to Solar Energy; Photovoltaics; Elec'l Generation, Small Scale
Number of Times Taught: 1
Average Enrollment: 8

Elementary Solar Electric Systems
Instructor: Smith, O.J.M.
(415) 642-7591
Course Number: EECS165
Department: Elec. Eng. & Computer Sci.
Program or Curriculum: Solar Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Systems Design; Solar Systems Installation; Elec'l Generation, Central; Wind Power, Small Systems

Energy and Power
Instructor: Lieberman, M.A.
(415) 642-1030
Course Number: E160
Department: Engineering
Program or Curriculum: Solar Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 7
Average Enrollment: 100

Energy Conversion Principles
Instructor: Daily, John W.
(415) 642-0238
Course Number: ME 145
Department: Mechanical Engineering
Program or Curriculum: Solar Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Photovoltaics
Number of Times Taught: 7
Average Enrollment: 22

Physics of Solar Radiation
Instructor: Portis, Alan M.
(415) 642-3697
Course Number: 180B
Department: Physics
Program or Curriculum: Solar Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Photovoltaics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating

Physics of Solar Radiation
Instructor: Portis, Alan M.
(415) 642-3697
Course Number: 180A
Department: Physics
Program or Curriculum: Solar Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Photovoltaics; Solar Collector Evaluation/Design; Solar Systems Design

Sol. Ener. for Bldgs., Homes, Pools
Instructor: Pike, Nanette
(415) 642-4151
Department: Continuing Education in Engineering
Student Level: College Graduate
Duration: 1 Weeks, 16.0 hrs per week
Contact Hours: 16
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 9
Average Enrollment: 90

Solar Cells-Basic to Advanced Systems
Instructor: Barry, Helen
(415) 642-4151
Department: Continuing Education in Engineering
Student Level: College Graduate

Duration: 1 Weeks, 8.0 hrs per week
Contact Hours: 8
Topics Covered Extensively:
Photovoltaics

Solar Electric Systems
Instructor: Smith, O.J.M.
(415) 642-7591
Course Number: EECS166
Department: Elec. Eng. & Computer Sci.
Program or Curriculum: Solar Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Economics; Solar Systems Design; Elec'l Generation, Central

Solar Electric Systems A
Instructor: Smith, O.J.M.
(415) 642-7591
Course Number: EECS215A
Department: Elec. Eng.& Computer Sci.
Program or Curriculum: Solar Engineering
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Economics; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l Generation, Small Scale

Solar Electric Systems B
Instructor: Smith, O.J.M.
(415) 642-7591
Course Number: EECS215B
Department: Elec. Eng. & Computer Sci.
Program or Curriculum: Solar Engineering
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Economics; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l Generation, Small Scale

Solar Energy
Instructor: Merriam, M.F.
(415) 642-3664
Course Number: E 161
Department: Engineering
Program or Curriculum: Solar Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Photovoltaics; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating; Space Cooling; Wind Power, Central Systems
Number of Times Taught: 8
Average Enrollment: 75

Solar Energy Materials
Instructor: Merriam, M. F.
(415) 642-3664
Course Number: MSME290G
Department: Mat. Sci. and Mineral Eng.
Program or Curriculum: Solar Engineering
Credits: 2
Student Level: College Graduate
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20
Topics Covered Extensively: Materials Research; Photovoltaics
Number of Times Taught: 5
Average Enrollment: 12

Solar Energy Seminar
Instructor: Merriam, M. F.
(415) 642-3664
Course Number: E298-2
Department: Engineering
Program or Curriculum: Solar Engineering
Credits: 1
Student Level: Junior or Senior
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20
Topics Covered Extensively: Solar Economics
Number of Times Taught: 12
Average Enrollment: 40

Thermal Ener. Aspects in Plan. and Des.
Instructor: Parman, John
(415) 642-4811
Department: Environmental Design
Student Level: College Graduate
Duration: 2.0 Days, 6.0 hrs per day
Contact Hours: 12
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar

Technology; Solar System Components; Domestic Hot Water; Space Heating; Space Cooling; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 14

Thermal Radiation ME253
Instructor: Daily, John W. (415) 642-0238
Course Number: ME253
Department: Mechanical Engineering
Program or Curriculum: Solar Engineering
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 7
Average Enrollment: 28

Wind Energy
Instructor: Pike, Nanette (415) 642-4151
Department: Continuing Education in Engineering
Student Level: College Graduate
Duration: 1 Weeks, 8.0 hrs per week
Contact Hours: 8
Topics Covered Extensively: Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 35

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CAL- DAVIS, U OF (1313)
DAVIS, California 95616
(916) 752-1011

PROGRAMS AND CURRICULA

Graduate Solar Energy
Degree: MA, MS, Atmospheric Sciences
Contact: Coulson, Kinsell (916) 752-1450
Students Taking or Completing Offering: Educator, Researcher

SOLAR RELATED COURSES

Radiation Instrumentation and Measurement
Instructor: Flocchini, R. G. (916) 752-7097
Course Number: 128
Department: Atmospheric Science
Program or Curriculum: Graduate Solar Energy
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50

Solar and Related Energy Sources
Instructor: Flocchini, R. G. (916) 752-7097
Course Number: 203
Department: Resource Science
Program or Curriculum: Graduate Solar Energy
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Photovoltaics; Wind Power, Central Systems; Wind Power, Small Systems

Solar Energy Applications
Instructor: Flocchini, R. G. (916) 752-7097
Course Number: 103
Department: Resource Science
Program or Curriculum: Graduate Solar Energy
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30

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CAL- LOS ANGELES, U OF (1315)
LOS ANGELES, California 90024
(213) 825-4321

PROGRAMS AND CURRICULA

Architecture/Urban Design
Degree: MA, OTHER, Architecture and Urban Planning
Contact: Moore, Charles (213) 825-8959
Students Taking or Completing Offering: Architect, Educator, Researcher

Ener. Conserving Des. Elective Sequence
Degree: MA, OTHER, Architecture and Urban Planning
Contact: Moore, Charles (213) 825-8950
Students Taking or Completing Offering: Architect, Researcher

SOLAR RELATED COURSES

Building Climatology
Instructor: Givoni, Baruch/ Milne, Murray (213) 825-7370
Course Number: 442
Department: Architecture/Urban Design
Program or Curriculum: Ener. Conserving Des. Elective Sequence
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Heat and Energy Transfer; Solar Systems Design;

Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 40

Heat and the Thermal Environment
Instructor: Givoni, Baruch
(213) 825-2769
Course Number: 443
Department: Architecture and Urban Planning
Program or Curriculum: Ener. Conserving Des. Elective Sequence
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar Home Construction; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 6

Introduction to Energy Conserving Design I
Instructor: Schoen, Richard
(213) 825-1345
Course Number: 446,403
Department: Arch., Urb. Plan.-Arch. Urb. Design
Program or Curriculum: Architecture/ Urban Design
Credits: 1
Student Level: College Graduate
Duration: 10 Weeks, 1.0 hrs per week
Contact Hours: 10
Classroom: 5
Laboratory: 5
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Plumbing Techniques; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 10

Introduction to Energy Conserving Design II
Instructor: Schoen, Richard
(213) 825-1345
Course Number: 446,403
Department: Arch, Urb. Plan.-Arch. Urb. Design
Program or Curriculum: Architecture/ Urban Design
Credits: 1
Student Level: College Graduate
Duration: 10 Weeks, 1.0 hrs per week
Contact Hours: 10
Classroom: 5
Laboratory: 5
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Plumbing Techniques; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 10

Introduction to Energy Conserving Design III
Instructor: Schoen, Richard
(213) 825-1345
Course Number: 446,403
Department: Arch. Urb. Plan.-Arch. Urb. Design
Program or Curriculum: Architecture/ Urban Design
Credits: 1
Student Level: College Graduate
Duration: 10 Weeks, 1.0 hrs per week
Contact Hours: 10
Classroom: 5
Laboratory: 5
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Plumbing Techniques; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 10

New Ener. Tech.-Res. Conv. Constraints
Instructor: Buchberg, H.
Course Number: 134A
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion
Number of Times Taught: 5
Average Enrollment: 20

Proj. in Arch.: Computer Aided Design
Instructor: Milne, Murray
(213) 825-7370

Course Number: 403G
Department: Architecture and Urban Planning
Program or Curriculum: Ener. Conserving Des. Elective Sequence
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 10
Laboratory: 30
Topics Covered Extensively: Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 3

Solar Energy Use and Control
Instructor: Buchberg, H. (213) 825-5313
Course Number: 134B
Department: Chem, Nucl, Therm, Engr, Appl.Sci.
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation
Number of Times Taught: 4
Average Enrollment: 17

Topics in Thermal Design
Instructor: Buchberg, H./ Mills, A. (213) 825-5313
Course Number: 234A
Department: Chem, Nucl, Ther, Engr,Appl.Sci.
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 8
Average Enrollment: 8

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CAL- RIVERSIDE, U OF (1316)
RIVERSIDE, California 92521
(714) 787-1012

SOLAR RELATED COURSES

Calif. Solar Energy Tax Credit
Instructor: Thiebaux, Brain (714) 787-4101
Course Number: 888.31
Department: University Extension
Student Level: All levels
Duration: 1 Weeks, 5.0 hrs per week
Contact Hours: 5
Classroom: 5
Topics Covered Extensively: Solar Law/Legislation; Solar Collector Evaluation/Design

Designing Standard Frame House for Solar Energy
Instructor: Thiebaux, Brian (714) 787-4101
Course Number: 888.3
Department: University Extension
Credits: 1
Student Level: All levels
Duration: 1 Weeks, 3.0 hrs per week
Contact Hours: 3
Classroom: 3
Topics Covered Extensively: Solar Home Construction; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating; Space Cooling

Energy: Its Impact on the U.S. Economy
Instructor: Thiebaux, Brian (714) 787-4101
Course Number: X421
Department: University Extension
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Marketing/Market Analysis; Solar Economics

Refitting Your Home to Save Water, Energy, & Money
Instructor: Richter, Jean (714) 787-4361
Department: University Extension
Student Level: All levels
Duration: 1 Weeks, 9.0 hrs per week
Contact Hours: 9
Classroom: 9
Topics Covered Extensively: Solar Home Construction; Domestic Hot Water; Space Heating; Space Cooling

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CAL- SAN DIEGO, U OF (1317)
LA JOLLA, California 92093
(714) 452-2230

SOLAR RELATED COURSES

Ener. Cons. Through Arch. Design
Instructor: Quigley, Rob
Course Number: 805.6
Department: Professional Programs
Student Level: College Graduate
Duration: 5 Weeks, 2.5 hrs per week
Contact Hours: 13
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling

Number of Times Taught: 3

Solar Energy For Your Home
Instructor: Meyer, Greg
Course Number: B05.5
Department: Professional Programs
Student Level: College Graduate
Duration: 5 Weeks, 2.5 hrs per week
Contact Hours: 13
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; 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; Space Cooling
Number of Times Taught: 3

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CAL- SANTA BARBARA, U OF (1320)
SANTA BARBARA, California 93106
(805) 961-2311

SOLAR RELATED COURSES

Solar Energy
Instructor: Manalis, Mel
(805) 961-2896
Course Number: ES105
Department: Environmental Studies
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 5
Average Enrollment: 75

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CAL- SANTA CRUZ, U OF (1321)
SANTA CRUZ, California 95064
(408) 429-0111

SOLAR RELATED COURSES

**Alternate Energy Sources*
Instructor: Scott, Peter
Course Number: ES428
Department: Environmental Studies
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design

**The Sun*
Instructor: Menger, Eva/ Hammond, George
Course Number: OAKES 38
Department: Oakes College
Topics Covered Extensively: Intro. to Solar Energy

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COGSWELL COLLEGE (1177)
SAN FRANCISCO, California 94108
(415) 433-1994

SOLAR RELATED COURSES

Solar Energy Appls. for Bldg.
Instructor: Sartor, Dale
(415) 236-7436
Course Number: CT 431
Department: Civil Engineering Technology
Credits: 3
Student Level: Junior or Senior
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 3
Average Enrollment: 20

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HARVEY MUDD COLLEGE (1171)
CLAREMONT, California 91711
(714) 626-8511

SOLAR RELATED COURSES

Freshman Projects
Instructor: Wolf, Robert
(714) 621-8000
Course Number: FY 4
Department: Freshman Division
Credits: 1
Student Level: Freshman or Sophomore
Duration: 7 Weeks, 3.0 hrs per week
Contact Hours: 21
Classroom: 21
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology;

Solar Economics; 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
Number of Times Taught: 2
Average Enrollment: 30

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HUMBOLDT STATE U (1149)
ARCATA, California 95521
(707) 826-3011

SOLAR RELATED COURSES

Solar Energy: Thermal Processes
Instructor: Borgers, Tom R.
(707) 826-3255
Course Number: ENGR. 184
Department: Engr./Chem.
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 7

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LA VERNE COLLEGE (1216)
LA VERNE, California 91750
(714) 593-3511

SOLAR RELATED COURSES

Energy Colloquium
Instructor: Green, Richard H.
(714) 593-3511
Credits: 4
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Passive Solar Technology; Photovoltaics; Solar Energy Policy Development; Solar Economics; Solar Law/Legislation; Wind Power, Small Systems

Energy Options
Instructor: Arnold, Geo.
(714) 593-7792
Course Number: PHYSICS
Department: Physics
Credits: 4
Student Level: Junior or Senior
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 15

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LOMA LINDA UNIVERSITY (1218)
LOMA LINDA, California 92354
(714) 796-7311

SOLAR RELATED COURSES

Practical Solar Energy
Instructor: Walls, Art
(714) 785-2218
Course Number: INDS 283
Department: Industrial Studies
Credits: 4
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 60
Classroom: 30
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design
Number of Times Taught: 2
Average Enrollment: 9

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LOYOLA MARYMOUNT U (11649)
LOS ANGELES, California 90045
(213) 642-2700

SOLAR RELATED COURSES

Thermal Aspects of Design
Instructor: Callinan, J. P.
(213) 642-2827
Course Number: ME 571
Department: Mechancial Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 10

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NEW COLLEGE OF CALIFORNIA (10831)
SAN FRANCISCO, California 94110
(415) 626-1694

PROGRAMS AND CURRICULA

Econ.,Ener.-Formation of World Conscious
Degree: MA, BA, Humanities-Energy, Economics, Design
Contact: Beru, Jelaleddin
(415) 626-1694
Students Taking or Completing Offering: Educator, Researcher, Trade Specialty

SOLAR RELATED COURSES

Econ.,Ener.-Formation of World Conscious
Instructor: Beorje, Bryon
(415) 231-9466
Department: Humanities
Program or Curriculum: Econ.,Ener.-Formation of World Conscious
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 6.0 hrs per week
Contact Hours: 108
Classroom: 70
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Intro. to Solar Energy; Solar Energy Policy Development; Solar Economics; Solar Systems Testing and Evaluation
Number of Times Taught: 2
Average Enrollment: 20

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NORTHROP UNIVERSITY (1248)
INGLEWOOD, California 90306
(213) 776-3410

PROGRAMS AND CURRICULA

Energy Systems Engineering
Degree: BS, Science, Energy Systems Engineering
Contact: Pelka, David G.
(213) 641-3470
Students Taking or Completing Offering: Researcher, Solar Engineer

SOLAR RELATED COURSES

Energy Conservation
Instructor: Eytal, L. S.
(213) 641-3470
Course Number: ES431
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation

Energy Control Systems
Instructor: Pelka, D. G.
(213) 641-3470
Course Number: ES436
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Solar Systems Testing and Evaluation

Energy Design Systems I
Instructor: Jacowitz, Lawrence
(213) 641-3470
Course Number: ES471
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 20
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Solar Systems Design; Solar Systems Testing and Evaluation

Energy Policy
Instructor: Pelka, D. G.
(213) 641-3470
Course Number: ES421
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Solar Energy Policy Development; Solar Law/Legislation

Energy Systems Design II
Instructor: Jacowitz, Lawrence
(213) 641-3470
Course Number: ES472
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 20
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Solar Systems Design; Solar Systems Testing and Evaluation

Energy Systems Design III
Instructor: Jacowitz, Lawrence
(213) 641-3470
Course Number: ES473
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering

Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 20
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Solar Systems Design; Solar Systems Testing and Evaluation

Environmental Systems
Instructor: Pelka, D. G.
(213) 641-3470
Course Number: ES352
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology

Law and Energy Applications
Instructor: Pelka, D. G.
(213) 641-3470
Course Number: ES433
Department: Law School
Program or Curriculum: Energy Systems Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Solar Law/Legislation

Photovoltaic Technology
Instructor: Pelka, D. G.
(213) 641-3470
Course Number: ES 311
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 6.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Energy Conversion; Photovoltaics; Elec'l Generation, Small Scale
Number of Times Taught: 1
Average Enrollment: 10

Solar Energy Systems I
Instructor: Jacowitz, Lawrence
(213) 641-3470
Course Number: ES321
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 6.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 3

Solar Energy Systems II
Instructor: Jacowitz, Lawrence
(213) 641-3470
Course Number: ES401
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 6.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 2
Average Enrollment: 8

Wind Machine Design & Operation
Instructor: Lord, Paul
(213) 641-3470
Course Number: ES441
Department: Energy Systems Engineering
Program or Curriculum: Energy Systems Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1

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REDLANDS,UNIVERSITY OF (1322)
REDLANDS, California 92373
(714) 793-2121

SOLAR RELATED COURSES

**Energy Alt. - Priorities, Policies*
Instructor: Krantz, Reinhold J.
(714) 793-2121
Course Number: 25
Department: Arts & Sci. - Eng'r
Topics Covered Extensively: Alternate Energy Sources; Solar Economics

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SAN DIEGO STATE U (1151)
SAN DIEGO, California 92182
(714) 286-5000

SOLAR RELATED COURSES

Energy: Issues and Ideas
Instructor: Craig, George T.
(714) 286-6067
Course Number: E-360
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Intro. to Solar Energy; Passive Solar Technology; Solar Economics
Number of Times Taught: 1
Average Enrollment: 20

Solar Energy
Instructor: Thompson, Willis H.
(714) 286-6582
Course Number: NS 496
Department: Natural Science
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 34

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SAN FRANCISCO STATE U (1154)
SAN FRANCISCO, California 94132
(415) 469-2141

SOLAR RELATED COURSES

**Design of Solar Energy Systems*
Instructor: Warren, M.
Course Number: ENGR 584
Department: Science, Eng'r
Credits: 3
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

**Intro. to Solar Energy Systems*
Instructor: Warren, M.
Course Number: ENGR 582
Department: Science, Eng'r
Credits: 3
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design

**Seminar in Science and Society*
Instructor: Shapiro, C.
Course Number: PHYS 600
Department: Science, Physics
Credits: 3
Student Level: Freshman or Sophomore

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SAN FRANCISCO, U OF (1325)
SAN FRANCISCO, California 94117
(415) 666-6600

PROGRAMS AND CURRICULA

Environmental Planning & Management
Degree: MS, Environm. Plan. and Management
Contact: Petulla, Joseph M.
(415) 666-6254

SOLAR RELATED COURSES

Ecosicence
Instructor: Gruhn, Thomas
(415) 666-6208
Course Number: IDS 250
Department: Continuing Education
Program or Curriculum: Environmental Planning & Management
Credits: 4
Student Level: College Graduate
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56

Energy For The Future
Instructor: Albergotti, J. C.
(415) 666-6144
Course Number: 121
Department: Science/Nat. Sci.
Credits: 3
Student Level: All levels
Duration: 4 Weeks, 12.0 hrs per week
Contact Hours: 48
Classroom: 32
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 13

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SAN JOSE STATE U (1155)
SAN JOSE, California 95192
(408) 277-2000

PROGRAMS AND CURRICULA

Solar Design/Engineering
Degree: BA, BS, Environ. Studies - Solar Emphasis
Contact: Aitken, Donald
(408) 277-3107
Students Taking or Completing Offering: Solar Technician

SOLAR RELATED COURSES

Solar Energy Theory
Instructor: Aitken, Donald
(408) 277-3107
Course Number: ES116
Department: Environmental Studies
Program or Curriculum: Solar Design/ Engineering
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Space Heating
Number of Times Taught: 4
Average Enrollment: 100

Solar Energy Workshop
Instructor: Aitken, Donald
(408) 277-3107
Course Number: 186
Department: Environmental Studies
Program or Curriculum: Solar Design/ Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 9.0 hrs per week
Contact Hours: 135
Classroom: 45
Number of Times Taught: 3
Average Enrollment: 25

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SANTA CLARA, UNIVERSITY OF (1326)
SANTA CLARA, California 95053
(408) 984-4242

SOLAR RELATED COURSES

Solar Energy for Heating and Cooling I
Instructor: Wedel, Roger
(415) 493-4411
Course Number: ME 244
Department: Mech. Eng'r
Credits: 2
Student Level: College Graduate
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 5
Average Enrollment: 25

Solar Energy for Heating and Cooling II
Instructor: Wedel, Roger
(415) 493-4411
Course Number: ME 247
Department: Mech. Eng'r.
Credits: 2
Student Level: College Graduate
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 5
Average Enrollment: 25

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SOUTHERN CALIFORNIA, U OF (1328)
LOS ANGELES, California 90007
(213) 741-2311

PROGRAMS AND CURRICULA

Special Probs. in Solar Energy
Degree: PHD, MS,
Students Taking or Completing Offering: Solar Engineer, Researcher

SOLAR RELATED COURSES

Sol. Ener. Conversion Sys. Des.
Instructor: Lampert, Seymour
(213) 741-2944
Course Number: ME 499
Department: Mechanical Engineering
Program or Curriculum: Special Probs. in Solar Energy
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conservation; Energy Conversion; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 18

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STANFORD UNIVERSITY (1305)
STANFORD, California 94305
(415) 497-2300

SOLAR RELATED COURSES

Solar Energy
Instructor: Ferziger
(415) 497-3148
Course Number: ME 255
Department: Mech.Engineering
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 4
Average Enrollment: 30

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Community/Junior Colleges

AMERICAN RIVER COLLEGE (9552)
SACRAMENTO, California 95841
(916) 484-8011

SOLAR RELATED COURSES

**Alternative Energy Courses*

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ANTELOPE VALLEY COLLEGE (1113)
LANCASTER, California 93534
(805) 947-0160

SOLAR RELATED COURSES

Air Cond./Refrig. A
Instructor: Ford, Chuck
(805) 943-3241
Course Number: ACR 43A
Department: Technical Education
Credits: 5
Student Level: All levels
Duration: 18 Weeks, 10.0 hrs per week
Contact Hours: 180
Number of Times Taught: 12
Average Enrollment: 24

Air Cond./Refrig. B
Instructor: Ford, Chuck
(805) 943-3241
Course Number: ACR 43B
Department: Technical Education
Credits: 5
Student Level: All levels
Duration: 18 Weeks, 10.0 hrs per week
Contact Hours: 180
Number of Times Taught: 12
Average Enrollment: 24

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BAKERSFIELD COLLEGE (1118)
BAKERSFIELD, California 93305
(805) 395-4011

SOLAR RELATED COURSES

Solar Heat. and Cool. of Res. Bldgs.
Instructor: Tuttle, Robert E.
(805) 395-4571
Course Number: SOLAR I
Department: Industrial Education
Credits: 3
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 48
Laboratory: 6
Topics Covered Extensively: Intro. to Solar Energy; 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; Space Heating
Average Enrollment: 35

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BUTTE COLLEGE (8073)
OROVILLE, California 95965
(916) 895-2511

SOLAR RELATED COURSES

Solar Energy Systems
Instructor: Peters, Mary
(916) 877-8308
Course Number: TEC 280
Department: Technology
Credits: 3
Student Level: All levels
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating
Number of Times Taught: 2
Average Enrollment: 28

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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

Alt. Energy Systems (Sol. Tech.)
Course Number: CET60ABCD
Department: Indust. - Elect. Tech.
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

Appl. of Solar Ener. in Agric.
Course Number: CET 61
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: 48
Topics Covered Extensively: Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Process Heat, Agricultural

Solar Architecture
Course Number: CET 62
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: 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: CET 53
Department: Indus. - Elect. Tech.
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; Elec'l Generation, Central; Elec'l Generation, Small Scale

Solar Energy in Agriculture
Course Number: CET 54
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 Bldg. Design
Course Number: CET 52
Department: Indus. - Elect. Tech.
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 Tech. & Fabrication
Course Number: CET 50 ABCD
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 & Weatherizing
Course Number: CET 51
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

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CERRO COSO CMTY COLLEGE (10111)
RIDGECREST, California 93555
(714) 375-5001

PROGRAMS AND CURRICULA

**Solar Engineering Technology*
Degree: AD, Appl.Sci.- Sol Eng'r Tech
Contact: Dodge, Dick (714) 375-5001
Students Taking or Completing Offering: Solar Technician

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CHABOT COLLEGE-VALLEY CAMPUS (90160)
3033 Collier Canyon Road
Livermore, California 94550
(415) 455-5300

SOLAR RELATED COURSES

Solar Design Fundamentals
Instructor: Deleray, Arthur (415) 455-5300
Course Number: 24
Department: Physical Science
Credits: 3
Student Level: All levels
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating

Solar Heat for You
Instructor: Deleray, Arthur (415) 455-5300
Course Number: 24
Department: Physical Science
Credits: 2
Student Level: All levels
Duration: 12 Weeks, 2.0 hrs per week
Topics Covered Extensively: Passive Solar Technology; Solar System Components; Swimming Pool Heating; Space Heating
Number of Times Taught: 1
Average Enrollment: 40

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CHAFFEY COLLEGE (1163)
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

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CITRUS COLLEGE (1166)
AZUSA, California 91702
(213) 335-0521

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Bratt, George
Course Number: 102
Department: Physical Sciences/Engineering
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

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COASTLINE CMTY COLLEGE (29027)
FOUNTAIN VALLEY, California 92708
(714) 963-0811

PROGRAMS AND CURRICULA

**Solar Technician*
Students Taking or Completing Offering:
Solar Technician

SOLAR RELATED COURSES

**Solar Seminar*

**Ten Courses in Energy Management*
Program or Curriculum: Solar Technician

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COLUMBIA JUNIOR COLLEGE (7707)
COLUMBIA, California 95310
(209) 532-3141

SOLAR RELATED COURSES

**Course on Alternate Energy*

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COSUMNES RIVER COLLEGE (7536)
SACRAMENTO, California 95823
(916) 421-1000

PROGRAMS AND CURRICULA

Envir. Des. -Intro. Sol. Ener. 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

ED 47, Alternate Energy Systems
Instructor: House, Harold
Course Number: 3108-01
Department: Environmental Design
Program or Curriculum: Envir. Des. -Intro. Sol. Ener. Systems
Credits: 2
Duration: 8 Weeks, 3.0 hrs per week
Contact Hours: 24
Classroom: 24
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Photovoltaics
Number of Times Taught: 3
Average Enrollment: 15

Intro. to Solar Energy Systems
Instructor: House, Harold
Course Number: ED 31
Department: Environmental Design
Program or Curriculum: Envir. Des. -Intro. Sol. Ener. Systems
Credits: 2
Duration: 4 Weeks, 16.0 hrs per week
Contact Hours: 64
Classroom: 48
Laboratory: 16
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling

Residential Energy Conservation
Instructor: House, Harold
Course Number: 3105-01
Department: Environmental Design
Program or Curriculum: Envir. Des. -Intro. Sol. Ener. Systems
Credits: 2
Duration: 3 Weeks, 8.0 hrs per week
Contact Hours: 24
Classroom: 24
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive

Solar Technology; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 15

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CUESTA COLLEGE (1192)
SAN LUIS OBISPO, California 93406
(805) 544-2943

SOLAR RELATED COURSES

App. of Solar Energy Systems
Instructor: Lagomarsino, Peter
(805) 543-2943
Course Number: CT60
Department: Construction Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 6.0 hrs per week
Contact Hours: 108
Classroom: 54
Laboratory: 54
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 18

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DE ANZA COLLEGE (4480)
CUPERTINO, California 95014
(408) 996-4567

SOLAR RELATED COURSES

Design of Sol. Ener. Sys.-Heat. and Cool. A
Instructor: Wedel, R.
(408) 493-4411
Course Number: 379A
Department: Engineering
Credits: 2
Student Level: All levels
Duration: 12 Weeks, 2.0 hrs per week
Contact Hours: 24
Classroom: 24
Number of Times Taught: 4
Average Enrollment: 20

Design of Sol. Ener. Sys.-Heat. and Cool. B
Instructor: Wedell, R.
(408) 493-4411
Course Number: 379B
Department: Engineering
Credits: 2
Student Level: All levels
Duration: 12 Weeks, 2.0 hrs per week
Contact Hours: 24
Classroom: 24
Topics Covered Extensively: Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 4
Average Enrollment: 20

Utilization of Solar Energy
Course Number: 369
Department: Engineering
Credits: 3
Student Level: All levels
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 18
Laboratory: 18

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DESERT, COLLEGE OF THE (1182)
PALM DESERT, California 92260
(714) 346-8041

SOLAR RELATED COURSES

Introduction to Solar Energy
Instructor: Marzicola, John
(714) 346-8041
Course Number: ARCH 13
Department: Engineering and Technology
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Solar Home Construction; Solar Law/Legislation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 42

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DIABLO VALLEY COLLEGE (1191)
PLEASANT HILL, California 94523
(415) 685-1230

SOLAR RELATED COURSES

Energy and Buildings
Course Number: 150
Department: Arch /Engineering
Credits: 3
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 48
Laboratory: 48

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EVERGREEN VALLEY COLLEGE (12452)
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

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FEATHER RIVER COLLEGE (8597)
QUINCY, California 95971
(916) 283-0202

SOLAR RELATED COURSES

Solar Utilization and Energy--Wise Construction
Instructor: Martin, Bill
(916) 283-1197
Course Number: PHYS. SCI.75
Department: Physical Science
Credits: 2
Student Level: All levels
Duration: 18 Weeks, 2.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 15

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FOOTHILL COLLEGE (1199)
LOS ALTOS HILLS, California 94022
(415) 948-8590

SOLAR RELATED COURSES

Solar Energy
Instructor: Blanchard/ Heinemann/ Schiavo
Course Number: ENV STUD
Department: Engineering & Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 4
Average Enrollment: 30

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FRESNO CITY COLLEGE (1307)
FRESNO, California 93704
(209) 442-4600

SOLAR RELATED COURSES

Solar Energy
Instructor: Mortensen, David
(209) 442-8215
Course Number: S.S. 47
Department: Earth/Physical Science
Credits: 2
Student Level: All levels
Duration: 6 Weeks, 6.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 2
Average Enrollment: 40

Solar Systems
Instructor: Wash, Dennis C.
(209) 442-4600
Course Number: AC-55
Department: Technical-Industrial
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 4.0 hrs per week
Contact Hours: 72
Classroom: 36
Laboratory: 36
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Photovoltaics; 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

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FULLERTON COLLEGE (1201)
FULLERTON, California 92634
(714) 871-8000

SOLAR RELATED COURSES

Solar Heating
Topics Covered Extensively: Space Heating

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GAVILAN COLLEGE (1202)
GILROY, California 95020
(408) 847-1400

SOLAR RELATED COURSES

Sol. Ener. H/Water Sys. Install.
Instructor: Hansen, John
(408) 847-1400
Course Number: 66A
Department: Occupational Education
Credits: 3
Student Level: All levels
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 60
Classroom: 24
Laboratory: 36
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating
Number of Times Taught: 2
Average Enrollment: 25

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GLENDALE CMTY COLLEGE (1203)
GLENDALE, California 91208
(213) 240-1000

SOLAR RELATED COURSES

**Energy Alternatives*

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LONG BEACH CITY COLLEGE (1219)
LONG BEACH, California 90808
(213) 420-4111

PROGRAMS AND CURRICULA

**Air Cond. & Refrig.*

SOLAR RELATED COURSES

**Solar Segment*
Department: Air Cond. & Refrig.
Program or Curriculum: *Air Cond. & Refrig.

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LOS ANGELES PIERCE COLLEGE (1226)
WOODLAND HILLS, California 91371
(213) 347-0551

SOLAR RELATED COURSES

**Energy & Power*
Instructor: Duxler, William M.
Course Number: PHY SC 13
Department: Physics, Engineering
Duration: 18 Weeks
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy

**Man & His Environ: Phys. Processes*
Instructor: Meyer, W. Craig
(213) 347-0551
Course Number: EN ST 1
Department: Life & Earth Science
Topics Covered Extensively: Alternate Energy Sources; Solar Systems Design

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LOS ANGELES TRADE TECH COLLEGE (1227)
LOS ANGELES, California 90015
(213) 746-0800

SOLAR RELATED COURSES

Energy Management in Buildings
Instructor: Adams, N.
(213) 746-0800
Course Number: EM 189
Department: Electrical-Mechanical
Credits: 3
Student Level: High School Graduate
Duration: 20 Weeks, 3.0 hrs per week
Contact Hours: 60
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer

Solar Energy
Instructor: Adams, N.
(213) 746-0800
Course Number: EMT 188
Department: Electrical-Mechanical Dept.
Credits: 3
Student Level: High School Graduate
Duration: 20 Weeks, 3.0 hrs per week
Contact Hours: 60
Topics Covered Extensively: 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; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 30

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MARIN, COLLEGE OF (1178)
KENTFIELD, California 94904
(415) 457-8811

SOLAR RELATED COURSES

Energy Efficient Design
Instructor: Sartor, Dale
Department: Adult Education
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 28
Classroom: 20
Laboratory: 8
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; 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; Process Heat, Industrial; Space Heating; Wind Power, Small Systems
Number of Times Taught: 9
Average Enrollment: 50

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MERCED COLLEGE (1237)
MERCED, California 95340
(209) 723-4321

SOLAR RELATED COURSES

Residential Application-Solar Energy
Instructor: Cox, James W.
(209) 723-4321
Course Number: IT-40
Department: Industrial Technology
Credits: 3
Student Level: High School Graduate
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
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; Photovoltaics; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

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MODESTO JUNIOR COLLEGE (1240)
MODESTO, California 95350
(209) 526-2000

PROGRAMS AND CURRICULA

External - Project Sunrise
Contact: Wilson, E. William
(209) 526-2000

SOLAR RELATED COURSES

Solar Energy Applications
Instructor: Wilson, E. William
(209) 526-2000
Course Number: PS 368
Department: Dept. Engineering, Physical Science & 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

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MOORPARK COLLEGE (7115)
MOORPARK, California 93021
(805) 529-2321

SOLAR RELATED COURSES

Solar Heating Construction Institute
Instructor: Ainge, Ken
(805) 529-2321
Course Number: ET 89B
Department: Technology
Credits: 2
Student Level: All levels
Duration: 9 Weeks, 3.0 hrs per week
Contact Hours: 27
Classroom: 27
Topics Covered Extensively: Appropriate Technology; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 15

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MOUNT SAN ANTONIO COLLEGE (1245)
WALNUT, California 91789
(714) 598-2811

PROGRAMS AND CURRICULA

Air Cond., Heat., and Vent.
Degree: AD, Air Cond., Heat. and Refrig.
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 (714) 594-5611
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
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 (714) 594-5611
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
Topics Covered Extensively: Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation

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MT SAN JACINTO COLLEGE (1246)
SAN JACINTO, California 92383
(714) 654-7321

SOLAR RELATED COURSES

Solar Collector Design
Instructor: Caldwell, B. (714) 654-7321
Course Number: ENGR 6
Department: Vocational Education
Credits: 3
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 45
Laboratory: 9
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 34

Solar Energy Applications
Instructor: Caldwell, Benton (714) 654-7321
Course Number: ENGR 4
Department: Vocational Education
Credits: 3
Student Level: College Graduate
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 49
Laboratory: 5
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 2
Average Enrollment: 33

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NAPA COLLEGE (1247)
NAPA, California 94558
(707) 255-2100

SOLAR RELATED COURSES

Solar Energy Workshop
Instructor: Dean, Anson R. (916) 758-4606
Department: Continuing Education
Student Level: All levels
Duration: 6 Weeks, 3.0 hrs per week
Contact Hours: 18
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Solar System Components; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating
Number of Times Taught: 2
Average Enrollment: 50

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OHLONE COLLEGE (4481)
FREMONT, California 94537
(415) 657-2100

SOLAR RELATED COURSES

**Two Courses on Solar*

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ORANGE COAST COLLEGE (1250)
COSTA MESA, California 92626
(714) 556-5651

SOLAR RELATED COURSES

Solar
Instructor: Abernathy, Bill J.
(714) 556-5812
Course Number: 115
Department: Technology
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Economics; Space Heating
Number of Times Taught: 2
Average Enrollment: 30

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PASADENA CITY COLLEGE (1261)
PASADENA, California 91106
(213) 578-7123

SOLAR RELATED COURSES

**Energy Sources, Resources & Uses*
Instructor: Ball, D.A.
Course Number: EN100
Department: Eng'r & Tech
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Wind Power, Small Systems

**Solar Energy for the Consumer*
Instructor: Yanow, Gilbert
(213) 578-7301
Department: Eng'r. & Tech.
Duration: 9 Weeks, 3.0 hrs per week
Contact Hours: 27
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Small Scale; Space Heating

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REDWOODS, COLLEGE OF THE (1185)
EUREKA, California 95501
(707) 443-8411

SOLAR RELATED COURSES

Solar Heating A
Instructor: Mills, David
(707) 443-8411
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

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RIVERSIDE CITY COLLEGE (1270)
RIVERSIDE, California 92506
(714) 684-3240

SOLAR RELATED COURSES

Solar Energy Applications
Instructor: Budd, Frank W. (714) 684-3240
Course Number: AC 52A
Department: Air Conditioning
Credits: 5
Student Level: All levels
Duration: 18 Weeks, 7.0 hrs per week
Contact Hours: 126
Classroom: 72
Laboratory: 54
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; 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

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SACRAMENTO CITY COLLEGE (1233)
SACRAMENTO, California 95822
(916) 449-7531

SOLAR RELATED COURSES

Basic Solar Heating and Cooling Systems
Instructor: Stockwell, Richard/ Goff, Don (916) 449-7278
Course Number: MET 141
Department: Occupational Technology/Mechanical, Electrical Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Materials Research; Photovoltaics; Plumbing Techniques; Solar System Components; Solar Economics; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Maintenance; Domestic Hot Water; Process Heat, Industrial; Space Heating; Space Cooling

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SAN BERNARDINO VLY COLLEGE (1272)
SAN BERNARDINO, California 92403
(714) 885-0231

SOLAR RELATED COURSES

**Two Solar Courses*

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SAN DIEGO CC- CITY COLLEGE (8895)
SAN DIEGO, California 92101
(714) 238-1181

PROGRAMS AND CURRICULA

**Solar Ener. Main. and Tech*
Degree: AD, Advanced Degree

SOLAR RELATED COURSES

**Two Courses on Solar Energy Main.,Tech.*
Program or Curriculum: *Solar Ener. Main. and Tech.
Topics Covered Extensively: Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation

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SAN DIEGO CC- EVENING COLLEGE (7478)
SAN DIEGO, California 92101
(714) 238-1181

PROGRAMS AND CURRICULA

Air Cond., Heat., Refrig., and Sol. Tech.
Degree: AD, OTHER, Air Cond., Heat., Refrig., & Sol. Tech.
Contact: Belker, Loren (714) 238-1181
Students Taking or Completing Offering: Solar Technician, Trade Specialty

SOLAR RELATED COURSES

Adv. Sol. Ser. Main. and Tech.
Instructor: Faris, Theodore (714) 238-1181
Course Number: 226

Department: City Campus
Program or Curriculum: Air Cond. Heat., Refrig. and Sol. Tech.
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 Cond., Heat., Refrig., and Sol. Ener.
Instructor: Faris, Theodore (714) 238-1181
Course Number: 201
Department: City Campus
Program or Curriculum: Air Cond., Heat., Refrig., and Sol. Tech.
Credits: 4
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

Sol. Ser. Main. and Tech.
Instructor: Faris, Theodore (714) 238-1181
Course Number: 225
Department: City Campus
Program or Curriculum: Air Cond., Heat., Refrig., and Sol. Tech.
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

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SAN DIEGO CC- MESA COLLEGE (1275)
SAN DIEGO, California 92111
(714) 279-2300

SOLAR RELATED COURSES

Utilization of Solar Energy
Instructor: Reeder, M.M. (714) 279-2300
Course Number: 215
Department: Building Construction Technology
Credits: 4
Student Level: Freshman or Sophomore
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; 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: 4
Average Enrollment: 25

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SAN JOAQUIN DELTA COLLEGE (1280)
STOCKTON, California 95207
(209) 478-2011

SOLAR RELATED COURSES

**Energy Conservation and Alternatives*
Instructor: Oliver, James E.
Course Number: NR75D
Department: Physics
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy

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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 Technician*
Degree: OTHER, Certificate of Achievement
Contact: Herrick, Clyde/ Upton, Si
Students Taking or Completing Offering:
Solar Technician

SOLAR RELATED COURSES

**Solar Energy - Indust. Appl.*
Instructor: Upton, Si
Course Number: SOL 114
Department: Solar Technology
Program or Curriculum: *Solar Technician
Credits: 3

**Solar Energy - Res. Appl.*
Instructor: Upton, Si
Course Number: SOL113
Department: Solar Technology
Program or Curriculum: *Solar Technician
Credits: 3

**Solar Photoelectric Conversion*
Instructor: Upton, Si
Course Number: SOL116
Department: Solar Technology
Program or Curriculum: *Solar Technician
Credits: 2

**Solar Theory*
Instructor: Upton, Si
Course Number: PHYSCI21
Program or Curriculum: *Solar Technician
Credits: 3

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SANTA ANA COLLEGE (1284)
SANTA ANA, California 92706
(714) 835-3000

SOLAR RELATED COURSES

**Three Solar Courses*

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SEQUOIAS, COLLEGE OF THE (1186)
VISALIA, California 93277
(209) 733-2050

SOLAR RELATED COURSES

Solar Applications
Instructor: Cottrell, Richard S.
(209) 733-2050
Course Number: PS 14
Department: Architecture/Science
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 25

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SIERRA COLLEGE (1290)
ROCKLIN, California 95677
(916) 624-3333

SOLAR RELATED COURSES

Solar Energy Housing
Course Number: WT6
Department: Wood Technology
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Topics Covered Extensively: Energy Conservation
Number of Times Taught: 4
Average Enrollment: 50

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SISKIYOUS, COLLEGE OF THE (1187)
WEED, California 96094
(916) 938-4463

SOLAR RELATED COURSES

**Frontiers of Sci. - Enrer. for Consumers*
Instructor: Crist, Friend, Dawson
Course Number: SCI 10
Department: Natural Science
Topics Covered Extensively: Alternate Energy Sources; Solar Economics

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SOUTHWESTERN COLLEGE (1294)
CHULA VISTA, California 92010
(714) 420-1080

SOLAR RELATED COURSES

One Solar Course

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WEST VALLEY COLLEGE (1338)
SARATOGA, California 95070
(408) 867-2200

SOLAR RELATED COURSES

Introduction of Solar Energy
Instructor: Feemster, John
(408) 925-3095
Department: Engineering
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 8
Average Enrollment: 40

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Other Educational Institutions

ANTIOCH COLLEGE/WEST (90520)
1161 Mission St.
San Francisco, California 94103

PROGRAMS AND CURRICULA

Solar Energy & Design
Degree: BA, MS, Envir. Studs. & Approp. Tech.
Contact: Nelson, Lynn
(415) 864-2570

SOLAR RELATED COURSES

Courses in Des., Const. of Sol. Systems
Instructor: Olkowski, Helga
Department: Farallones Institute
Program or Curriculum: *Solar Energy & Design
Topics Covered Extensively: Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling

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CENTER FOR EMPLOYMENT TRAINING (90350)
425 So. Market St.
San Jose, California 95113

SOLAR RELATED COURSES

Building Maintenance
Instructor: Rodriguez, Rudolph
Duration: 6 Weeks
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation

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OFFICE OF APPROPRIATE TECHNOLOGY (90530)
PO Box 1677
Sacramento, California 95808

PROGRAMS AND CURRICULA

Training Program for Installers
(916) 445-1803
Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System)

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SOLAR TECHNICIAN TRAINING PROGRAM - OFFICE OF APPROPRIATE TECHNOLOGY (90340)
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

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SOLARCON (90490)
PO Box 14875
San Francisco, California 94114

SOLAR RELATED COURSES

Installers Workshop
(415) 648-2159
Department: Karellen Educational Services
Topics Covered Extensively: Solar Systems Installation

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Colleges/Universities

ADAMS STATE COLLEGE (1345)
ALAMOSA, Colorado 81102
(303) 589-7346

SOLAR RELATED COURSES

Special Projects: Solar Heating
Instructor: Spannagel, Larry
(303) 589-3133
Course Number: 1A 303
Department: Industrial Arts
Credits: 2
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 15
Laboratory: 45
Topics Covered Extensively: Appropriate Technology; Energy Storage; Passive Solar Technology; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 13

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COLO 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
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology
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
Topics Covered Extensively: Heat and Energy Transfer; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
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
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 9

Average Enrollment: 8

Solar Science
Instructor: Decker, Tom
(303) 598-0200
Course Number: SOL 200
Department: Solar Engineering Technology
Program or Curriculum: Solar Engineering Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 12
Average Enrollment: 10

Solar Science II
Instructor: Christensen, Edward
(303) 598-0200
Course Number: SOL 404
Department: Solar Engineering Technology
Program or Curriculum: Solar Engineering Technology
Credits: 3
Student Level: Junior or Senior
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Heat and Energy Transfer; Solar Collector Evaluation/Design; Solar Systems Testing and Evaluation
Number of Times Taught: 2
Average Enrollment: 5

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COLO- COLO SPRINGS, U OF (4509)
COLORADO SPRINGS, Colorado 80907
(303) 598-3737

PROGRAMS AND CURRICULA

Distributed Studies in Energy Science
Degree: BA, Distributed Studies
Contact: Blade, Richard A.
(303) 598-3737
Students Taking or Completing Offering: Researcher, Solar Engineer, Other, Solar Technician

Solar Energy and Energy Sciences
Degree: BS, Resource Systems Engineering
Contact: Wiener, R.
Students Taking or Completing Offering: Solar Engineer

SOLAR RELATED COURSES

Introduction to Energy Sciences 150
Instructor: Grogger, Scott P./ Blade, R.
(303) 598-3737
Course Number: 150
Department: Physics and Energy Sciences
Program or Curriculum: Distributed Studies in Energy Science
Credits: 3
Student Level: All levels
Duration: 2 Weeks, 40.0 hrs per week
Contact Hours: 80
Classroom: 64
Laboratory: 16
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Space Heating
Number of Times Taught: 2
Average Enrollment: 30

Introduction to Energy Sciences 151
Instructor: Scott, M./ Grogger, P./ Blade, R.
(303) 598-3737
Course Number: 151
Department: Physics and Energy Sciences
Program or Curriculum: Distributed Studies in Energy Science
Credits: 3
Student Level: All levels
Duration: 2 Weeks, 40.0 hrs per week
Contact Hours: 80
Classroom: 64
Laboratory: 16
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Space Heating
Number of Times Taught: 2
Average Enrollment: 30

Methods of Energy Sciences 350
Instructor: Grogger, P./ Blade, R.
(303) 598-3737
Course Number: 350
Department: Physics and Energy Sciences
Program or Curriculum: Distributed Studies in Energy Science
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 96
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer

Number of Times Taught: 1
Average Enrollment: 15

Methods of Energy Sciences 351
Instructor: Grosser, P./ Blade, R. (303) 598-3737
Course Number: 351
Department: Physics and Energy Sciences
Program or Curriculum: Distributed Studies in Energy Science
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 96
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer
Number of Times Taught: 1
Average Enrollment: 15

Solar Energy I
Instructor: Scott, M.
Course Number: 195
Department: Physics and Energy Science
Program or Curriculum: Solar Energy and Energy Sciences
Credits: 3

Solar Energy I, 160
Instructor: Scott, Michael (303) 598-3737
Course Number: 160
Department: Physics and Energy Science
Program or Curriculum: Distributed Studies in Energy Science
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 40
Laboratory: 20
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 7
Average Enrollment: 30

Solar Energy II
Instructor: Scott, M.
Course Number: 207
Department: Physics & Energy Sci.
Program or Curriculum: Solar Energy and Energy Sciences
Credits: 3

Solar Energy II, 360
Instructor: Jones, Robert (303) 598-3737
Course Number: 360
Department: Physics and Energy Sciences
Program or Curriculum: Distributed Studies in Energy Science
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Materials Research; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 24

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COLORADO AT BOULDER, U OF (1370)
BOULDER, Colorado 80309
(303) 492-0111

PROGRAMS AND CURRICULA

Joint Inst. for Lab. Astrophysics
Contact: Hummer, David (303) 492-6787
Students Taking or Completing Offering: Educator, Researcher, Solar Engineer

Lab for Atmospheric and Space Phys
Contact: Barth, Charles A. (303) 492-7677
Students Taking or Completing Offering: Educator, Researcher, Solar Engineer

Solar/Appropriate Technology
Degree: BA, MA, Environmental Design Architecture
Contact: Holloway, Dennis R. (303) 492-7497
Students Taking or Completing Offering: Architect, Researcher, Contractor, Installer-Residential (Solar System), Installer-Commercial (Solar System)

SOLAR RELATED COURSES

Appropriate Technology 333
Instructor: Holloway, Dennis R. (303) 492-7497
Course Number: ENVD 333
Department: Environmental Design
Program or Curriculum: Solar/ Appropriate Technology

Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Classroom: 3
Laboratory: 8
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Storage; Heat and Energy Transfer; Materials Research; Passive Solar Technology; 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 Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 50

Appropriate Technology 334
Instructor: Holloway, Dennis R. (303) 492-7497
Course Number: ENVD 334
Department: Environmental Design
Program or Curriculum: Solar/ Appropriate Technology
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Classroom: 24
Laboratory: 66
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Storage; Heat and Energy Transfer; Materials Research; Passive Solar Technology; 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 Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 50

Community Design
Instructor: Holloway, Dennis R. (303) 492-7497
Course Number: 300
Department: Environmental Design
Program or Curriculum: Solar/ Appropriate Technology
Credits: 6
Student Level: Junior or Senior
Duration: 15 Weeks, 8.0 hrs per week
Contact Hours: 120
Classroom: 24
Laboratory: 96
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Passive Solar Technology; Solar Energy Policy Development; Solar Economics; Solar Home Construction; Solar Law/Legislation
Number of Times Taught: 2
Average Enrollment: 40

Computer-Aided Thermal Design
Instructor: Johnson, Herbert (303) 492-6648
Course Number: 458
Department: Mechanical Engineering
Program or Curriculum: Lab for Atmospheric and Space Phys., Joint Inst. for Lab. Astrophysics
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Energy Storage; Solar System Components; Solar Systems Design

Energy in a Technical Society
Instructor: Bartlett, David (303) 492-6960
Course Number: 207
Department: Arts and Sci., Phys./Astrophysics
Program or Curriculum: Joint Inst. for Lab. Astrophysics, Lab for Atmospheric and Space Phys.
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 7
Average Enrollment: 50

Energy Conversion
Instructor: Johnson, Herbert (303) 492-6648
Course Number: 455
Department: Engineering, Mechanical Engineering
Program or Curriculum: Lab for Atmospheric and Space Phys., Joint Inst. for Lab. Astrophysics
Credits: 3

Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Elec'l Generation, Central
Number of Times Taught: 10
Average Enrollment: 25

Energy Utilization
Instructor: Krenz, Jerrold (303) 492-7925
Course Number: 496
Department: Engineering/Electrical Engineering
Program or Curriculum: Joint Inst. for Lab. Astrophysics, Lab for Atmospheric and Space Phys.
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 6
Average Enrollment: 25

Solar Energy Utilization
Instructor: Kreith, Frank/ West, Ron (303) 492-7471
Course Number: 405/505
Department: Engineering/Chemical Engineering
Program or Curriculum: Lab for Atmospheric and Space Phys., Joint Inst. for Lab. Astrophysics
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design
Average Enrollment: 45

Solar Technology
Instructor: Holloway, Dennis R. (303) 492-7497
Course Number: ENVD 332
Department: Environmental Design
Program or Curriculum: Solar/ Appropriate Technology
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 12
Laboratory: 33
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 130

Sun and Solar Energy
Instructor: Malville, J. McKim (303) 492-8913
Course Number: 321
Department: Arts and Sci, Astrogeophysics
Program or Curriculum: Lab for Atmospheric and Space Phys., Joint Inst. for Lab. Astrophysics
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 38
Laboratory: 10
Topics Covered Extensively: Intro. to Solar Energy; Photovoltaics; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 120

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COLORADO SCHOOL OF MINES (1348)
GOLDEN, Colorado 80401
(303) 279-0300

SOLAR RELATED COURSES

Principles of Solar Energy Systems
Instructor: Mathews, Frank S. (303) 279-0300
Course Number: PH419
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Elec'l Generation, Central
Number of Times Taught: 3
Average Enrollment: 20

Renewable Energy Sources
Instructor: Miller, Sam (303) 279-0300
Course Number: BE479
Department: Basic Engineering
Credits: 3
Student Level: Junior or Senior

Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Heat and Energy Transfer; Solar Systems Testing and Evaluation

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COLORADO STATE UNIVERSITY (1350)
FORT COLLINS, Colorado 80523
(303) 491-5321

PROGRAMS AND CURRICULA

Solar Energy Applications
Degree: PhD, MS, Engineering
Students Taking or Completing Offering:
Educator, Researcher, Solar Engineer

SOLAR RELATED COURSES

Design of Solar Energy Systems
Course Number: CE/ME 675
Department: Engineering
Program or Curriculum: Solar Energy Applications
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Central; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 30

Principles of Solar Energy Applications
Course Number: CE/ME 676
Department: Engineering
Program or Curriculum: Solar Energy Applications
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy; 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; Elec'l Generation, Central; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 30

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DENVER, UNIVERSITY OF (1371)
DENVER, Colorado 80210
(303) 753-1964

PROGRAMS AND CURRICULA

Solar Energy
Contact: Stonely, Paul J.
(303) 753-2194
Students Taking or Completing Offering:
Do-it-yourself Homeowner

SOLAR RELATED COURSES

Solar Energy: Some Like It Hot
Instructor: Vragel, Kurt
(303) 837-3385
Course Number: 00-99.11
Department: Continuing Education
Program or Curriculum: Solar Energy
Student Level: All levels
Duration: 9 Weeks, 2.0 hrs per week
Contact Hours: 18
Number of Times Taught: 7
Average Enrollment: 22

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FORT LEWIS COLLEGE (1353)
DURANGO, Colorado 81301
(303) 247-7661

SOLAR RELATED COURSES

Elements of Solar Energy
Instructor: Capp, Clifford
(303) 247-7249
Course Number: GS200
Department: General Studies
Credits: 3
Student Level: All levels
Duration: 5 Weeks, 8.0 hrs per week
Contact Hours: 40
Classroom: 20
Laboratory: 10
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 20

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MESA COLLEGE (1358)
GRAND JUNCTION, Colorado 81501
(303) 248-1020

PROGRAMS AND CURRICULA

Solar Power

Contact: Ramsey, Woodrow
(303) 248-1565
Students Taking or Completing Offering:
Do-it-yourself Homeowner

SOLAR RELATED COURSES

Advanced Solar
Instructor: Ramsey, Woodrow
(303) 248-1565
Department: Continuing Education/Outreach
Program or Curriculum: Solar Power
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Systems Installation; Solar Systems Maintenance
Number of Times Taught: 3
Average Enrollment: 25

Beginning Solar Power
Instructor: Ramsey, Woodrow
(303) 248-1565
Department: Continuing Education/Outreach
Program or Curriculum: Solar Power
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Systems Installation; Solar Systems Maintenance
Number of Times Taught: 3
Average Enrollment: 25

Solar Practicum
Instructor: Ramsey, Woodrow
(303) 248-1565
Department: Continuing Education/Outreach
Program or Curriculum: Solar Power
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Systems Installation; Solar Systems Maintenance
Number of Times Taught: 3
Average Enrollment: 25

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METROPOLITAN ST COLLEGE (1360)
DENVER, Colorado 80204
(303) 629-2400

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Leitz, Robert
(303) 629-3143
Course Number: 190
Department: Earth Sciences
Program or Curriculum: Alternate Energy Sources
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 1
Average Enrollment: 20

Economics of Solar Heating
Instructor: Smith, Howard S.
(303) 629-3084
Course Number: EET 390
Department: Electronics Engineering Technology
Credits: 2
Student Level: Junior or Senior
Duration: 4 Weeks, 7.5 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Solar Economics
Number of Times Taught: 2
Average Enrollment: 21

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NORTHERN COLORADO, U OF (1349)
GREELEY, Colorado 80639
(303) 351-1890

SOLAR RELATED COURSES

Applied Solar Energy
Instructor: Fadner, Willard
(303) 351-2962
Course Number: 467
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy

Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Elec'l Generation, Central; Space Heating
Number of Times Taught: 1
Average Enrollment: 5

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US AIR FORCE ACADEMY (1369)
US AIR FORCE ACAD, COLO, Colorado 80840
(303) 472-1818

SOLAR RELATED COURSES

Solar Energy Applications
Instructor: Eden, Anthony
(303) 472-4036
Course Number: CE495
Department: Civil Engr., Engr. Mechanics and Materials
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 2.5 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 5
Average Enrollment: 16

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WESTERN ST COLLEGE COLO (1372)
GUNNISON, Colorado 81230
(303) 943-0120

SOLAR RELATED COURSES

Design for Solar Energy in Your Home Heating
Instructor: Kowal, Jerry
(303) 943-2004
Course Number: IA 233
Department: Industrial Arts
Credits: 2
Student Level: Junior or Senior
Duration: 2 Weeks, 15.0 hrs per week
Contact Hours: 30
Classroom: 20
Laboratory: 10
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design; Space Heating
Number of Times Taught: 7
Average Enrollment: 30

Passive Solar Arch. and Underground Const.
Instructor: Kowal, Jerry
(303) 943-2004
Course Number: IA 233
Department: Industrial Arts
Credits: 2
Student Level: Junior or Senior
Duration: 2 Weeks, 15.0 hrs per week
Contact Hours: 30
Classroom: 20
Laboratory: 10
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Space Heating

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Community/Junior Colleges

COLO MTN COLLEGE WEST CAM (4506)
GLENWOOD SPRINGS, Colorado 81601
(303) 945-7481

SOLAR RELATED COURSES

Energy: Sources and Uses
Instructor: Trapani, I. L.
Course Number: GSC 156
Credits: 3
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Wind Power, Central Systems; Wind Power, Small Systems

Sol. Ener. Bldg.-Design and Const.
Instructor: Shore, Ron
Course Number: BLO 205
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.5 hrs per week
Contact Hours: 35
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Space Heating; Space Cooling

Solar and Wind Energy Symposium
Instructor: Dutmers, Gary
Course Number: GSC 270S1
Credits: 1
Student Level: All levels

Duration: 10 Weeks, 1.0 hrs per week
Contact Hours: 10
Topics Covered Extensively: Passive Solar Technology; Photovoltaics; Solar Collector Evaluation/Design; Wind Power, Central Systems; Wind Power, Small Systems

Solar Architecture
Instructor: Fanta, Greg
Course Number: BLO 204
Credits: 5
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling

Solar Energy
Instructor: Shore, Ron
Department: Cont. Ed.
Student Level: High School Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 15
Number of Times Taught: 3
Average Enrollment: 25

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DENVER NORTH CAMPUS, CC OF (7933)
WESTMINSTER, Colorado 80030
(303) 287-3311

SOLAR RELATED COURSES

Solar Energy
Instructor: Kroll, Fred
(303) 466-8811
Course Number: SCI 120
Department: Science/Math
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 45

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DENVER RED ROCKS CAM, CC OF (9543)
GOLDEN, Colorado 80401
(303) 988-6160

PROGRAMS AND CURRICULA

Solar Energy-Instl. and Main.
Degree: AD, OTHER, Solar Energy-Inst. and Main.
Contact: Hilton, Craig/ Hilton, Robert (303) 988-6161
Students Taking or Completing Offering: Educator, Researcher, Installer-Residential (Solar System), Plumber, Sheet Metal Worker

SOLAR RELATED COURSES

Advance Solar Controls
Instructor: Klima, John (303) 988-6161
Course Number: SOM 236
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: Solar System Components; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 1
Average Enrollment: 25

Altern. Backup Systems for Solar Energy
Instructor: Hilton, Craig (303) 988-6161
Course Number: SOM 238
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: Alternate Energy Sources

Basic Sheet Metal for Solar Energy
Instructor: DuPriest, Don (303) 988-6161
Course Number: SHM 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: Sheet Metal Techniques; Solar System Components
Number of Times Taught: 3
Average Enrollment: 25

Basic Solar Controls
Instructor: Hitz, Frank
(303) 988-6161
Course Number: SOM235
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 Testing and Evaluation
Number of Times Taught: 2
Average Enrollment: 30

Basic Solar Systems
Instructor: Hilton, Craig
(303) 988-6161
Course Number: SOM220
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Inst. 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 Constr. Trades
Instructor: Feister, Clarence
(303) 988-6161
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: 20
Average Enrollment: 20

Bricklaying For Construction Trades
Instructor: Gale, Bud
(303) 988-6161
Course Number: BRI120
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
(303) 988-6161
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
(303) 988-6161
Course Number: SOM227
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: 4
Average Enrollment: 25

Hot Water Heating-Instal. and Main.
Instructor: Hilton, Robert
(303) 988-6161
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

Intro. to Photovoltaic and Wind Energy
(303) 988-6161
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: 30
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Photovoltaics; Solar Systems Installation; Elec'l Generation, Small Scale; Wind Power, Small Systems

Orient. of Tools, Basic Plumb. and Draw.
Instructor: Hilton, Robert
(303) 988-6161
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
(303) 988-6161
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 Eng. Tech I
Instructor: Haugseth, Larry
(303) 988-6161
Course Number: SOM221
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Instl. 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 Eng. Tech. II
Instructor: Dahl, Mike
(303) 988-6161
Course Number: SOM222
Department: Industrial Occupations
Program or Curriculum: Solar Energy-Inst. 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
(303) 988-6161
Course Number: SOM226
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
(303) 988-6161
Course Number: SOM 229
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
(303) 988-6161

Course Number: SOM225
Department: Industrail 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 (303) 988-6161
Course Number: SOM228
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-Inst. 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

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OTERO JUNIOR COLLEGE (1362)
LA JUNTA, Colorado 81050
(303) 384-4443

PROGRAMS AND CURRICULA

Arch. Tech. - 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

Arch. Tech. - 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

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TRINIDAD STATE JR COLLEGE (1368)
TRINIDAD, Colorado 81082
(303) 846-5531

SOLAR RELATED COURSES

Solar Home Construction
Instructor: Brunelli, Roger F. (303) 846-5571
Course Number: BT 280
Department: Building Trades
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 10
Average Enrollment: 8

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Other Educational Institutions

COLLEGE OF SOLAR ENERGY (90540)
Box 397
Nederland, Colorado 80466

SOLAR RELATED COURSES

Solar Related Courses

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COLORADO OFFICE OF ENERGY CONSERVATION (90440)
1410 Grant St., B-104
Denver, Colorado 80203

SOLAR RELATED COURSES

Solar Energy Workshops

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DOMESTIC TECHNOLOGY INSTITUTE (90550)
Box 2043
Evergreen, Colorado 80439

SOLAR RELATED COURSES

Solar Energy Workshops
Instructor: Lillywhite, Malcom

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THE ALTERNATE ENERGY INSTITUTE (90310)
Box 3100
Estes Park, Colorado 80517

SOLAR RELATED COURSES

Solar Saturday
Topics Covered Extensively: Alternate Energy Sources

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Colleges/Universities

CENTRAL CONN ST COLLEGE (1378)
NEW BRITAIN, Connecticut
(203) 827-7000

SOLAR RELATED COURSES

Introduction to Energy Processing
Instructor: Duffy, Joseph
(203) 827-7378
Course Number: I.E. 114
Department: Technology
Credits: 2
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 26
Laboratory: 70
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 12
Average Enrollment: 45

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CONN MAIN CAMPUS, U OF (29013)
STORRS, Connecticut
(203) 486-2000

SOLAR RELATED COURSES

Solar Energy
Instructor: Pitkin, Edward T.
(203) 786-2332
Course Number: 320/295
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 30

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GRADUATE CNT. OF RP 1 & CNT. ENVIRONMENT & MAN (90260)
275 Windsor St.
Hartford, Connecticut 06120

SOLAR RELATED COURSES

**Some Solar Energy Studies*

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HARTFORD GRADUATE CENTER (2804)
HARTFORD, Connecticut
(203) 549-3600

PROGRAMS AND CURRICULA

**Environ. Sci. and Tech.*
Contact: Florek, Donald B.
Students Taking or Completing Offering: Architect, Solar Engineer, Other

SOLAR RELATED COURSES

**Adv. Solar Energy Systems Design*
Instructor: Florek, Donald B.
Department: Special Programs
Program or Curriculum: *Environ. Sci. and Tech.
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design

**Solar Energy*
Instructor: Florek, Donald B.
Department: Special Programs
Program or Curriculum: *Environ. Sci. and Tech.
Topics Covered Extensively: Intro. to Solar Energy

**Solar Energy for Bldgs.*
Instructor: Florek, Donald B.
Department: Special Programs
Program or Curriculum: *Environ. Sci. and Tech.
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design

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NEW HAVEN, UNIVERSITY OF (1397)
WEST HAVEN, Connecticut
(203) 934-6321

SOLAR RELATED COURSES

**Solar Heating and Cooling*
Department: Special Studies
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Topics Covered Extensively: Space Heating; Space Cooling

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SAINT JOSEPH COLLEGE (1409)
WEST HARTFORD, Connecticut
(203) 232-4571

SOLAR RELATED COURSES

Alt. Ener. Resources
Instructor: Murphy, S. MaryEllen
(203) 232-4571
Course Number: SCI ED 607
Department: Chemistry
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Number of Times Taught: 2
Average Enrollment: 25

Energy Conversion
Instructor: Markham, S. Claire/
Murphy, S. MaryEllen
(203) 232-4571
Course Number: SCI ED 507
Department: Chemistry
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Solar Energy Policy Development
Number of Times Taught: 2
Average Enrollment: 25

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WESLEYAN UNIVERSITY (1424)
MIDDLETOWN, Connecticut
(203) 347-9411

SOLAR RELATED COURSES

Field Work - Energy Planning
Instructor: Hawke, Paul
(203) 347-9411
Course Number: 417
Department: Science in Society
Credits: 3
Student Level: All levels
Duration: 13 Weeks, 8.0 hrs per week
Contact Hours: 104
Classroom: 98
Topics Covered Extensively: Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Systems Installation
Average Enrollment: 8

Field Work - Environ. Planning
Instructor: Trousdale, William
(203) 347-9411
Course Number: 413
Department: College of Science in Society
Credits: 3
Student Level: All levels
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 33
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 11

Field Work in Energy Planning
Instructor: Brown, Howard J.
(203) 347-9411
Course Number: 412
Department: Science in Society
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Passive Solar Technology; Solar Economics
Number of Times Taught: 2
Average Enrollment: 10

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WESTERN CONN ST COLLEGE (1380)
DANBURY, Connecticut
(203) 792-1400

SOLAR RELATED COURSES

Alternate Energy Systems
Instructor: Tucker, Glenn T.
Student Level: All levels
Duration: 6 Weeks, 2.5 hrs per week
Contact Hours: 15
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Space Heating, Space Cooling
Number of Times Taught: 2
Average Enrollment: 24

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YALE UNIVERSITY (1426)
NEW HAVEN, Connecticut
(203) 436-4771

SOLAR RELATED COURSES

Energy Conservation Seminar
Instructor: Watson, Donald
(203) 453-6388
Course Number: C-24 (B)
Department: Architecture

Credits: 3
Student Level: College Graduate
Duration: 13 Weeks, 2.0 hrs per week
Contact Hours: 26
Classroom: 26
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 5
Average Enrollment: 25

HVAC and Energy Conservation
Instructor: Barber, Everett M..
(203) 436-0550
Course Number: A-21
Department: Architecture
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Passive Solar Technology
Number of Times Taught: 6
Average Enrollment: 38

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Other Educational Institutions

ENERGY ED. SERVICES OF CONNECTICUT (90280)
PO Box 224
Hartford, Connecticut 06103

SOLAR RELATED COURSES

**Solar Ener. for Homes & Bldgs*
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

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THAMES VLY STATE TECH C (1413)
NORWICH, Connecticut
(203) 886-0177

SOLAR RELATED COURSES

Solar Energy/Energy Conservation and Usage
Department: Evening Division
Student Level: High School Graduate
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Number of Times Taught: 1
Average Enrollment: 30

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Colleges/Universities

DELAWARE, UNIVERSITY OF (1431)
NEWARK, Delaware 19711
(302) 738-2000

SOLAR RELATED COURSES

Photovoltaic Energy Conversion
Instructor: Boer, Karl W.
(302) 738-8048
Department: Engineering
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
-Classroom: 48
Topics Covered Extensively: Photovoltaics
Number of Times Taught: 3
Average Enrollment: 15

Solar Energy Conversion
Instructor: Boer, Karl W.
(302) 738-8048
Course Number: 467/667
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Laboratory: 3
Topics Covered Extensively: Energy Conversion; Materials Research; Photovoltaics
Number of Times Taught: 3
Average Enrollment: 20

Solar Thermal Conversion
Instructor: Gureri, Selauk
(302) 738-8160
Course Number: 667
Department: Mechanical and Aerospace Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 45

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Vocational/Technical Colleges

NEWCASTLE COUNTY VOCATIONAL TECHNICAL SCHOOL (90370)
1417 Newport Rd.
Wilmington, Delaware 19804

PROGRAMS AND CURRICULA

**Solar Heating of Buildings*

SOLAR RELATED COURSES

**Solar Heating of Buildings*
Program or Curriculum: *Solar Heating of Buildings
Contact Hours: 60
Topics Covered Extensively: Energy Conversion; Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation

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Colleges/Universities

CATHOLIC U OF AMERICA (1437)
WASHINGTON, District of Colombia 20064
(202) 635-5000

SOLAR RELATED COURSES

Graduate Research in Solar Energy
Department: Chemical Eng'r

Solar Energy and Thermal Radiation
Instructor: Whang, Y. C.
(202) 635-5170
Course Number: ME527
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 36
Laboratory: 6
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar Systems Design
Number of Times Taught: 5
Average Enrollment: 15

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GEORGE WASH UNIVERSITY (1444)
WASHINGTON, District of Colombia 20052
(202) 676-6000

PROGRAMS AND CURRICULA

**Energy Resources & Environ.*
Degree: PhD, MS,
(202) 676-6749

SOLAR RELATED COURSES

**Solar Heat. & Cool.-Res.,Comm.Appls.*
Department: Continuing Education
Topics Covered Extensively: Space Heating; Space Cooling

**Solar Heat. and Cool. Systems*
Course Number: ME259
Department: Civil, Mech. & Environ. Eng'r
Program or Curriculum: *Energy Resources & Environ.
Credits: 3
Student Level: College Graduate
Topics Covered Extensively: Alternate Energy Sources; Energy Storage; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

**Wind Energy*
Course Number: ME294
Department: Civil, Mech. & Environ. Eng'r
Program or Curriculum: *Energy Resources & Environ
Credits: 3
Student Level: College Graduate
Topics Covered Extensively: Energy Conversion; Solar Economics; Elec'l Generation, Central; Elec'l Generation, Small Scale; Wind Power, Central Systems; Wind Power, Small Systems

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HOWARD UNIVERSITY (1448)
WASHINGTON, District of Colombia 20059
(202) 636-6040

SOLAR RELATED COURSES

Energy and Power
Instructor: Walker, M. L.
(202) 636-6565
Course Number: 304-428
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Materials Research; Photovoltaics; Solar Economics
Number of Times Taught: 11

Process Engineering in Energy Systems
Instructor: Rao, M. Gopala
(202) 636-6624
Course Number: 305-413
Department: Chemical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Energy Conservation; Energy Storage
Average Enrollment: 25

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Other Educational Institutions

NATIONAL TRAINING FUND (90360)
1900 "L" Street NW, Suite 405,
Washington, District of Colombia 20036

PROGRAMS AND CURRICULA

**Sheet Metal - Apprentice, Journeyman*
Contact: Harrington, Mr.
(202) 833-9543

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Colleges/Universities

BARRY COLLEGE (1466)
MIAMI, Florida 33161
(305) 758-3392

SOLAR RELATED COURSES

Energy Economics
Instructor: Wryman, Mark
(305) 754-7233
Course Number: ECO 302
Department: Continuing Education
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Solar Energy Policy Development; Solar Economics; Solar Home Construction; Solar Law/Legislation; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 12

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FLORIDA INST TECHNOLOGY (1469)
MELBOURNE, Florida 32901
(305) 723-3701

SOLAR RELATED COURSES

Design of Solar Conversion Systems
Instructor: Alkasab, K. A.
(305) 723-3701
Course Number: ME 5037
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Heat and Energy Transfer; Solar System Components; Solar Systems Design; Elec'l Generation, Central; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 10

Prin. of Solar Energy Conversion
Instructor: Alkasab, K. A.
(305) 723-3701
Course Number: ME 5035
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Elec'l Generation, Central; Space Cooling
Number of Times Taught: 1
Average Enrollment: 6

Solar Energy Conversion Systems
Instructor: Alkasab, K. A.
(305) 723-3701
Course Number: ME 5036
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Heat and Energy Transfer; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Elec'l Generation, Central; Space Cooling
Number of Times Taught: 2
Average Enrollment: 12

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FLORIDA INTERNATIONAL U (9635)
MIAMI, Florida 33199
(305) 552-2731

PROGRAMS AND CURRICULA

Solar Energy Technology
Degree: MS, Master of Science
Contact: Leonard, Rene J.
Students Taking or Completing Offering: Solar Engineer

SOLAR RELATED COURSES

Advanced Solar Energy
Instructor: Leonard, Rene J.
(305) 552-2807
Department: Technology
Program or Curriculum: Solar Energy Technolgoy
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 10
Average Enrollment: 25

Energy Systems
Instructor: Leonard, Rene J.
(305) 552-2807
Department: Technology
Program or
Curriculum: Solar Energy Technolgoy
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 10
Average Enrollment: 25

Solar Energy in Bldg. Design
Instructor: Leonard, Rene J.
(305) 552-2807
Department: Technolgoy
Program or
Curriculum: Solar Energy Technology
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 10
Average Enrollment: 25

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FLORIDA TECHNOLOGICAL U (3954)
ORLANDO, Florida 32816
(305) 275-2351

SOLAR RELATED COURSES

Solar Energy Systems
Instructor: Evans, Ronald
(305) 275-2416
Course Number: EML6416
Department: Engin., Mech. Engin. and Aerosp. Sci.
Credits: 4
Student Level: Junior or Senior
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 27

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FLORIDA, UNIVERSITY OF (1535)
GAINESVILLE, Florida 32611
(904) 392-3261

PROGRAMS AND CURRICULA

**Mechanical Eng'r*
Degree: MS, Mechanical Engineering

SOLAR RELATED COURSES

**Courses in Wind, Methane, Greenhouse, Solar*
Department: Mechanical Engineering
Program or
Curriculum: *Mechanical Eng'r
Student Level: All levels
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Space Heating; Wind Power, Small Systems

**Graduate Research Courses*
Department: Mechanical Eng'r
Program or
Curriculum: *Mechanical Eng'r
Student Level: College Graduate

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MIAMI, UNIVERSITY OF (1536)
CORAL GABLES, Florida 33124
(305) 284-2211

SOLAR RELATED COURSES

Fundamentals of Solar Energy Utilization
Instructor: Poteat, L./ Olsen, T.
(305) 284-2571
Course Number: MEN 510
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 12

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NORTH FLORIDA, U OF (9841)
JACKSONVILLE, Florida 32216
(904) 646-2666

SOLAR RELATED COURSES

Energy: Past, Present and Future
Instructor: Bowman, Ray
(904) 646-2518
Course Number: BSC 9930AB
Department: Arts and Sciences/Nautural Sciences
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 4

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WEST FLORIDA, U OF (3955)
PENSACOLA, Florida 32504
(904) 476-9500

PROGRAMS AND CURRICULA

Master of Public Administration
Degree: Public Administration
Contact: Skelton, Luther
(904) 476-9500

SOLAR RELATED COURSES

Energy Systems
Instructor: Salmon, Jack D.
(904) 476-9500
Course Number: PHD 6934
Department: Political Science
Program or Curriculum: Master of Public Administration
Credits: 5
Student Level: College Graduate
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 50
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Systems Design; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 1
Average Enrollment: 9

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Community/Junior Colleges

BREVARD CMTY COLLEGE (1470)
COCOA, Florida 32922
(305) 632-1111

PROGRAMS AND CURRICULA

Solar Eng'r Technology
Degree: AD, Appl. Sci. - Sol. Eng'r Tech
Contact: Donnell, Nelson
(305) 532-1111
Students Taking or Completing Offering:
Solar Technician

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EDISON COMMUNITY COLLEGE (1477)
FORT MYERS, Florida 33901
(813) 481-2121

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Werst, Lee
(813) 481-2121
Department: Basic Science
Credits: 4
Student Level: High School Graduate
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 48
Laboratory: 16
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy

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GULF COAST CMTY COLLEGE (1490)
PANAMA CITY, Florida 32401
(904) 769-1551

PROGRAMS AND CURRICULA

Solar Energy Solar Systems
Degree: AD, Science
Contact: Jones, Robert C.
(904) 769-1551

SOLAR RELATED COURSES

Solar Energy
Instructor: Stotz, Robert/ Jones, Robert
(904) 769-1551
Course Number: ETM-1101
Department: Tech.Ed. - A/C Heat. and Refrig.
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: 29

Solar Systems
Instructor: Stotz, Robert/ Jones, Robert
(904) 769-1551
Course Number: ETM 2102
Department: Tech. Ed. - A/C Heat. and Refrig.
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

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MIAMI- DADE CMTY 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, Commerical
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 2756C
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

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PENSACOLA JUNIOR COLLEGE (1513)
PENSACOLA, Florida 32504
(904) 476-5410

PROGRAMS AND CURRICULA

Solar Energy Technology
Degree: AD, Energy Tech. - Certificate of Completion
Contact: Lowery, Stanley
(904) 476-5410

SOLAR RELATED COURSES

Res. Design and Installation
Instructor: Lowery, Stanley
(904) 476-5410
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

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SANTA FE CMTY COLLEGE (1519)
GAINESVILLE, Florida 32601
(904) 377-5161

SOLAR RELATED COURSES

Principles of Solar Heat
Instructor: Roy, Russell
(904) 377-5161
Course Number: ACT 1840
Department: Industrial Education
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 30
Laboratory: 15
Topics Covered Extensively: 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; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 6
Average Enrollment: 20

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VALENCIA CMTY COLLEGE (6750)
ORLANDO, Florida 32802
(305) 299-5000

SOLAR RELATED COURSES

Energy
Instructor: McCord, Willian
(305) 299-5000
Course Number: PS-290
Department: Science
Credits: 3
Student Level: Freshman or Sophomore
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 12

Solar Energy for the Home-owner
Instructor: McCord, William M.
(305) 299-5000
Department: Open Campus/Continuing Edu.
Student Level: All levels
Duration: 1 Weeks, 6.0 hrs per week
Contact Hours: 6
Classroom: 2
Topics Covered Extensively: Intro. to Solar Energy; Domestic Hot Water

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Vocational/Technical Colleges

PINELLAS VO-TECH INSTITUTE (90320)
6100 154th Ave. North
Clearwater, Florida 33516

SOLAR RELATED COURSES

**Household Ener. Cons./Sol. Energy*
Topics Covered Extensively: Energy Conservation; Domestic Hot Water

**Solar Energy Heating and Cooling*
Duration: 9 Weeks
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling

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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 Cond., Refrig. and Maj. 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 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

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Other Educational Institutions

FLORIDA SOLAR ENERGY CENTER (90100)
300 State Rd. 401
Cape Canaveral, Florida 32920

SOLAR RELATED COURSES

**Short Courses, Workshops, Seminars*

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Colleges/Universities

BRENAU COLLEGE (1556)
GAINESVILLE, Georgia 30501
(404) 532-4341

SOLAR RELATED COURSES

Ecology
Instructor: Andrews, Charles L.
(404) 532-4341
Course Number: BY 303
Department: Math/Sciences
Credits: 5
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 6.0 hrs per week
Contact Hours: 60
Classroom: 40
Laboratory: 20
Average Enrollment: 20

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GA INST OF TECHN MAIN CAM (1569)
ATLANTA, Georgia 30332
(404) 894-2000

SOLAR RELATED COURSES

Solar Energy Engineering
Instructor: Williams, J. Richard
(404) 894-3351
Course Number: ME 6360
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 30
Laboratory: 6
Topics Covered Extensively: Alternate Energy Sources; 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; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 30

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GA INST TECHN- SOUTHERN TECH (1570)
MARIETTA, Georgia 30060
(404) 424-7200

SOLAR RELATED COURSES

Solar Heating and Cooling of Residences
Instructor: Newman, W.S.
(404) 424-7255
Course Number: 444
Department: Architectural Engineering Technology
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 6.0 hrs per week
Contact Hours: 60
Classroom: 40
Laboratory: 20
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 20

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GEORGIA, UNIVERSITY OF (1598)
ATHENS, Georgia 30602
(404) 542-3030

SOLAR RELATED COURSES

Architecture Design Studio (Introductory Architecture
Instructor: Linley, J.W./ Wahl, Michael
(404) 542-1816
Course Number: LAR 320
Department: Environmental Design
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 10
Laboratory: 40
Number of Times Taught: 10
Average Enrollment: 25

Landscape Ecology
Instructor: Fisher, W.R.
(404) 542-1816
Course Number: LAR 323
Department: Environmental Design
Credits: 5
Student Level: College Graduate
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 10
Laboratory: 40
Number of Times Taught: 10
Average Enrollment: 20

Nursery Management I
Instructor: Tinga, J.H.
(404) 542-2471
Course Number: HORT 363A

Department: Horticulture
Credits: 2
Student Level: Junior or Senior
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 10
Laboratory: 10
Number of Times Taught: 10
Average Enrollment: 25

Nursery Management II
Instructor: Tinga, J.H.
(404) 542-2471
Course Number: HORT 367B
Department: Horticulture
Credits: 2
Student Level: Junior or Senior
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 10
Laboratory: 10
Number of Times Taught: 10
Average Enrollment: 25

Nursery Management III
Instructor: Tinga, J.H.
(404) 542-2471
Course Number: HORT 363C
Department: Horticulture
Credits: 2
Student Level: Junior or Senior
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 10
Laboratory: 10
Number of Times Taught: 10
Average Enrollment: 25

Public Policy: Energy and Environment
Instructor: Regens, James L.
(404) 542-2057
Course Number: POL 451B
Department: Political Science
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 40
Laboratory: 10

Solar Energy Thermal Processes
Instructor: Wilson, J.D./ McLendon, B.D.
(404) 542-1653
Course Number: 802
Department: Agricultural Engineering
Credits: 5
Student Level: College Graduate
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 21
Laboratory: 29
Topics Covered Extensively: Heat and Energy Transfer; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water
Number of Times Taught: 2
Average Enrollment: 8

Utilization of Renewable Energy Resources
Instructor: McLendon, B. Derrell
(404) 549-7527
Department: Agricultural Engineering
Credits: 5
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 34
Laboratory: 16
Topics Covered Extensively: Alternate Energy Sources; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Small Scale

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Community/Junior Colleges

BRUNSWICK JUNIOR COLLEGE (1558)
BRUNSWICK, Georgia 31520
(912) 264-7211

PROGRAMS AND CURRICULA

**Vocational - Technical*

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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

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Colleges/Universities

GUAM, UNIVERSITY OF (3935)
AGANA, Guam 96910

SOLAR RELATED COURSES

Seminar
Instructor: Smith, Douglas
(671) 734-2921
Course Number: BI 691
Department: Arts and Science,
Biology
Credits: 1
Student Level: College Graduate
Duration: 15 Weeks, 1.0 hrs per week
Contact Hours: 15
Classroom: 15
Average Enrollment: 5

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Colleges/Universities

HAWAII AT MANOA, U OF (1610)
HONOLULU, Hawaii 96822
(808) 948-7837

SOLAR RELATED COURSES

Environmental Education
Instructor: Boyer, Wm. H.
(808) 948-7817
Course Number: ED EF 686
Department: Education
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation
Number of Times Taught: 3
Average Enrollment: 20

Seminar on Solar Energy
Instructor: Garrett, Alfred J.
(808) 948-7577
Course Number: CE499AR477
Department: Arts and Sciences, Meteorology
Credits: 1
Student Level: All levels
Duration: 14 Weeks, 1.0 hrs per week
Contact Hours: 14
Classroom: 14
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Space Heating; Space Cooling; Wind Power, Central Systems
Number of Times Taught: 1
Average Enrollment: 6

Solar Energy and Architecture
Instructor: Falicoff, W.
(808) 948-6845
Course Number: ARCH 477
Department: Arts and Sciences, Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 17
Laboratory: 25
Topics Covered Extensively: Passive Solar Technology; Solar Economics; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling

Solar Energy Measurements and Surveys
Instructor: Garrett, Alfred J.
(808) 948-7577
Course Number: MET 752
Department: Arts and Sciences, Meteorology
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 17
Laboratory: 25
Topics Covered Extensively: Intro. to Solar Energy; Solar Systems Design; Solar Systems Maintenance

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HAWAII HONOLULU CC, U OF (1612)
HONOLULU, Hawaii 96817
(808) 845-9211

SOLAR RELATED COURSES

Energy: Its Sources and Utilization
Course Number: ME 210
Department: Mechanical Engineering
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Number of Times Taught: 3

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Community/Junior Colleges

HAWAII KAUAI CC, U OF (1614)
LIHUE, Hawaii 96766
(808) 245-8311

SOLAR RELATED COURSES

Alternate Sources of Energy
Instructor: Mock, Marshall
(808) 245-8250
Course Number: SCI 097
Department: Math, Science & Tech.
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Small Scale; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 30

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Colleges/Universities

IDAHO STATE UNIVERSITY (1620)
POCATELLO, Idaho 83201
(208) 236-0211

SOLAR RELATED COURSES

Intro to Solar Energy
Instructor: Corey, L.E.
(298) 236-3975
Course Number: ENG/PHY299
Department: Engr/Physics
Credits: 2
Student Level: All levels
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Space Heating
Number of Times Taught: 46
Average Enrollment: 23

Intro. to Solar Energy
Instructor: Corey, L.E.
(208) 236-3975
Course Number: ENG/PHY 299
Department: Eng./Physics
Credits: 2
Student Level: All levels
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Number of Times Taught: 46
Average Enrollment: 23

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IDAHO, UNIVERSITY OF (1626)
MOSCOW, Idaho 83843
(208) 885-6111

PROGRAMS AND CURRICULA

Power Technology
Degree: BS, Science in Education
Contact: Cassetto, James M.
(208) 885-6492
Students Taking or Completing Offering: Educator

Solar Energy
Degree: PhD, MS, BS, Mech. or Elec. Engrg.
Contact: Warner, R. E.
(208) 885-6579
Students Taking or Completing Offering: Architect, Researcher, Solar Engineer

Solar Energy Workshop
Degree:
Contact: Cassetto, James
(208) 885-6492
Students Taking or Completing Offering: Educator, Contractor, Do-it-yourself Homeowner

SOLAR RELATED COURSES

Alternate Energy
Instructor: Cassetto, James
(208) 885-6492
Course Number: 350
Department: Education, Industrial Ed.
Program or Curriculum: Power Technology
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 6.0 hrs per week
Contact Hours: 108
Classroom: 54
Laboratory: 50
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; Solar Energy Policy Development; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Average Enrollment: 50

Alternate Energy Resources
Instructor: Hager, Wayne
(208) 885-6438
Course Number: ES404
Department: Engineering
Program or Curriculum: Solar Energy Workshop
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 3
Average Enrollment: 60

Arch. - Environmental Control System
Instructor: Bevans, Ronald D.
(208) 885-6272
Course Number: 463
Department: Art and Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51

Classroom: 51
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Passive Solar Technology; Plumbing Techniques; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 65

Arch. - Solar Energy Design
Instructor: Eder, Anton
(208) 885-6272
Course Number: 404
Department: Art and Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 100

Direct Energy Conversion
Instructor: Hagen, Jack I.
(208) 885-6555
Course Number: EE 420
Department: Electrical Engineering
Program or Curriculum: Solar Energy Workshops
Credits: 3
Student Level: College Graduate
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Photovoltaics; Solar Collector Evaluation/Design; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 1
Average Enrollment: 10

Power Technology
Instructor: Cassetto, James M.
(208) 885-6492
Course Number: 316
Department: Industrial Educ.
Program or Curriculum: Power Technology
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 6.0 hrs per week
Contact Hours: 108
Classroom: 54
Laboratory: 54
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; Photovoltaics; 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; Elec'l Generation, Small Scale; Process Heat, Industrial; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 15

Solar Energy Systems
Instructor: Warner, R. E.
(208) 885-6579
Course Number: MEE 435
Department: Mechanical Engineering
Program or Curriculum: Solar Energy
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 52
Laboratory: 2
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Central; Space Heating
Number of Times Taught: 2
Average Enrollment: 18

Workshop Solar Energy Tech
Instructor: Cassetto, James
(208) 885-6492
Course Number: 403
Department: Education Industrial Ed.
Program or Curriculum: Power Technology
Credits: 1
Student Level: All levels
Duration: 1 Weeks, 36.0 hrs per week
Contact Hours: 36
Classroom: 18
Laboratory: 18
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; 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; Elec'l Generation, Small Scale; Process Heat, Industrial; Space Heating
Number of Times Taught: 3
Average Enrollment: 35

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Colleges/Universities

BRADLEY UNIVERSITY (1641)
PEORIA, Illinois 61625
(309) 676-7611

SOLAR RELATED COURSES

Solar Energy Application
Instructor: Safdari, Y. B.
(309) 676-7611
Course Number: ME 409
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 30
Laboratory: 15
Topics Covered Extensively: Intro. to Solar Energy; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 15

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CHICAGO STATE UNIVERSITY (1694)
CHICAGO, Illinois 60628
(312) 995-2000

SOLAR RELATED COURSES

Conservation of Energy Resources
Instructor: Cutler, Irving
(312) 995-2186
Course Number: 345
Department: Geography
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage
Number of Times Taught: 2
Average Enrollment: 18

Conservation of Natural Resources
Instructor: Cutler, Irving
(312) 995-2186
Course Number: 256
Department: Geography
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage
Number of Times Taught: 7
Average Enrollment: 19

Energy and Man
Instructor: Treptow, Richard
(312) 995-2180
Course Number: 101
Department: Physical Sciences
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 9
Average Enrollment: 103

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CHICAGO, UNIVERSITY OF (1774)
CHICAGO, Illinois 60637
(312) 753-1234

SOLAR RELATED COURSES

**Modern Optics*
Instructor: Winston, Roland
Department: Physics
Student Level: College Graduate
Topics Covered Extensively: Solar Collector Evaluation/Design

**Theory of Photovoltaic - Research*
Instructor: Cohen, Morrel
Student Level: College Graduate
Topics Covered Extensively: Photovoltaics

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CITY COLL OF CHICAGO- CITY WIDE C. (29050)
CHICAGO, Illinois 60601
(312) 977-2500

SOLAR RELATED COURSES

**Natural Resources: Solar Energy*
Instructor: Tryon, John
Department: Public Service Institute

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DEPAUL UNIVERSITY (1671)
CHICAGO, Illinois 60604
(312) 321-8000

SOLAR RELATED COURSES

Environmental Quality
Instructor: Schillinger, E. J.
(312) 321-8175
Course Number: 390
Department: Physics
Credits: 4

Student Level: College Graduate
Duration: 3 Weeks, 25.0 hrs per week
Contact Hours: 75
Classroom: 50
Laboratory: 25
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Elec'l Generation, Central
Number of Times Taught: 1
Average Enrollment: 20

Probs.(tech. Soc)-Prac. Sol. Ener-home
Instructor: R.L.Novak
(312) 321-8192
Course Number: NSM1303
Department: DePaul College
Credits: 4
Student Level: Junior or Senior
Duration: 9 Weeks, 3.0 hrs per week
Contact Hours: 27
Classroom: 27
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction
Number of Times Taught: 2
Average Enrollment: 40

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EASTERN ILL UNIVERSITY (1674)
CHARLESTON, Illinois 61920
(217) 581-3020

SOLAR RELATED COURSES

Alternate Energy Systems
Instructor: Kleine, Ric
(217) 581-2721
Course Number: 3933
Department: School of Technology
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 30
Laboratory: 15
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion
Number of Times Taught: 2
Average Enrollment: 30

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GEORGE WILLIAMS COLLEGE (1683)
DOWNERS GROVE, Illinois 60515
(312) 964-3100

SOLAR RELATED COURSES

**Energy Technology and the Future*
Instructor: Clark, Edward T.
Department: IEA

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GOVERNORS ST UNIVERSITY (9145)
PARK FOREST SOUTH, Illinois 60466
(312) 534-5000

SOLAR RELATED COURSES

Applications of Appropriate Tech.
Instructor: Hagens, Beth
Course Number: 5295
Department: Environmental and Applied Sciences
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Marketing/Market Analysis; Materials Research; Passive Solar Technology; Solar Energy Policy Development; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 15

Fundamentals of Appropriate Technology
Instructor: Hagens, Beth
(312) 534-5000
Course Number: 6255
Department: Environmental & Applied Sciences
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar Energy Policy Development; Solar Economics; Solar Home Construction; Solar Systems Design; Elec'l Generation, Small Scale; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 15

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GREENVILLE COLLEGE (1684)
GREENVILLE, Illinois 62246
(618) 664-1840

SOLAR RELATED COURSES

Solar Energy
Instructor: Siefken, Hugh
(618) 664-1840
Course Number: PHY 270
Department: Physics
Credits: 4

Student Level: All levels
Duration: 6 Weeks, 18.0 hrs per week
Contact Hours: 108
Classroom: 45
Laboratory: 63

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ILL CHICAGO CIRCLE, U OF (1776)
CHICAGO, Illinois 60680
(312) 996-3000

SOLAR RELATED COURSES

Building Construction Systems
Instructor: Dudnik, Elliott
(312) 996-3335
Course Number: ARCH 313
Department: Architecture
Credits: 6
Student Level: Junior or Senior
Duration: 10 Weeks, 15.0 hrs per week
Contact Hours: 150
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer
Average Enrollment: 10

Solar Energy
Instructor: Simon, H. A.
(312) 996-8530
Course Number: ENRE 391
Department: Energy Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Heat and Energy Transfer; Solar Collector Evaluation/Design

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ILL URBANA CAMPUS, U OF (1775)
URBANA, Illinois 61801
(217) 333-1000

SOLAR RELATED COURSES

Advanced Topics to Heat and Mass Transfer
Instructor: Alkire, Richard
(217) 333-0063
Course Number: 488
Department: Chemical Engineering
Credits: 1
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 5
Average Enrollment: 15

Architectural Design Studio
Instructor: Bergeson, Donald
(217) 333-2848
Course Number: 371
Department: Architecture
Credits: 5
Student Level: Junior or Senior
Duration: 15 Weeks, 15.0 hrs per week
Contact Hours: 225
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy

Electrochemical Engineering
Instructor: Alkire, Richard
(217) 333-0063
Course Number: 388
Department: Chemical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Materials Research
Number of Times Taught: 4

Energy Alternatives and Societal Values
Instructor: Bond, Charles E.
(217) 367-8995
Course Number: AAE 280
Department: Aeronautical and Astronautical Engineering
Credits: 4
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation
Number of Times Taught: 7
Average Enrollment: 20

Energy Implications for Building Design
Instructor: Smith, Robert
(217) 333-2848
Course Number: 301ES
Department: Architecture
Credits: 4
Student Level: College Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Appropriate Technology; Energy Conservation
Number of Times Taught: 1
Average Enrollment: 10

Geology of Energy
Instructor: Langenheim, R. L.
(217) 333-1338
Course Number: 105
Department: Geology
Credits: 2
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Classroom: 30
Number of Times Taught: 4
Average Enrollment: 15

Heat Transfer
Instructor: Dunn, W. E.
(217) 333-3832
Course Number: ME 213
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Solar Collector Evaluation/Design
Number of Times Taught: 25
Average Enrollment: 120

Oceanography
Instructor: Anderson, T. F.
Course Number: GEO 1370
Department: Geology
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 45
Laboratory: 15
Number of Times Taught: 7
Average Enrollment: 10

Solar Energy Utilization
Instructor: Clausing, A. M.
(217) 333-0366
Course Number: ME 307
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 30

Solar Thermal Systems and Architectural Design
Instructor: Bergeson, Donald
(217) 333-2848
Course Number: 301S
Department: Architecture
Credits: 4
Student Level: College Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 10

Sun, Wind, Earth, and Sea
Instructor: Bend, Charles E.
(217) 367-8995
Course Number: AAE 281
Department: Aeronautical and Astronautical Engineering
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Solar Energy Policy Development; Solar Economics; Domestic Hot Water; Space Heating; Wind Power, Central Systems
Number of Times Taught: 2
Average Enrollment: 24

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ILLINOIS INST TECHNOLOGY (1691)
CHICAGO, Illinois 60616
(312) 567-3189

PROGRAMS AND CURRICULA

Energy Conscious Design
Degree: Architecture
Contact: Sharpe, David C.
(312) 567-3262
Students Taking or Completing Offering: Architect, Educator, Researcher, Other

SOLAR RELATED COURSES

Energy Conscious Design I
Instructor: Swenson, Alfred
(312) 567-3262
Course Number: ARCH 387
Department: Architecture, Planning and Design
Program or Curriculum: Energy Conscious Design
Credits: 2
Student Level: Junior or Senior
Duration: 17 Weeks, 2.0 hrs per week
Contact Hours: 34
Topics Covered Extensively: Energy Conservation; Passive Solar Technology; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 10

Housing and Community Bldgs.
Course Number: CRP 201
Department: City and Regional Planning
Program or Curriculum: Energy Conscious Design
Credits: 6
Student Level: All levels
Duration: 17 Weeks, 16.0 hrs per week
Contact Hours: 272

Topics Covered Extensively: Passive Solar Technology; Solar System Components; Solar Home Construction

Solar & Geographical Energy
Instructor: Lavan, Zalman
Course Number: 449
Department: Mechanical and Aero. Engr.
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 20

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ILLINOIS STATE UNIVERSITY (1692)
NORMAL, Illinois 61761
(309) 438-2111

PROGRAMS AND CURRICULA

Technology for Industry-Energy
Degree: BS, Industrial Technology
Contact: Israel, Everett N. (309) 438-3661
Students Taking or Completing Offering: Contractor, Other

SOLAR RELATED COURSES

Solar Cooling and Heating
Instructor: Frances, Edward (309) 438-3661
Course Number: 300 LEVEL
Department: Industrial Technology
Program or Curriculum: Technology for Industry-Energy
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 14

Solar Workshop
Instructor: Frances, Edward (309) 438-3661
Course Number: 300 LEVEL
Department: Industrial Technology
Program or Curriculum: Technology for Industry-Energy
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 14

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LEWIS UNIVERSITY (1707)
LOCKPORT, Illinois 60441
(815) 838-0500

SOLAR RELATED COURSES

**Alt.Ener. Sour.-Prob., Phys. Environ.*
Instructor: Walch, Philip
Department: Physics
Topics Covered Extensively: Alternate Energy Sources

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NORTHERN ILL UNIVERSITY (1737)
DE KALB, Illinois 60115
(815) 753-1000

SOLAR RELATED COURSES

Energy Conversion
Instructor: Shaffer, John C. (815) 753-1773
Course Number: PHYS 436
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion

Solar Energy Collection and Conversion
Instructor: Shaffer, John C. (815) 753-1773
Course Number: PHYS 432
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy

Conversion; Photovoltaics; Elec'l Generation, Small Scale

Solar Energy Seminar
Instructor: Comer, John C.
(815) 753-1154
Course Number: IT598U
Department: Industry and Technology
Credits: 3
Student Level: College Graduate
Duration: 4 Weeks, 20.0 hrs per week
Contact Hours: 80
Classroom: 40
Laboratory: 10
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 10

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NORTHWESTERN UNIVERSITY (1739)
EVANSTON, Illinois 60201
(312) 492-3741

PROGRAMS AND CURRICULA

Solar Energy Principles and Applications
Degree: NO, Departmental Engineering Degree
Contact: Thodos, George

SOLAR RELATED COURSES

Solar Energy Principles and Applications
Instructor: Thodos, George
(312) 492-3452
Course Number: 710-C65
Department: Chemical Engineering
Program or Curriculum: Solar Energy Principles and Applications
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components
Number of Times Taught: 2
Average Enrollment: 18

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PRINCIPIA COLLEGE (1744)
ELSAH, Illinois 62028
(618) 374-2131

SOLAR RELATED COURSES

Energy Efficient Living
Instructor: Holzberlein, Thomas M.
Course Number: 172
Department: Physics
Credits: 5
Student Level: All levels
Duration: 10 Weeks, 10.0 hrs per week
Contact Hours: 100
Classroom: 80
Laboratory: 20
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction
Number of Times Taught: 1
Average Enrollment: 23

Environmental Physics
Instructor: Holzberlein, Thomas
(618) 374-2131
Department: Physics
Credits: 5
Student Level: All levels
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 52
Classroom: 52
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy; Passive Solar Technology; Space Heating
Number of Times Taught: 3
Average Enrollment: 20

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SANGAMON STATE UNIVERSITY (9333)
SPRINGFIELD, Illinois 62708
(217) 786-6634

SOLAR RELATED COURSES

Solar Energy-Options for Illinois
Instructor: Casella, Al
(217) 786-6630
Course Number: PAC
Department: Physical Sciences
Credits: 2
Student Level: Junior or Senior
Duration: 4 Weeks, 8.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 100

Solar Energy-Principles and App.
Instructor: Casella, Al
(217) 786-6630
Course Number: PHS-422
Department: Physical Sciences
Credits: 5
Student Level: Junior or Senior
Duration: 16 Weeks, 8.0 hrs per week
Contact Hours: 128
Classroom: 64
Laboratory: 64
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space

Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 40

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SOUTHERN ILLINOIS U CARBONDL (1758)
CARBONDALE, Illinois 62901
(618) 453-2121

SOLAR RELATED COURSES

Solar Heating Design
Instructor: Kent, Albert
(618) 536-2396
Course Number: TEE407
Department: Engin. and Tech.-Therm and Envir. Eng.
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

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SOUTHERN ILLINOIS U EDWARDSVL (1759)
EDWARDSVILLE, Illinois 62026
(618) 692-2000

SOLAR RELATED COURSES

Solar Energy
Instructor: Kokorcpoulos, P.
(618) 692-2500
Department: Engineering/Technology
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 10
Topics Covered Extensively: Energy Conservation; Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 6
Average Enrollment: 40

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CARL SANDBURG COLLEGE (7265)
GALESBURG, Illinois 61401
(309) 344-2518

PROGRAMS AND CURRICULA

**Adult Continuing Edu.*
Contact: Rudd, Lanny

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CITY C CHICAGO LOOP C (1652)
CHICAGO, Illinois 60601
(312) 269-8000

SOLAR RELATED COURSES

**Basic Consumer Ed. Courses - Sol. Products*

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DUPAGE, COLLEGE OF (6656)
GLEN ELLYN, Illinois 60137
(312) 858-2800

SOLAR RELATED COURSES

Introduction to Solar Energy
Department: Extension Division
Student Level: All levels
Duration: 3 Weeks, 20.0 hrs per week
Contact Hours: 60
Classroom: 39
Laboratory: 21
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 25

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ILL ESTN CC OLNEY CEN C (1742)
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
Course Number: SCI 121
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
Course Number: COT 172
Department: Construction Trades
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 Conservation; 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; Domestic Hot Water; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 30

Gas and Arc Welding
Instructor: Jausel, Russ (618) 395-4351
Course Number: AUM 282
Department: Welding
Program or Curriculum: Construction Energy Program
Credits: 5
Student Level: All levels
Duration: 12 Weeks, 8.0 hrs per week
Contact Hours: 96
Classroom: 24
Laboratory: 72
Number of Times Taught: 3
Average Enrollment: 12

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ILL ESTN LINCOLN TRAIL C (9786)
ROBINSON, Illinois 62454
(618) 544-8657

SOLAR RELATED COURSES

Air Conditioning and Refrigeration-Load Calculation
Instructor: Harvey, Robert (618) 544-8657
Course Number: ACR 272
Department: Air Conditioning and Refrigeration
Credits: 5
Student Level: Freshman or Sophomore
Duration: 6 Weeks, 12.0 hrs per week
Contact Hours: 72
Classroom: 48
Laboratory: 24
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 Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Process Heat, Agricultural; Process Heat, Industrial; Space Heating
Number of Times Taught: 3
Average Enrollment: 20

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ILLINOIS CENTRAL COLLEGE (6753)
EAST PEORIA, Illinois 61635
(309) 694-5011

SOLAR RELATED COURSES

Energy Alternatives
Instructor: Brooks-Miller, D.L.
Course Number: ARC 183-3
Department: Agriculture-Indus. Occupation
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 6
Average Enrollment: 20

Residential Solar Energy Planning
Instructor: Brooks-Miller, D.L.
Course Number: ARC001-3
Department: Agriculture-Indus. Occupation
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Domestic Hot Water; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

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JOHN A LOGAN COLLEGE (8076)
CARTERVILLE, Illinois 62918
(618) 985-3741

SOLAR RELATED COURSES

Introduction to Solar Energy
Instructor: Ehrlich, Brent (618) 684-4110
Course Number: DRV 035A
Department: Adult and Continuing Education
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 14
Laboratory: 6
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy
Number of Times Taught: 2
Average Enrollment: 18

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KANKAKEE CMTY COLLEGE (7690)
KANKAKEE, Illinois 60901
(815) 933-9311

SOLAR RELATED COURSES

Solar Energy Survey
Instructor: Mathers, Kris (815) 933-0345
Course Number: REFR 1413
Department: Technical Division
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Intro. to Solar Energy; Solar Economics; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation
Number of Times Taught: 1
Average Enrollment: 8

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MCHENRY COUNTY COLLEGE (7691)
CRYSTAL LAKE, Illinois 60014
(815) 455-3700

SOLAR RELATED COURSES

Solar Energy Fundamentals
Instructor: Konitzer, John D. (815) 455-3700
Course Number: CCD 009A
Department: Natural Science
Student Level: All levels
Duration: 4 Weeks, 4.0 hrs per week
Contact Hours: 16
Classroom: 12
Laboratory: 4
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 6

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MORAINE VLY CMTY COLLEGE (7692)
PALOS HILLS, Illinois 60465
(312) 974-4300

SOLAR RELATED COURSES

**Alternate Energy Conference*
Instructor: Zoller, Arlene
Department: Special Projects
Topics Covered Extensively: Alternate

Energy Sources

*Introduction to Solar Energy
Instructor: Zoller, Arlene
Department: Special Projects
Topics Covered Extensively: Intro. to Solar Energy

*Lecture Series on Solar Homes
Instructor: Zollar, Arlene
Department: Special Projects
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction

*Solar Power and Collector Equipment
Instructor: Behles, William J.
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design

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TRITON COLLEGE (1773)
RIVER GROVE, Illinois 60171
(312) 456-0300

SOLAR RELATED COURSES

Solar Energy (Introduction To)
Instructor: Fricano, Peter
Course Number: TEC E19
Department: School of Continuing Ed.
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Number of Times Taught: 3
Average Enrollment: 20

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WM RAINEY HARPER COLLEGE (3961)
PALATINE, Illinois 60067
(312) 397-3000

SOLAR RELATED COURSES

Solar Energy Architecture
Instructor: Yohanan, Joseph (312) 397-3000
Course Number: ATE211
Department: Architectural Technology
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 2
Average Enrollment: 20

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Vocational/Technical Colleges

THE QUINCY TECHNICAL SCHOOL (90030)
Quincy, Illinois 62301

SOLAR RELATED COURSES

Air Cond., Refrig., Heating Service
Instructor: Devlin, David B./ W.G.Dubuque (217) 224-0600
Department: Refrigeration
Student Level: High School Graduate
Duration: 1 Weeks, 30.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Solar System Components; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

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Other Educational Institutions

SOLAR STORE INC (90330)
Box 841, Dept. bs
Peoria, Illinois 61652

PROGRAMS AND CURRICULA

Sol. Ener. Ed. for Installers
Contact: Shanks, Diane/ Adsit, M.

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Colleges/Universities

BALL STATE UNIVERSITY (1786)
MUNCIE, Indiana 47306
(317) 289-1241

SOLAR RELATED COURSES

Solar Architecture for Architects
Instructor: Koester, Robert J.
(317) 285-4955
Course Number: 498
Department: Arch.
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 15

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EARLHAM COLLEGE (1793)
RICHMOND, Indiana 47374
(317) 962-6561

SOLAR RELATED COURSES

Energy, Technology, And Human Affairs
Instructor: Flick, Cathy
(317) 962-6561
Course Number: P10
Department: Physics
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Number of Times Taught: 5
Average Enrollment: 35

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HUNTINGTON COLLEGE (1803)
HUNTINGTON, Indiana 46750
(219) 356-6000

SOLAR RELATED COURSES

Energy Alternatives: Solar Energy
Instructor: Smith, Gerald D.
(219) 356-6000
Course Number: 207
Department: Physics
Credits: 4
Student Level: All levels
Duration: 4 Weeks, 15.0 hrs per week
Contact Hours: 60
Classroom: 40
Laboratory: 20
Topics Covered Extensively: Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar Home Construction; Solar Collector Evaluation/Design; Domestic Hot Water; Elec'l Generation, Central; Space Heating

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IND NORTHERN GRAD SCH MGMT (1806)
MARION, Indiana 46952
(317) 674-2900

PROGRAMS AND CURRICULA

Masters of Professional Management
Degree: MS, OT, Professional Management
Contact: Morgan, James/ Costa, Dr. Da
(317) 674-2900

SOLAR RELATED COURSES

Energy Auditing for Mgrs. and Engrs.
Instructor: Klima, Karel/ Thumann, Al
(404) 874-8188
Course Number: 561
Department: Ft. Wayne Ext.-Prof. Mgmnt. Hosp. Adm.
Program or Curriculum: Masters of Professional Management
Credits: 4
Student Level: College Graduate
Duration: 13 Weeks, 2.0 hrs per week
Contact Hours: 26
Classroom: 26
Topics Covered Extensively: Energy Conservation; Solar Systems Testing and Evaluation; Process Heat, Industrial; Space Heating; Space Cooling
Average Enrollment: 50

Energy Conservation for Managers
Instructor: Klima, Karel/ Thumann, Al
(404) 874-8188
Course Number: 560
Department: Ft. Wayne Ext.-Prof. Mgmnt./Hosp. Adm.
Program or Curriculum: Masters of Professional Management
Credits: 4
Student Level: College Graduate
Duration: 13 Weeks, 2.0 hrs per week
Contact Hours: 26
Classroom: 26
Topics Covered Extensively: Energy Conservation; Process Heat, Industrial; Space Heating; Space Cooling
Average Enrollment: 50

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IND- PURDUE U FORT WAYNE (1812)
FORT WAYNE, Indiana 46805
(219) 482-5121

SOLAR RELATED COURSES

Solar Energy, Ready When You Are
Instructor: Johnson, Kenneth R.
(219) 482-5737
Department: Engineering/Continuing Education
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Systems Design; Space Heating

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IND- PURDUE U INDIANAPOLIS (1813)
INDIANAPOLIS, Indiana 46202
(317) 635-8661

SOLAR RELATED COURSES

Solar Energy for Heating and Cooling
Instructor: Kaplan, Jerome I.
(317) 923-1321
Course Number: ME497
Department: Engineering and Technology
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45

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NOTRE DAME, UNIVERSITY OF (1840)
NOTRE DAME, Indiana 46556
(219) 283-1122

SOLAR RELATED COURSES

Man and Energy - Alt. to Atom and Coal
Instructor: Berry, William B.
(219) 283-1122
Course Number: EE-213
Department: Electrical Engineering
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy
Number of Times Taught: 6
Average Enrollment: 12

Solid-State Energy Conversion
Instructor: Berry, William B.
(219) 283-1122
Course Number: EE-466
Department: Electrical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Intro. to Solar Energy; Photovoltaics
Number of Times Taught: 8
Average Enrollment: 12

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PURDUE U MAIN CAMPUS (1825)
LAFAYETTE, Indiana 47907
(317) 749-8111

SOLAR RELATED COURSES

Aerodynamics of Wind Machines
Instructor: Sullivan, Jo
(317) 749-2400
Course Number: 590A
Department: Aero & Astro
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 30
Laboratory: 15
Topics Covered Extensively: Energy Conversion; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 10

Properties of Solids
Instructor: Sato, H.
Course Number: MSE 550
Department: Materials Engr
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Materials Research
Number of Times Taught: 8
Average Enrollment: 10

Sel. of Materials and Mech. Functions
Instructor: Hruska, S. J.
(317) 493-1875
Course Number: MSE 345
Department: Materials Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Materials Research
Number of Times Taught: 10
Average Enrollment: 140

Solar Energy Utilization
Instructor: Viskanta, R.
Course Number: ME495V
Department: Mechanical Engineering
Credits: 1
Student Level: Junior or Senior
Duration: 5 Weeks, 3.0 hrs per week

Contact Hours: 15
Topics Covered Extensively: Appropriate Technology; Biomass Conversion; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 20

Utilization of Renewable Resources
Instructor: Ladisch, Michael (317) 749-2971
Course Number: AGR. 500
Department: Agricultural Engineering Dept.
Credits: 1
Student Level: Junior or Senior
Duration: 16 Weeks, 1.0 hrs per week
Contact Hours: 16
Classroom: 16
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conversion

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ROSE-HULMAN INST OF TECHN (1830)
TERRE HAUTE, Indiana 47803
(812) 877-1511

SOLAR RELATED COURSES

Independent study
Instructor: Caskey, Jerry A. (812) 877-1511
Course Number: CHE490
Department: Chem. Engineering & Mech. Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 20
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 11

Solar Energy
Instructor: Dekker, Don L. (812) 877-1511
Course Number: ME308
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Intro. to Solar Energy; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 40

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Vocational/Technical Colleges

IND VOC TECH C- EVANSVILLE (9925)
EVANSVILLE, Indiana 47710
(812) 426-2865

SOLAR RELATED COURSES

Solar Heating and Cooling
Instructor: Foster, Jerry (812) 426-2865
Course Number: 7157
Department: Heating, Air Conditioning and Refrigeration
Credits: 2
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 11
Laboratory: 22
Number of Times Taught: 1
Average Enrollment: 15

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IND VOC TECH- SELLERSBURG (10109)
SELLERSBURG, Indiana 47172
(812) 246-3301

SOLAR RELATED COURSES

Solar Heating & Cooling
Instructor: Owsly, Dean
Course Number: 7157
Department: Heating, Air Conditioning, Refrigeration
Credits: 2
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Classroom: 22
Laboratory: 22
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating

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INDIANA VOCATIONAL TECHNICAL COLLEGE-NW (90040)
Gary, Indiana 46409
(219) 981-1111

SOLAR RELATED COURSES

Solar Energy Seminar
Credits: 1
Student Level: All levels
Duration: 1 Weeks, 1.5 hrs per week
Contact Hours: 11
Topics Covered Extensively: Solar Energy Policy Development; Solar System Components; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design

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Other Educational Institutions

INDIANAPOLIS CENTER FOR ADVANCED RESEARCH (90300)
1219 West Michigan St.
Indianapolis, Indiana 46202

SOLAR RELATED COURSES

**Solar Energy Studies*

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Colleges/Universities

DIVINE WORD COLLEGE (1858)
EPWORTH, Iowa 52045
(319) 876-3354

SOLAR RELATED COURSES

Energy (lecture and laboratory)
Instructor: Tomuta, Liviu
(319) 876-3354
Course Number: PHYS. 321/2
Department: Science and Mathematics
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Classroom: 45
Laboratory: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar Systems Design; Space Heating

Everybody's Physics
Instructor: Tomuta, Liviu
(319) 876-3354
Course Number: PHYS 158
Department: Science and Mathematics
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 23
Laboratory: 22
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Intro. to Solar Energy

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IOWA STATE U SCI & TECHN (1869)
AMES, Iowa 50010
(515) 294-4111

PROGRAMS AND CURRICULA

Arch.-Energy Conscious Design
Degree: M.Arch.
Contact: Greenfield, Sanford R.
(515) 294-4718
Students Taking or Completing Offering: Architect, Educator, Researcher, Do-it-yourself Homeowner

SOLAR RELATED COURSES

Adv. Thermal Environmental Engineering
Instructor: Woods, James E.
(515) 294-2342
Course Number: ME647X
Department: Mech. Engr.
Program or Curriculum: Arch.-Energy Conscious Design
Credits: 4
Student Level: College Graduate
Duration: 11 Weeks, 8.0 hrs per week
Contact Hours: 88
Classroom: 22
Laboratory: 66
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 5

Design with Solar Energy
Instructor: Kainlauri, Eino O.
(515) 294-4717
Department: Architecture - Extension
Program or Curriculum: Arch.-Energy Conscious Design
Student Level: College Graduate
Duration: 1 Weeks, 28.0 hrs per week
Contact Hours: 28
Classroom: 12
Laboratory: 16
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling

Human Thermal Environments
Instructor: Woods, James E.
(515) 294-2342
Course Number: 529
Department: Design/Architecture
Program or Curriculum: Arch.-Energy Conscious Design
Credits: 3
Student Level: College Graduate
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Heat and Energy Transfer; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 8

Solar Energy Thermal Systems
Instructor: Woods, James E.
(515) 294-2342
Course Number: ME528
Department: Mechanical Engineering
Program or Curriculum: Arch.-Energy Conscious Design
Credits: 3
Student Level: Junior or Senior
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy

Conversion; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 24

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IOWA, UNIVERSITY OF (1892)
IOWA CITY, Iowa 52242
(319) 353-2121

SOLAR RELATED COURSES

Chemistry and the Physics of the Environment
Instructor: Frank, L. A./ Frank, C. W.
Course Number: 11:25/29:25
Department: Liberal Arts/Chemistry-Physics
Credits: 4
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Energy Storage; Intro. to Solar Energy
Number of Times Taught: 6
Average Enrollment: 350

Methods of Direct Energy Conversion
Instructor: Lonngren, Karl (319) 353-3696
Course Number: 545:176
Department: Electrical and Computer Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Photovoltaics
Number of Times Taught: 7
Average Enrollment: 10

Solar Energy Applications
Instructor: Spencer, D. L. (319) 353-4099
Course Number: 528:148
Department: Energy Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.5 hrs per week
Contact Hours: 54
Classroom: 44
Laboratory: 10
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design
Number of Times Taught: 2
Average Enrollment: 18

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LORAS COLLEGE (1873)
DUBUQUE, Iowa 52001
(319) 588-7100

SOLAR RELATED COURSES

Physics: Energy and the Environment
Instructor: Hutchinson, D. J. (319) 588-7154
Course Number: 9
Department: Physics and Engineering Science
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Solar Energy Policy Development
Number of Times Taught: 4
Average Enrollment: 75

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LUTHER COLLEGE (1874)
DECORAH, Iowa 52101
(319) 387-2000

SOLAR RELATED COURSES

Solar Energy
Instructor: Nelson, David T. (319) 387-1226
Department: Physics
Credits: 3
Student Level: All levels
Duration: 3 Weeks, 20.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Intro. to Solar Energy; Space Heating
Number of Times Taught: 4
Average Enrollment: 30

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NORTHERN IOWA, U OF (1890)
CEDAR FALLS, Iowa 50613
(319) 273-2311

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Macomber, Hilliard K. (319) 273-2290
Department: College of Natural Sciences
Credits: 1
Student Level: College Graduate
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15

Classroom: 12
Topics Covered Extensively: Alternate Energy Sources

Physics & the Environment
Instructor: Jensen, Verner
(319) 273-2588
Course Number: 88:010
Department: Physics Dept. of Natural Science
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Number of Times Taught: 10
Average Enrollment: 80

Power Systems
Instructor: Norton, Will
(319) 273-2561
Course Number: 33:032
Department: Natural Sciences Industrial Technology
Credits: 2
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 2.0 hrs per week
Contact Hours: 36
Classroom: 36
Number of Times Taught: 9
Average Enrollment: 94

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Community/Junior Colleges

DES MOINES AREA CC (8735)
ANKENY, 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: Sidles, Paul
(515) 296-6844
Course Number: BLDG: 519
Department: Adult Ed
Program or Curriculum: Solar Energy I and II
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 27
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 7
Average Enrollment: 15

Solar Energy II - Air Systems
Instructor: Hummell, Myron
(515) 239-6900
Course Number: BLDG. 522
Department: Adult Ed.
Program or Curriculum: Solar Energy I and II
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 27
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Sheet Metal Techniques; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Space Heating
Number of Times Taught: 2
Average Enrollment: 10

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KIRKWOOD CMTY COLLEGE (4076)
CEDAR RAPIDS, Iowa 52406
(319) 398-5411

SOLAR RELATED COURSES

**Agr. Supplemental Ener. Systems*
Department: Agr. Cont. Education
Topics Covered Extensively: Biomass Conversion; Wind Power, Small Systems

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MUSCATINE CMTY 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 Sol. Ener.-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: 46 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 Sol. Ener.-Homeowners, Builders
Instructor: Ohlendorf, Vernon
(319) 263-8250
Department: Community Services-Continued Education
Program or Curriculum: Use of Sol. Ener.-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

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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: Instal.,Repair - Heat.,Ref.,A/C*
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 Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Process Heat, Industrial; Space Heating; Space Cooling

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Vocational/Technical Colleges

WESTERN IOWA TECH (7316)
SIOUX CITY, Iowa 51102
(712) 276-0380

PROGRAMS AND CURRICULA

Solar Systems Technology
Degree: AD, Applied Sci. in Sol. Sys. Tech.
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: 60
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 Systems Design; Elec'l Generation, Small Scale; 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 Sci. 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'l 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
Topics Covered Extensively: Solar Economics
Average Enrollment: 11

Solar Systems Application 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: 60
Laboratory: 96
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Plumbing Techniques; Solar Collector Evaluation/Design
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
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation
Average Enrollment: 11

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Colleges/Universities

BENEDICTINE COLLEGE (10256)
ATCHISON, Kansas 66002
(913) 367-6110

SOLAR RELATED COURSES

Passive Solar Energy
Instructor: Niles, Red
Department: Continuing Education
Student Level: All levels
Duration: 7 Weeks, 2.0 hrs per week
Contact Hours: 14
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology

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EMPORIA STATE UNIVERSITY (1927)
EMPORIA, Kansas 66801
(316) 343-1200

SOLAR RELATED COURSES

The Energy Crisis
Instructor: Backhus, DeWayne
(316) 343-1200
Course Number: PS 520
Department: Liberal Arts and Sci.-Phys. Sci.
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 13
Average Enrollment: 15

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KANSAS MAIN CAMPUS, U OF (1948)
LAWRENCE, Kansas 66045
(913) 864-2700

SOLAR RELATED COURSES

Solar Energy
Instructor: Nemecek, I.V.
(913) 864-3181
Course Number: ME614
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 4
Average Enrollment: 20

Solar Energy System Design
Instructor: Dean, Thomas Scott
(913) 864-4281
Course Number: 731
Department: Architectural Engineering
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80
Classroom: 32
Laboratory: 48
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 25

Thermal Properties of Building Materials
Instructor: Dean, Thomas Scott
(913) 864-4281
Course Number: 728
Department: Architectural Engineering
Credits: 2
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Space Heating
Number of Times Taught: 1
Average Enrollment: 14

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KANSAS ST U AGR & APP SCI (1928)
MANHATTAN, Kansas 66506
(913) 532-6011

PROGRAMS AND CURRICULA

Architecture
Degree: Architecture
Contact: Foerster, Bernd
(913) 532-5950
Students Taking or Completing Offering: Architect

SOLAR RELATED COURSES

Architectural Design Studio 3
Instructor: Coates, Gary
(913) 532-5953
Course Number: 105-603
Department: Architecture
Program or Curriculum: Architecture
Credits: 5
Student Level: Junior or Senior

Duration: 16 Weeks, 15.0 hrs per week
Contact Hours: 240
Laboratory: 240
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Average Enrollment: 20

Architectural Design Studio, 4
Instructor: Coates, Gary (913) 532-5953
Course Number: 105-604
Department: Architecture
Program or Curriculum: Architecture
Credits: 5
Student Level: Junior or Senior
Duration: 16 Weeks, 15.0 hrs per week
Contact Hours: 240
Laboratory: 240
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Average Enrollment: 20

Architectural Design Studio, 5
Instructor: Coates, Gary (913) 532-5953
Course Number: 105-801
Department: Architecture
Program or Curriculum: Architecture
Credits: 5
Student Level: Junior or Senior
Duration: 16 Weeks, 15.0 hrs per week
Contact Hours: 240
Laboratory: 240
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Average Enrollment: 20

Basic Construction Technology
Instructor: Chapman (913) 532-5953
Course Number: 104-290
Department: Pre-Design Professions
Program or Curriculum: Architecture
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 8
Number of Times Taught: 5
Average Enrollment: 250

Ener. Use and Control in Agri. Systems
Instructor: Clark, Stanley J. (913) 532-5580
Course Number: 505
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Classroom: 30
Laboratory: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conversion
Number of Times Taught: 6
Average Enrollment: 15

Environmental Design of Farm Buildings
Instructor: Spillman, Charles K. (913) 532-5580
Course Number: 505 510
Department: Agricultural Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80
Classroom: 32
Laboratory: 48
Number of Times Taught: 6
Average Enrollment: 17

Environmental Design Studio
Instructor: Miller (913) 532-5953
Course Number: 104-261
Department: Pre-Design Professions
Program or Curriculum: Architecture
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Laboratory: 64
Number of Times Taught: 5
Average Enrollment: 300

Environmental Systems in Architecture
Instructor: Jahnke, William R. (913) 532-5950
Course Number: 105-515
Department: Architecture
Program or Curriculum: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conservation; Passive Solar Technology; Plumbing Techniques; Sheet Metal Techniques; 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: 6
Average Enrollment: 100

Environmental Systems in Architecture I
Instructor: Coates, Gary
(913) 532-5953
Course Number: 105-413
Department: Architecture
Program or Curriculum: Architecture
Credits: 4
Student Level: Junior or Senior
Duration: 16 Weeks, 8.0 hrs per week
Contact Hours: 64
Classroom: 48
Laboratory: 16
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Space Heating
Average Enrollment: 140

Intro. to Alternate Energy Sources
Instructor: Eckhoff, N. Dean
(913) 532-5624
Course Number: 500-420
Department: General Engineering
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 10

Solar Energy Conversion Processes
Instructor: Eckhoff, N. Dean
(913) 532-5624
Course Number: 500-380
Department: General Engineering
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 7

Solar Energy Thermal Processes
Instructor: Ball, H. D.
(913) 532-5610
Course Number: 560-680
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 25

Theory of Design
Instructor: Coates, Gary
(913) 532-5953
Course Number: 105-715
Department: Architecture
Program or Curriculum: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Passive Solar Technology; Solar Energy Policy Development; Solar Economics; Solar Law/Legislation; Space Heating; Space Cooling

Topics in Building Construction Systems
Instructor: Coates, Gary
(913) 532-5953
Course Number: 105-735
Department: Architecture
Program or Curriculum: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Laboratory: 48
Topics Covered Extensively: Energy Conservation; Energy Storage; Passive Solar Technology; Solar Energy Policy Development; Solar Law/Legislation; 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: 7

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PITTSBURG ST UNIVERSITY (1926)
PITTSBURG, Kansas 66762
(316) 231-7000

SOLAR RELATED COURSES

Energy Efficiency Design
Instructor: Hightower, Daniel L.
(316) 231-7000
Course Number: 736
Department: Technology
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 20

Solar Energy
Instructor: Backes, Robert
(316) 231-7000
Course Number: 740
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 8 Weeks, 6.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

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WICHITA STATE UNIVERSITY (1950)
1945 Fairmount
WICHITA, Kansas 67208
(316) 689-3456

SOLAR RELATED COURSES

Energy-Alternatives and Impact
Instructor: Berg, J.R.
(316) 689-3141
Course Number: 690
Department: Geology
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Number of Times Taught: 4
Average Enrollment: 13

Energy, Resources & Environment
Instructor: Gries, J.C./ Berg, J.R.
(316) 689-3141
Course Number: 300G
Department: Geology
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Number of Times Taught: 20
Average Enrollment: 200

Inst. Math & Proc.
Instructor: Webb, Edgar
(316) 689-3350
Course Number: I.E.751
Department: Industrial Education
Credits: 3
Student Level: Junior or Senior
Duration: 4 Weeks, 15.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Appropriate Technology; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components
Number of Times Taught: 2
Average Enrollment: 9

Meteorology
Instructor: Carrier, Cecil
(316) 689-3141
Course Number: GEOG 235
Department: Geology/Geography
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 32
Laboratory: 32
Average Enrollment: 36

ME Special Topics
Instructor: Graham, A.R.
(316) 689-3402
Course Number: ME751
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 20

Petroleum Geology
Instructor: Berg, J.R.
(316) 689-3141
Course Number: 682
Department: Geology
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 40

Classroom: 48
Number of Times Taught: 54
Average Enrollment: 13

Urban Alternate Energy Sources
Instructor: Graham, A.R.
(316) 689-3402
Course Number: 751
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources

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GARDEN CITY COMMUNITY JC (1919)
GARDEN CITY, Kansas 67846
(316) 276-7611

SOLAR RELATED COURSES

Solar Energy
Instructor: Hundley, Gerald
(316) 276-7611
Course Number: 274-083
Department: Industrial Educ.
Credits: 3
Student Level: All levels
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Classroom: 51
Number of Times Taught: 5
Average Enrollment: 8

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Community/Junior Colleges

BARTON CO CMTY JR COLLEGE (4608)
GREAT BEND, Kansas 67530
(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 Sicence 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

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Vocational/Technical Colleges

KANSAS TECHNICAL INST (4611)
SALINA, Kansas 67401
(913) 825-0275

PROGRAMS AND CURRICULA

Mech. Engineering Tech. -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.
(913) 825-0275
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.
(913) 825-0275
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

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Other Educational Institutions

UNIVERSITY FOR MAN (90150)
1221 Thurston Avenue
Manhattan, Kansas 66502

PROGRAMS AND CURRICULA

Appropriate Technology
Contact: Coates, Gary
(913) 532-5866

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Colleges/Universities

KENTUCKY, UNIVERSITY OF (1989)
LEXINGTON, Kentucky 40506
(606) 258-9000

SOLAR RELATED COURSES

Advanced Topics in Solar Energy
Instructor: Birkebak, R.C.
(606) 257-2712
Course Number: ME 782/380
Department: Mechanical Engineering
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 10

Functional Des. of Agri. Structures
Instructor: Parker, B.F.
(606) 258-5671
Course Number: AEN 427
Department: Agricultural Engineering
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 4

Solar Housing Workshop
Instructor: Levine, Richard
(606) 258-4367
Course Number: ARC 963/4
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 8
Average Enrollment: 15

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NORTHERN KY UNIVERSITY (9275)
HIGHLAND HEIGHTS, Kentucky 41076
(606) 292-5100

SOLAR RELATED COURSES

Solar Energy I
Instructor: McPherson, Mike
(606) 292-5409
Course Number: PHY299
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Classroom: 15
Laboratory: 60
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating

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WESTERN KY UNIVERSITY (2002)
BOWLING GREEN, Kentucky 42101
(502) 745-0111

SOLAR RELATED COURSES

Solar Collector Construction
Instructor: H.M.Healey
(502) 745-0111
Course Number: ET475
Department: Engineering Technology
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 10
Laboratory: 6
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Testing and Evaluation
Number of Times Taught: 1
Average Enrollment: 15

Solar Fundamentals For Buildings
Instructor: Healey, H.M.
(502) 745-2461
Course Number: ET347
Department: Engineering Technology
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy

Storage; Heat and Energy Transfer; Intro. to Solar Energy; 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: 0

WKU Solar Heating Systems
Instructor: Healey, H.M.
(502) 745-2461
Department: Engineering Technology
Student Level: All levels
Duration: 1 Weeks, 32.0 hrs per week
Contact Hours: 32
Classroom: 28
Laboratory: 4
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

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Colleges/Universities

LA STATE U AND A&M C (2010)
BATON ROUGE, Louisiana 70803
(504) 388-1471

SOLAR RELATED COURSES

Mechanical Engineering Problems
Instructor: Arnas/ Maples
(504) 388-5792
Course Number: 7933
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Energy Conversion; Energy Storage; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 2
Average Enrollment: 10

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LOUISIANA TECH UNIVERSITY (2008)
RUSTON, Louisiana 71272
(318) 257-0211

SOLAR RELATED COURSES

Solar Energy Design
Instructor: Barron, Randall F.
(318) 257-4141
Course Number: 442
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 3.8 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Process Heat, Agricultural; Space Heating; Space Cooling
Number of Times Taught: 0

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NEW ORLEANS, UNIVERSITY OF (2015)
NEW ORLEANS, Louisiana 70122
(504) 283-0600

SOLAR RELATED COURSES

Design of Solar Heat. and Cool. Systems
Instructor: Russo, Edwin P.
(504) 283-0652
Course Number: 4770
Department: Engineering/Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 35

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TULANE U OF LOUISIANA (2029)
NEW ORLEANS, Louisiana 70118
(504) 865-4011

SOLAR RELATED COURSES

Solar Thermal Processes
Instructor: Hamilton, DeWitt C.
(504) 865-6176
Course Number: ME 619
Department: Mech. Enging.
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 5
Average Enrollment: 15

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Community/Junior Colleges

DELGADO COLLEGE (4626)
NEW ORLEANS, Louisiana 70119
(504) 486-7393

SOLAR RELATED COURSES

Applied Solar Energy
Instructor: Charbonnet, Lary/ Tou, Patrick
(504) 486-7393
Course Number: MET130

Department: Eng. and Indus. Tech./Mech. Engin. Tech.
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; 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; Domestic Hot Water; Swimming Pool Heating; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 30

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Colleges/Universities

ATLANTIC, COLLEGE OF THE (11385)
BAR HARBOR, Maine
(207) 288-5015

PROGRAMS AND CURRICULA

Environmental Design
Degree: BA, Human Ecology
Contact: Caivano, Roe
(207) 288-5015
Students Taking or Completing Offering:
Architect, Educator, Researcher,
Do-it-yourself Homeowner

SOLAR RELATED COURSES

Alternate Energy
Instructor: Lyman, Harris
Department: Environmental Design
Program or
Curriculum: Environmental Design
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling; Wind Power, Small Systems

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COLBY COLLEGE (2039)
WATERVILLE, Maine
(207) 873-1131

SOLAR RELATED COURSES

Energy Economics
Instructor: Tietenberg, Tom
(207) 547-3339
Course Number: 311
Department: Economics
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 2
Average Enrollment: 18

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MAINE AT FORT KENT, U OF (2041)
FORT KENT, Maine
(207) 834-3162

SOLAR RELATED COURSES

Energy Conservation, Alternate Sources
Instructor: Thiele, Eborhard
(207) 834-3162
Course Number: ET322
Department: Environmental Studies
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 10

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MAINE AT ORONO, U OF (2053)
ORONO, Maine
(207) 581-7011

SOLAR RELATED COURSES

Energy and Man
Instructor: Smith, Norman
(207) 581-7265
Course Number: AE 41
Department: Agr. Engineering
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Solar Economics
Number of Times Taught: 8
Average Enrollment: 25

Mechanical Engineering Laboratory
Instructor: Hill, Richard C.
(207) 581-7228
Course Number: ME 72
Department: Engineering & Science
Credits: 2
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Laboratory: 39
Topics Covered Extensively: Biomass Conversion; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 24

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Other Educational Institutions

CORNERSTONES, WING SCHOOL OF SHELTER TECHNOLOGY (90090)
54 Cumberland St.
Brunswick, Maine 04011

SOLAR RELATED COURSES

Advanced New House
Course Number: B
Duration: 3 Weeks, 35.0 hrs per week
Contact Hours: 105
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction

Passive Solar Building Design
(207) 729-0540
Course Number: E
Duration: 1 Weeks, 35.0 hrs per week
Contact Hours: 35
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction

Passive Solar House Design & Construction
Instructor: Wing, Charles
(207) 729-0540
Course Number: A
Credits: 3
Student Level: All levels
Duration: 8 Weeks, 6.0 hrs per week
Contact Hours: 48
Classroom: 45
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction
Number of Times Taught: 30
Average Enrollment: 30

Retrofitting Existing Structures
(207) 729-0540
Course Number: C
Duration: 3 Weeks, 35.0 hrs per week
Contact Hours: 105
Topics Covered Extensively: Alternate Energy Sources; Passive Solar Technology; Solar Home Construction

Solar Greenhouses
(207) 729-0540
Course Number: D
Duration: 1 Weeks, 35.0 hrs per week
Contact Hours: 35
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction

The Design Workshop
Instructor: Colburn, Gary
(207) 729-0540
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction

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Portland Vocational Center (90410)
Portland, Maine 04111

SOLAR RELATED COURSES

**Training in Solar Installation*
Topics Covered Extensively: Solar Systems Installation

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SHELTER INSTITUTE (90240)
58 Center Street
Bath, Maine 04530

SOLAR RELATED COURSES

**Passive Solar Design*
Instructor: Hennin, Patsy
(207) 443-9084
Duration: 15 Weeks
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction

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Colleges/Universities

LOYOLA COLLEGE (2078)
BALTIMORE, Maryland 21210
(301) 323-1010

SOLAR RELATED COURSES

Energy and Environment
Instructor: Haig, Frank R.
(301) 323-1010
Course Number: PH 150
Department: Physics, Eng'r., Computer Sci.
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45

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MD COLLEGE PARK CAM, U OF (2103)
COLLEGE PARK, Maryland 20742
(301) 454-0100

PROGRAMS AND CURRICULA

Mechanical Engr./Solar Energy
Degree: BS, Science
Contact: Cunniff, P. F.
(301) 454-2410

SOLAR RELATED COURSES

Engineering Applications of Solar Energy
Instructor: Allen, R. W.
(301) 454-4994
Course Number: ENME 415
Department: Mechanical Engineering
Program or Curriculum: Mechanical Engr./ Solar Energy
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 40

Environmental Systems in Architecture
Instructor: Lord, David
(301) 454-3428
Course Number: ARCH 514
Department: Architecture
Program or Curriculum: Mechanical Engr./ Solar Energy
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 6.0 hrs per week
Contact Hours: 84
Classroom: 56
Laboratory: 28
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 7

Solar Energy Applications in Buildings
Instructor: Allen, R. W.
(301) 454-4994
Course Number: ENES 414
Department: Mechanical Engineering
Program or Curriculum: Mechanical Engr./ Solar Energy
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Storage; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 5
Average Enrollment: 35

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TOWSON STATE UNIVERSITY (2099)
BALTIMORE, Maryland 21204
(301) 321-2000

SOLAR RELATED COURSES

Alt. Ener. Sources - Homemaker
Instructor: Beckey, R.
(301) 321-2977
Student Level: All levels
Duration: 1 Weeks, 6.0 hrs per week
Contact Hours: 6
Topics Covered Extensively: Alternate Energy Sources; Passive Solar Technology; Solar Collector Evaluation/Design; Domestic Hot Water

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US NAVAL ACADEMY (2101)
ANNAPOLIS, MARYLAND, Maryland 21402
(301) 267-6100

SOLAR RELATED COURSES

Energy Conversion
Instructor: Wu, C.
(301) 267-3186
Course Number: EM443
Department: Mechanical Engineering
Credits: 3

Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water
Number of Times Taught: 5
Average Enrollment: 50

Ocean Energy Conversion
Instructor: McCormick, M.E.
(301) 267-3873
Course Number: EN474
Department: Naval Systems Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 1
Average Enrollment: 30

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Community/Junior Colleges

ALLEGANY CMTY COLLEGE (2057)
CUMBERLAND, Maryland 21502
(301) 724-7700

SOLAR RELATED COURSES

Industrial Systems I
Instructor: Myers, Robert W.
(301) 724-7700
Course Number: 203
Department: Electromechanical
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 26
Laboratory: 38
Number of Times Taught: 3
Average Enrollment: 12

Industrial Systems II
Instructor: Myers, Robert W.
(301) 724-7700
Course Number: 204
Department: Electromechanical
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 26
Laboratory: 38
Number of Times Taught: 3
Average Enrollment: 12

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DUNDALK CMTY COLLEGE (9935)
BALTIMORE, Maryland 21222
(301) 282-6700

SOLAR RELATED COURSES

Solar Energy: Installation and Maintenance
Instructor: Leddon, Jack
(301) 282-6700
Department: Math/Science
Student Level: All levels
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Classroom: 15
Laboratory: 15
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Solar Energy Policy Development; 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; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 15

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HARFORD COMMUNITY COLLEGE (2075)
BEL AIR, Maryland 21014
(301) 838-1000

SOLAR RELATED COURSES

Principles and Applications of Solar Energy
Course Number: 095
Department: Continuing Education
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology

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Vocational/Technical Colleges

RETS TECH CENTER (90050)
511 Russell Street
Baltimore, Maryland 21230
(301) 727-6863

PROGRAMS AND CURRICULA

Refrig., Climate Control and Clean Air
Degree: Refrig.-Climate Cont.-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

Refrig.- Climate Control- Clean Air
Instructor: Tickler, Earl M.
(301) 727-6863
Program or Curriculum: Refrig., 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 Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

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Colleges/Universities

AMHERST COLLEGE (2115)
AMHERST, Massachusetts
(413) 542-2000

SOLAR RELATED COURSES

**Energy*

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BOSTON COLLEGE (2128)
CHESTNUT HILL, Massachusetts
(617) 969-0100

SOLAR RELATED COURSES

Energy
Instructor: deBethune, Andre J.
Course Number: CH 152
Department: Art and Sci., Chem., Even., College
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Domestic Hot Water; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 25

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BOSTON UNIVERSITY (2130)
BOSTON, Massachusetts
(617) 353-2000

SOLAR RELATED COURSES

Man and Energy
Instructor: Lichtin, Norman N. (617) 353-2493
Course Number: UNI-EY-501
Department: University Professors
Credits: 4
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39

Solar Heating
Course Number: MET EM 510
Department: Metropolitan College
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating

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BRIDGEWATER STATE COLLEGE (2183)
BRIDGEWATER, Massachusetts
(617) 697-8321

SOLAR RELATED COURSES

Solar Energy
Instructor: Blackford, Paul A. (617) 697-8321
Course Number: GE 412
Department: Earth Sciences and Geography
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 6
Average Enrollment: 19

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CLARK UNIVERSITY (2139)
WORCESTER, Massachusetts
(617) 793-7177

SOLAR RELATED COURSES

Alternative Energy Systems Laboratory
Instructor: Gottlieb, Albert (617) 793-7439
Course Number: STS 132
Department: Science, Technology and Society
Student Level: Junior or Senior
Duration: 14 Weeks, 6.0 hrs per week
Contact Hours: 84
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar Collector Evaluation/Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Small Scale; Space Heating; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 10

Solar and Wind Energy for Home Use
Instructor: Russell, John I. (617) 852-3753
Course Number: ID 109
Department: Prof. and Cont. Edu.
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42

Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Small Scale; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 18

Solar Energy
Instructor: Davies, John
Course Number: STS 131
Department: Science, Technology, Society
Credits: 4
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Intro. to Solar Energy; Space Heating
Number of Times Taught: 1
Average Enrollment: 40

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HARVARD UNIVERSITY (2155)
CAMBRIDGE, Massachusetts
(617) 495-1000

SOLAR RELATED COURSES

Solar Heating: Basic Issues
Instructor: Hapgood, William
Department: Center for Lifelong Learning
Student Level: All levels
Duration: 6 Weeks, 2.0 hrs per week
Contact Hours: 12
Number of Times Taught: 0

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LOWELL, UNIVERSITY OF (2161)
LOWELL, Massachusetts
(617) 454-7811

PROGRAMS AND CURRICULA

Appl. Physics - Solar Ener. Option
Degree: PhD, MS, Physics, Solar Energy Option
Contact: Filippone, William (617) 454-7811
Students Taking or Completing Offering: Researcher, Solar Engineer

Solar Energy
Degree: MS, BS, Engineering or Science
Contact: Filippone, William (617) 454-7811
Students Taking or Completing Offering: Researcher, Solar Engineer

SOLAR RELATED COURSES

Advanced Solar Energy
Instructor: Filippone, William (617) 454-7811
Course Number: 24-513
Department: Nuclear Engineering
Program or Curriculum: Appl. Physics - Solar Ener. Option
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Small Scale; Elec'l Generation, Small Scale; Space Heating; Space Cooling; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 10

Geothermal and Wind Energy Systems
Instructor: Sheff, James R. (617) 454-7811
Course Number: 0
Department: Nuclear Engineering
Program or Curriculum: 24-530
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 15

Solar Energy
Instructor: Filippone, William (617) 454-7811
Course Number: 24-425
Department: Nuclear Engineering
Program or Curriculum: Solar Energy
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2

Average Enrollment: 18

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MASS AMHERST CAMPUS, U OF (2221)
AMHERST, Massachusetts
(413) 545-0111

PROGRAMS AND CURRICULA

Energy Program
Degree: BS, Mechanical Engineering-Energy Option
Contact: Cromack, Duane (413) 545-2756

SOLAR RELATED COURSES

Engineering Wind Power Systems
Instructor: Cromach, Duane E. (413) 545-2756
Course Number: NE3/90C90H
Department: Mechanical Engineering
Program or Curriculum: Energy Program
Credits: 33
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 37
Laboratory: 5
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 20

Solar and Direct Energy Conversion
Instructor: McGowan, J.
Course Number: 570
Department: Mechanical Engineering
Program or Curriculum: Energy Program
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 4
Average Enrollment: 20

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MASS INST OF TECHNOLOGY (2178)
CAMBRIDGE, Massachusetts
(617) 253-1000

SOLAR RELATED COURSES

Design with Microclimate
Instructor: Johnson, Tim (617) 253-5965
Course Number: 4.071J
Department: Architecture
Program or Curriculum: Arch. Study
Credits: 12
Student Level: All levels
Duration: 13 Weeks, 6.0 hrs per week
Contact Hours: 78
Classroom: 39
Laboratory: 39
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology
Number of Times Taught: 3
Average Enrollment: 25

Energy Economics and Policy
Instructor: Jacoby, H.D./ Zimmerman, M.B. (617) 253-6609
Course Number: 15.923
Department: Management - Applied Economics
Program or Curriculum: Arch. Study
Credits: 9
Student Level: College Graduate
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Energy Conservation; Marketing/Market Analysis; Solar Energy Policy Development
Number of Times Taught: 5
Average Enrollment: 25

Energy Prod. from Renewable Resources
Instructor: Fay, J.A. (617) 253-2236
Course Number: 2.63
Department: Mechanical Engineering
Program or Curriculum: Arch. Study
Credits: 12
Student Level: College Graduate
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Photovoltaics; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2

Average Enrollment: 25

Energy Technology
Instructor: Howard, J.B.
(617) 253-4574
Course Number: 10.39
Department: Chemical Engineering
Program or Curriculum: Arch. Study
Credits: 9
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage
Number of Times Taught: 5
Average Enrollment: 34

Materials for Advanced Energy Systems
Instructor: Bowen, H.K./ Adler, D.
(617) 253-6892
Course Number: 3.74J
Department: Material's Science & Engineering
Program or Curriculum: Arch. Study
Credits: 12
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Materials Research; Photovoltaics

Solar Energy Systems
Instructor: Pratt, G.W./ Thornton, R.D.
(617) 253-4636
Course Number: 6.725
Department: Elect. Engineering & Computer Sci.
Program or Curriculum: Arch. Study
Credits: 12
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Wind Power, Small Systems
Number of Times Taught: 3
Average Enrollment: 20

The Biosphere
Instructor: Bell, E.
(617) 253-4712
Course Number: 7.13
Department: Biology
Program or Curriculum: Arch. Study
Credits: 8
Student Level: All levels
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Number of Times Taught: 3
Average Enrollment: 15

Uses of Energy in Buildings
Instructor: Vamosi, Stephen
(617) 253-7659
Course Number: 4.45
Department: Architecture
Program or Curriculum: Arch. Study
Credits: 9
Student Level: College Graduate
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 56
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics
Number of Times Taught: 1
Average Enrollment: 50

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NORTH ADAMS STATE COLLEGE (2187)
NORTH ADAMS, Massachusetts
(413) 664-4511

PROGRAMS AND CURRICULA

Self Sufficient Prog.-Solar
Degree: BA, BS, NO, Physics
Contact: Seeley, William G.
(413) 664-4511
Students Taking or Completing Offering: Solar Engineer, Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician

SOLAR RELATED COURSES

Alternate Energy Techniques
Instructor: Seeley, W.
(413) 664-4511
Course Number: DI171
Department: Physics
Program or Curriculum: Self Sufficient Prog.-Solar
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 30
Laboratory: 15
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating

Number of Times Taught: 6
Average Enrollment: 25

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NORTHEASTERN UNIVERSITY (2199)
BOSTON, Massachusetts
(617) 437-2000

SOLAR RELATED COURSES

Heat and Mass Transfer
Instructor: Foster, Arthur R.
(617) 437-3811
Course Number: 02.260
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 20

Sol. Water Heat., Space Heat. 310
Instructor: Smith, Robert O./ Meeker, J.
(617) 965-5428
Course Number: 93.310
Department: Lincoln College
Credits: 2
Student Level: Junior or Senior
Duration: 12 Weeks, 2.0 hrs per week
Contact Hours: 22
Classroom: 22
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Solar System Components; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating

Sol. Water Heat., Space Heat. 311
Instructor: Smith, Robert O./ Meeker, J.
(617) 965-5428
Course Number: 93.311
Department: Lincoln College
Credits: 2
Student Level: Junior or Senior
Duration: 12 Weeks, 2.0 hrs per week
Contact Hours: 22
Classroom: 22
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Solar System Components; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating

Solar Thermal Engineering I
Instructor: Foster, Arthur R.
(617) 437-3811
Course Number: 02.855
Department: Mechanical Engineering
Credits: 2
Student Level: College Graduate
Duration: 12 Weeks, 2.0 hrs per week
Classroom: 24
Topics Covered Extensively: Heat and Energy Transfer; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 15

Solar Thermal Engineering II
Instructor: Foster, Arthur R.
(617) 437-3811
Course Number: 02.856
Department: Mechanical Engineering
Student Level: College Graduate
Duration: 12 Weeks, 2.0 hrs per week
Contact Hours: 24
Classroom: 24
Topics Covered Extensively: Heat and Energy Transfer; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Cooling
Number of Times Taught: 1
Average Enrollment: 15

The Energy Crisis: Solar Energy
Instructor: Williams, John A.
(617) 437-2991
Course Number: 04.862
Department: Chemical Engineering
Credits: 2
Student Level: College Graduate
Duration: 12 Weeks, 2.0 hrs per week
Contact Hours: 24
Classroom: 24
Topics Covered Extensively: Intro. to Solar Energy; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 2
Average Enrollment: 35

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SPRINGFIELD COLLEGE (2211)
SPRINGFIELD, Massachusetts
(413) 787-2100

SOLAR RELATED COURSES

Energy 81
Instructor: Polito, Peter J.
(413) 787-2084
Course Number: PHY81
Department: Physics
Credits: 2
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
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; Solar System Components; Solar Economics; Solar Home Construction; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

Energy 82
Instructor: Polito, Peter J.
(413) 787-2084
Course Number: PHY 82
Department: Physics
Credits: 2
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
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; Solar System Components; Solar Economics; Solar Home Construction; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

Energy 83
Instructor: Polito, Peter J.
(413) 787-2084
Course Number: PHY 83
Department: Physics
Credits: 2
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
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; Solar System Components; Solar Economics; Solar Home Construction; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

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STHESTN MASS UNIVERSITY (2210)
NORTH DARTMOUTH, Massachusetts
(617) 997-9321

SOLAR RELATED COURSES

Energy and Energy Alternatives
Instructor: Bento, Robert
(617) 997-9321
Course Number: PH 163
Department: Physics
Credits: 3
Student Level: All levels
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation
Number of Times Taught: ?
Average Enrollment: 30

Science, Technology, and Society I
Instructor: Bento, Robert
(617) 997-9321
Course Number: PH 161
Department: Arts & Sciences/Physics
Credits: 3
Student Level: All levels
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 26
Laboratory: 13
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy
Number of Times Taught: 5
Average Enrollment: 100

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WENTWORTH INST OF TECH (29099)
BOSTON, Massachusetts
(617) 442-9010

SOLAR RELATED COURSES

**Arch: Solar and Ener. Conservation*
Instructor: Balichi, George
Department: Architecture
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction

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WORCESTER POLY INSTITUTE (2233)
WORCESTER, Massachusetts
(617) 753-1411

PROGRAMS AND CURRICULA

Major Qualifying Project
Degree: BS, Science
Contact: Bolz, R.E.
(617) 753-1411

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WORCESTER STATE COLLEGE (2190)
WORCESTER, Massachusetts
(617) 752-7700

SOLAR RELATED COURSES

Energy Applications and Techniques
Instructor: Kelley, Robert F.
(617) 752-7700
Course Number: NS8-404
Department: Natural Science/Physics
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Laboratory: 48
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 9

Energy, Cons., Management for Householder
Instructor: Dick, Daniel E.
(617) 752-7700
Course Number: 8-136
Department: Natural Sciences/Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 2.5 hrs per week
Contact Hours: 38
Classroom: 38
Topics Covered Extensively: Energy Conservation; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 30

Man's Environment - The World of Energy
Instructor: Chapman, Harold L.
(617) 752-7700
Course Number: NS 8230
Department: Natural Science/Physics
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 25

Shelter, Des., Alt. Energy
Instructor: Dick, Daniel E.
(617) 752-7700
Course Number: 8-135
Department: Art
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 2.5 hrs per week
Contact Hours: 38
Classroom: 38
Topics Covered Extensively: Alternate Energy Sources; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Systems Design; Space Heating
Number of Times Taught: 4
Average Enrollment: 12

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Community/Junior Colleges

BRISTOL COMMUNITY COLLEGE (2176)
FALL RIVER, Massachusetts
(617) 678-2811

PROGRAMS AND CURRICULA

**Energy Program*

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BUNKER HILL CMTY COLLEGE (11210)
CHARLESTOWN, Massachusetts
(617) 241-8600

SOLAR RELATED COURSES

Issues in Energy
Instructor: Chisholm, Francis E.
(617) 241-8600
Department: Science
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy

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CAPE COD CMTY 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
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

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FRANKLIN INST OF BOSTON (2151)
BOSTON, Massachusetts
(617) 423-4630

SOLAR RELATED COURSES

Solar and Alt. Ener. Sys. Design
Instructor: Powe, William
(617) 423-4630
Course Number: ES 426
Department: Energy System Engineering
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 7.0 hrs per week
Contact Hours: 105
Classroom: 60
Laboratory: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 0
Average Enrollment: 3

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NORTH SHORE CMTY COLLEGE (2173)
BEVERLY, Massachusetts
(617) 927-4850

SOLAR RELATED COURSES

Solar Energy - New Approaches, New Hopes
Instructor: Rowell, James
(617) 927-4850
Department: Continuing Education
Student Level: High School Graduate
Duration: 10 Weeks, 1.0 hrs per week
Contact Hours: 10

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SPRINGFIELD TECHNICAL CC (8078)
SPRINGFIELD, Massachusetts
(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

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Other Educational Institutions

BLUE HILLS REG TECH INST (5523)
CANTON, Massachusetts
(617) 828-5800

SOLAR RELATED COURSES

Solar Heating Systems Design
Instructor: O'Leary, Timothy
Course Number: HV-35
Department: Heating, Ventilating and A/C Tech.
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: 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 Testing and Evaluation; Domestic Hot Water; Space Heating

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BOSTON ARCHITECTURAL CENTER (90190)
320 Newbury St.
Boston, Massachusetts

SOLAR RELATED COURSES

Computers, Ener. and the Built Env.
Duration: 1.0 Days
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction

Solar Heating System Design
Instructor: Smith, Bob
Duration: 8 Weeks

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HEARTWOOD (90210)
Johnson Rd.
Johnson Rd., Massachusetts

SOLAR RELATED COURSES

Passive Solar Homes
Instructor: Velonis, E./ Misson, N/ Wehner, D.
(413) 623-6677
Duration: 3 Weeks

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HOOSUCK INSTITUTE (90220)
Windsor Mill
N. Adams, Massachusetts 01247

SOLAR RELATED COURSES

Arch and the Environment
Instructor: Ekstrom, R./ Green, K.
(413) 664-6302
Credits: 2
Duration: 2 Weeks, 10.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Passive Solar Technology; Solar Law/Legislation

Energy from the Sun, Wind and Water
Instructor: R.Ekstrom/ Knuth, R.
(413) 664-6302
Credits: 3
Duration: 2 Weeks, 10.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Elec'l Generation, Small Scale; Wind Power, Small Systems

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NORTHEAST INSTITUTE OF INDUSTRIAL TECHNOLOGY (90060)
41 Phillips St.
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, Refrigeration 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

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THE CAMBRIDGE SCHOOL - WESTON CNT. FOR OPEN EDU. (90200)
Weston, Massachusetts

SOLAR RELATED COURSES

**Adapting Heating Systems for Solar Use*
(617) 965-5428
Topics Covered Extensively: Space Heating

**Adv. Studies in Solar Heating*
(617) 965-5428
Topics Covered Extensively: Space Heating

**Basic Solar Heating*
(617) 965-5428
Topics Covered Extensively: Space Heating

**Biomass for Energy*
(617) 965-5420
Topics Covered Extensively: Biomass Conversion

**Designing Your Own Solar System*
(617) 965-5428
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating

**Photovoltaics*
(617) 965-5428
Topics Covered Extensively: Photovoltaics

**Power from the Sea*
(617) 965-5428

**Small Wind Mills*
(617) 965-5428
Topics Covered Extensively: Wind Power, Small Systems

**Solar Heating Added to Your House*
(617) 965-5420

**Solar Heating System Design*
(617) 965-5428
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

**Wind Machines*
(617) 965-5420
Topics Covered Extensively: Wind Power, Central Systems; Wind Power, Small Systems

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Colleges/Universities

CENTRAL MICH UNIVERSITY (2243)
MOUNT PLEASANT, Michigan 48858
(517) 774-3151

SOLAR RELATED COURSES

Energy Efficient Design and Cons.
Instructor: Ecker, Louis G./ Nee, John
(517) 774-3996
Course Number: 697
Department: Industrial Education/Technology
Credits: 3
Student Level: Junior or Senior
Duration: 6 Weeks, 13.0 hrs per week
Contact Hours: 80
Classroom: 60
Laboratory: 20
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 30

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DETROIT, UNIVERSITY OF (2323)
DETROIT, Michigan 48221
(313) 927-1000

SOLAR RELATED COURSES

Energy & Architecture
Instructor: LaGrassa, Stephen
(313) 927-1532
Course Number: ART 514
Department: Architecture
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 1
Average Enrollment: 15

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EASTERN MICH UNIVERSITY (2259)
YPSILANTI, Michigan 48197
(313) 487-1849

SOLAR RELATED COURSES

Solar Energy in Construction
Instructor: Kicklighter, Clois E.
(313) 487-4330
Course Number: 539
Department: Industrial Technology/Industrial Education
Credits: 2
Student Level: College Graduate
Duration: 2 Weeks, 15.0 hrs per week
Contact Hours: 30
Classroom: 20
Laboratory: 10
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 16

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FERRIS STATE COLLEGE (2260)
BIG RAPIDS, Michigan 49307
(616) 796-9971

PROGRAMS AND CURRICULA

Refrig., 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: Refrig., 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-D 302
Department: Construction
Program or Curriculum: Refrig., Heating and Air Conditioning

Technology
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
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: Refrig., 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: Stevens, Russ
(616) 796-9971
Course Number: RHA 260
Department: Construction
Program or Curriculum: Refrig., 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
Course Number: RHA 261
Department: Construction
Program or Curriculum: Refrig., 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: Plumbing Techniques; Solar System Components; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Average Enrollment: 18

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GENERAL MOTORS INSTITUTE (2262)
FLINT, Michigan 48502
(313) 766-2353

PROGRAMS AND CURRICULA

Solar Energy
Degree: Continuing Engineering Education Certificate
Contact: Brink, Michael
(313) 776-9881
Students Taking or Completing Offering: Architect, Educator, Researcher, Solar Engineer, Other

SOLAR RELATED COURSES

Solar Energy
Instructor: Brink, Michael
(313) 766-9881
Course Number: EIS0310
Department: Mechanical Engineering
Program or Curriculum: Solar Energy
Student Level: College Graduate
Duration: 1 Weeks, 24.0 hrs per week
Contact Hours: 24
Classroom: 21
Laboratory: 3
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Process Heat, Industrial; Wind Power, Small Systems; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

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GRAND VALLEY ST COLLEGES (2268)
ALLENDALE, Michigan 49401
(616) 895-6611

PROGRAMS AND CURRICULA

Alt. Ener. Emph. - Urban, Environ. Studs.
Degree: BS, Urban, Envi. Studies-Alt.Ener.
Contact: Bailey, Rod
(616) 895-6611
Students Taking or Completing Offering:

Educator, Do-it-yourself Homeowner, Solar Technician

SOLAR RELATED COURSES

Alternative Energy Systems
Instructor: Bailey, Rod (616) 895-6611
Course Number: 1579
Department: William James College
Program or Curriculum: Alt. Ener. Emph.-Urban, Environ. Studs.
Credits: 5
Student Level: All levels
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 50
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Passive Solar Technology; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 40

Solar Energy System Design
Instructor: Bailey, Rod (616) 895-6611
Course Number: 1734
Department: William James College
Program or Curriculum: Alt. Ener. Emph.-Urban, Environ. Studs.
Student Level: All levels
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 25
Laboratory: 25
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 Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 50

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JORDAN COLLEGE (29091)
CEDAR SPRINGS, Michigan 49319
(616) 696-1180

PROGRAMS AND CURRICULA

Energy and Environmental Studies
Degree: BS, Alternate and Environmental Studies
Contact: Till, Gordon Vander (616) 696-1180
Students Taking or Completing Offering: Educator, Researcher, Solar Technician

SOLAR RELATED COURSES

Bio-Gas
Instructor: Martin, Alan O. (616) 696-1180
Course Number: 240
Department: Energy Division
Program or Curriculum: Energy & Environmental Studies
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion
Number of Times Taught: 1
Average Enrollment: 20

Geo-Thermal and other Geological Alternatives
Instructor: Tyler, John (616) 696-1180
Course Number: 220
Department: Energy Division
Program or Curriculum: Energy & Environmental Studies
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources

Hydro-electricity
Instructor: Gates, Timothy (616) 696-1180
Course Number: 220
Department: Energy Division
Program or Curriculum: Energy & Environmental Studies
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology
Number of Times Taught: 3
Average Enrollment: 25

Solar I
Instructor: Gates, Timothy (616) 696-1180
Course Number: 200
Department: Energy Division
Program or Curriculum: Energy and Environmental Studies
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector

Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating
Number of Times Taught: 8
Average Enrollment: 50

Wind Energy Conversion Systems
Instructor: Bregg, Gary (616) 696-1180
Course Number: 210
Department: Energy Division
Program or Curriculum: Energy and Environmental Studies
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Materials Research; Wind Power, Small Systems
Number of Times Taught: 3
Average Enrollment: 20

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LAWRENCE INST TECHNOLOGY (2279)
SOUTHFIELD, Michigan 48075
(313) 356-0200

SOLAR RELATED COURSES

**Natural Energy Sources*
Department: Architecture
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Wind Power, Small Systems

**Solar Energy*
Department: Architecture
Student Level: Junior or Senior
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling

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MICHIGAN STATE UNIVERSITY (2290)
EAST LANSING, Michigan 48824
(517) 355-1855

SOLAR RELATED COURSES

Development of Solar Energy Designs
Instructor: Zapp, H. R. (517) 355-5230
Course Number: EGR 480
Department: Electrical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Photovoltaics; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 30

Direct Energy Conversion
Instructor: Kerber, R. (517) 353-9492
Course Number: ME 414
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Photovoltaics; Elec'l Generation, Small Scale
Number of Times Taught: 5
Average Enrollment: 30

Solar Energy Conversion
Instructor: Dhanak, A. M. (517) 355-5160
Course Number: ME 490
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 50

Technology and Utilization of Energy
Instructor: Dhanak, A. M. (517) 355-5160
Course Number: ME 300
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion
Number of Times Taught: 7
Average Enrollment: 60

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MICHIGAN TECHNOLOGICAL U (2292)
HOUGHTON, Michigan 49931
(906) 487-1885

SOLAR RELATED COURSES

Environmental Control Engineering
Instructor: Frea, Ward
(906) 487-2567
Course Number: ME437
Department: Mech. Engineering-Engineering Mech.
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Average Enrollment: 15

Forest Synecology
Instructor: Coffman, M.S.
(906) 487-2339
Course Number: FR510
Department: Forestry
Credits: 4
Student Level: College Graduate
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Classroom: 36
Laboratory: 12
Average Enrollment: 10

Heat Transfer
Instructor: Frea, Ward
(906) 487-2567
Course Number: ME328
Department: Mech. Engineering-Engineering Mech.
Credits: 4
Student Level: Junior or Senior
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Heat and Energy Transfer
Average Enrollment: 75

Radiative Heat Transfer
Instructor: Frea, Ward
(906) 487-2567
Course Number: ME527
Department: Mech. Engineering-Engineering Mech.
Credits: 3
Student Level: College Graduate
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Heat and Energy Transfer

Special Topics in Elect. Engrg.
Instructor: Schwartz, R.F.
(906) 487-2530
Course Number: EE490
Department: Electrical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Intro. to Solar Energy; Materials Research; Photovoltaics
Number of Times Taught: 1
Average Enrollment: 27

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MICHIGAN- ANN ARBOR, U (9092)
ANN ARBOR, Michigan 48109
(313) 764-1817

SOLAR RELATED COURSES

Applied Energy Conversion
Instructor: Pearson, J. R.
(313) 764-8464
Course Number: 437
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 8
Average Enrollment: 15

Direct Energy Conversion
Instructor: Pearson, J. R.
(313) 764-8464
Course Number: 436
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 8
Average Enrollment: 15

Energy Conservation Seminar I
Instructor: Overdick, Willard A.
(313) 764-9453
Course Number: 555
Department: Architecture and Urban Planning
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Number of Times Taught: 4
Average Enrollment: 15

Instrum. for Sol. Ener. Measurements
Instructor: Portman, Donald J.
(313) 763-4380
Course Number: 466
Department: Atmospheric and Oceanic Science
Credits: 3
Student Level: Junior or Senior

Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Classroom: 45
Laboratory: 30
Number of Times Taught: 1
Average Enrollment: 10

Solar Energy Fundamentals
Instructor: Clark, John
(313) 763-1046
Course Number: 475
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 6
Average Enrollment: 10

Solar Energy Systems Design
Instructor: Clark, John
(313) 763-1046
Course Number: 575
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 4
Average Enrollment: 8

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MICHIGAN- DEARBORN, U OF (2326)
DEARBORN, Michigan 48128
(313) 271-2300

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Friedman, Peter
Course Number: 295
Department: Natural Sciences
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Energy Storage; Photovoltaics
Number of Times Taught: 1
Average Enrollment: 50

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MICHIGAN- FLINT, U OF (2327)
FLINT, Michigan 48503
(313) 762-3000

SOLAR RELATED COURSES

Energy Planning and Technology
Instructor: Rycus, M.
(313) 762-3355
Course Number: ENV 250
Department: Environmental Studies
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 25

Energy, Man and the Environment
Instructor: Rycus, M.
(313) 762-3355
Course Number: ENV 105
Department: Environmental Studies
Credits: 3
Student Level: Freshman or Sophomore
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Domestic Hot Water
Number of Times Taught: 4
Average Enrollment: 30

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NORTHERN MICH UNIVERSITY (2301)
MARQUETTE, Michigan 49855
(906) 227-1000

SOLAR RELATED COURSES

Energy and Chemistry
Instructor: Allenstein, R.V.
(906) 226-3204
Course Number: CH 105
Department: Chemistry
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80
Classroom: 48
Laboratory: 32
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 5
Average Enrollment: 35

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OAKLAND UNIVERSITY (2307)
ROCHESTER, Michigan 48063
(313) 377-2100

SOLAR RELATED COURSES

Energy
Instructor: Tepley, N.
(313) 377-3410
Course Number: PHY 115
Department: Physics
Credits: 4
Student Level: All levels
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 56
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Elec'l Generation, Central; Wind Power, Central Systems

Energy and the Environment
Instructor: Miller, Steven R.
(313) 377-2334
Course Number: ENV 312
Department: Environmental Science
Credits: 4
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion
Number of Times Taught: 2
Average Enrollment: 39

Problems in Energy and Environment
Instructor: Miller, Steven R.
(313) 377-2334
Course Number: ENV 353
Department: Environmental Science
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 50
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 2
Average Enrollment: 6

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SAGINAW VLY STATE COLLEGE (2314)
UNIVERSITY CENTER, Michigan 48710
(517) 793-9800

SOLAR RELATED COURSES

Solar Energy Systems
Instructor: Ford, Frank E.
Course Number: 431
Department: Engineering & Technology
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 24

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WAYNE STATE UNIVERSITY (2329)
DETROIT, Michigan 48202
(313) 577-2424

SOLAR RELATED COURSES

Energy in the Environment
Instructor: Thomas, R.L.
(313) 577-2970
Course Number: 0106
Department: Physics and Astronomy
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 4
Average Enrollment: 16

Energy, Technology and Society
Course Number: GST 2202
Department: Lifelong Learning-Univ. Studies/Weekend Coll. Prog.
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Classroom: 11
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation
Number of Times Taught: 5
Average Enrollment: 600

Program in Environ. Studies 502
Instructor: Saperstein, A.M.
Course Number: ENV 502
Department: I.E., Physics, Pol. Sci.
Credits: 4
Student Level: Junior or Senior
Duration: 30 Weeks, 4.0 hrs per week
Contact Hours: 120
Number of Times Taught: 3
Average Enrollment: 10

Program in Environ. Studies 503
Instructor: Saperstein, A.M.
Course Number: ENV 503
Department: I.E., Physics, Pol. Sci.
Credits: 4
Student Level: Junior or Senior
Duration: 30 Weeks, 4.0 hrs per week
Contact Hours: 120
Number of Times Taught: 3
Average Enrollment: 10

Program in Environmental Studies
Instructor: Saperstein, A.M.
Course Number: ENV 501
Department: I.E., Physics, Pol. Sci.
Credits: 4
Student Level: Junior or Senior
Duration: 30 Weeks, 4.0 hrs per week
Contact Hours: 120
Number of Times Taught: 3
Average Enrollment: 10

Residential Solar Energy
Instructor: Bowen, David R. (313) 577-4631
Course Number: GST 2203
Department: Lifelong Learning, Univ. Studies/Weekend Coll. Prog
Credits: 4
Student Level: Freshman or Sophomore
Duration: 1 Weeks, 34.0 hrs per week
Contact Hours: 34
Classroom: 34
Topics Covered Extensively: Alternate Energy Sources; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 600

Senior Seminar
Instructor: Majeske, Penelope K. (313) 577-4644
Course Number: 4996
Department: Upper Division
Credits: 4
Student Level: Junior or Senior
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Number of Times Taught: 3
Average Enrollment: 7

Senior Seminar 4986
Instructor: Majeske, Penelope K. (313) 577-4644
Course Number: 4986
Department: Upper Division
Credits: 4
Student Level: Junior or Senior
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Number of Times Taught: 3
Average Enrollment: 7

Solar Energy Heat Transfer Processes
Instructor: Singh, Trilochan (313) 577-3845
Course Number: ME0527
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Number of Times Taught: 6
Average Enrollment: 15

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WESTERN MICH UNIVERSITY (2330)
KALAMAZOO, Michigan 49008
(616) 383-1600

SOLAR RELATED COURSES

Solar Energy II
Instructor: Schubert, R.C. (616) 383-4021
Course Number: 495
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 3 Weeks, 15.0 hrs per week
Contact Hours: 45
Classroom: 45
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; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 1
Average Enrollment: 15

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Community/Junior Colleges

CHAS S MOTT CMTY COLLEGE (2261)
FLINT, Michigan 48503
(313) 762-0200

PROGRAMS AND CURRICULA

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

SOLAR RELATED COURSES

Solar Heating and Cooling
Instructor: Laine, 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
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation
Number of Times Taught: 2
Average Enrollment: 20

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DELTA COLLEGE (2251)
UNIVERSITY CENTER, Michigan 48710
(517) 686-0400

SOLAR RELATED COURSES

Solar Energy Workshop
Instructor: Most, C./ Schuitman, J./ Whittaker, M. (517) 662-9267
Course Number: 78293
Department: Science
Credits: 1
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 9
Laboratory: 6
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 5
Average Enrollment: 20

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GLEN OAKS CMTY COLLEGE (2263)
CENTREVILLE, Michigan 49032
(616) 467-9945

SOLAR RELATED COURSES

Alternative Energy
Instructor: Moss, Wayne (616) 467-9945
Course Number: VAE 110
Department: Vocational
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 2

Solar Energy
Instructor: Moss, Wayne (616) 467-9945
Course Number: VAE 112
Department: Vocational
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 1
Average Enrollment: 30

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GRAND RAPIDS JR COLLEGE (2267)
GRAND RAPIDS, Michigan 49502
(616) 456-4895

PROGRAMS AND CURRICULA

Arch. Draft.
Degree: AD, Arch. Draft.
Contact: Boyer, Don
Students Taking or Completing Offering: Architect

Heat., Vent., A/C
Degree: AD, Heat., Vent., A, C
Contact: Boyer, Don

SOLAR RELATED COURSES

Sol. Sys. - Collector Des. and Cons.
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: Materials Research; Plumbing Techniques; 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
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: 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: 15

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JACKSON COMMUNITY COLLEGE (2274)
JACKSON, Michigan 49201
(517) 787-0800

SOLAR RELATED COURSES

Solar Heating and Cooling
Instructor: Ed., Supplemental-Dean Occup. Ed. (517) 787-0800
Course Number: A1T-010
Department: Occupational
Credits: 1
Student Level: All levels
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Classroom: 16
Number of Times Taught: 2
Average Enrollment: 45

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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: Ent'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 Ener. Collection*
Course Number: AT201
Department: Eng'r Technology
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design

**Res. 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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MACOMB CO CC- SOUTH CAMPUS (8906)
WARREN, Michigan 48093
(313) 779-7000

SOLAR RELATED COURSES

Solar Heating and Energy Conservation
Instructor: Cooper, W. B.
(313) 779-7465
Course Number: CCT 280
Department: Mechanical Tech.
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 8.0 hrs per week
Contact Hours: 128
Classroom: 64
Laboratory: 64
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating
Number of Times Taught: 4

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MID MICHIGAN CMTY COLLEGE (6768)
HARRISON, Michigan 48625
(517) 386-7792

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Derscheid, Larry
(517) 386-7792
Course Number: 151
Department: Physical Science
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
Number of Times Taught: 3
Average Enrollment: 10

Heating Systems
Instructor: Hohman, John
(517) 386-7792
Course Number: HRA201
Department: Technical
Credits: 6
Student Level: Junior or Senior
Duration: 16 Weeks, 8.0 hrs per week
Contact Hours: 128
Classroom: 64
Laboratory: 64
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Materials Research; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Maintenance; Domestic Hot Water
Number of Times Taught: 4
Average Enrollment: 20

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SCHOOLCRAFT COLLEGE (2315)
LIVONIA, Michigan 48152
(313) 591-6400

SOLAR RELATED COURSES

Energy, Man and the Future
Instructor: Lesko
(313) 591-6400
Course Number: 101
Department: Physics
Credits: 4
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80
Classroom: 48
Laboratory: 32
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar Economics
Number of Times Taught: 8
Average Enrollment: 20

Here Comes the Sun
Department: Bursar/Solar Energy
Student Level: All levels
Duration: 1 Weeks, 18.0 hrs per week
Contact Hours: 18
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; 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; Swimming Pool Heating; Space Heating

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SNT CLAIR CO CMTY COLLEGE (2310)
PORT HURON, Michigan 48060
(313) 984-3881

SOLAR RELATED COURSES

Alternate Energy, Intro. To Energy
Instructor: Zochowski, Phil
(313) 984-3881
Course Number: 100
Department: Industrial 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: Alternate Energy Sources; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Solar Home Construction; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 15

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SOUTHWESTERN MICH COLLEGE (2317)
DOWAGIAC, Michigan 49047
(616) 782-5113

SOLAR RELATED COURSES

Solar Energy
Instructor: Haidler, William
(616) 782-5113
Course Number: 181
Department: Continuing Education
Credits: 2
Student Level: All levels
Duration: 6 Weeks, 6.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 6
Average Enrollment: 20

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Other Educational Institutions

SUN STRUCTURES (90430)
201 E. Liberty St.
Ann Arbor, Michigan

SOLAR RELATED COURSES

**Alt. Ener. Workshops*

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Colleges/Universities

AUGSBURG COLLEGE (2334)
MINNEAPOLIS, Minnesota 55454
(612) 332-5181

SOLAR RELATED COURSES

Energy Options for the Future
Instructor: Paulson, Kermit E.
(612) 332-5181
Department: Physics
Credits: 4
Student Level: All levels
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy

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BEMIDJI STATE U (2336)
BEMIDJI, Minnesota 56601
(218) 755-2000

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Strom, Irving
(218) 755-2760
Course Number: 370
Department: Industrial Technology
Credits: 2
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation
Number of Times Taught: 1
Average Enrollment: 20

Fireplace Construction
Instructor: Anderson, Robert
(218) 755-2950
Course Number: 496
Department: Ind. Tech.
Credits: 1
Student Level: All levels
Duration: 1 Weeks, 20.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 5
Average Enrollment: 40

Heat Pump Tech.
Instructor: Larson, Irving
(218) 755-2950
Course Number: 4/596
Department: Ind. Tech.
Credits: 1
Student Level: All levels
Duration: 1 Weeks, 10.0 hrs per week
Contact Hours: 10
Classroom: 10
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer

Solar Heating (Energy)
Instructor: Larson, Irving
(218) 755-2950
Course Number: 4/596
Department: Ind. Tech.
Credits: 1
Student Level: All levels
Duration: 1 Weeks, 10.0 hrs per week
Contact Hours: 10
Classroom: 10
Topics Covered Extensively: Energy Conservation; 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; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 25

Wind Generation (Energy)
Instructor: Larson, Irving
(218) 755-2950
Department: Ind. Tech.
Credits: 1
Student Level: All levels
Duration: 10 Weeks, 1.0 hrs per week
Contact Hours: 10
Classroom: 10
Topics Covered Extensively: Energy Storage; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 20

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GUSTAVUS ADOLPHUS COLLEGE (2353)
SAINT PETER, Minnesota 56082
(507) 931-4300

SOLAR RELATED COURSES

Alternate Sources of Energy
Instructor: Bradley, Wendell
(507) 931-4300
Course Number: 104B
Department: Physics
Credits: 1
Student Level: All levels
Duration: 7 Weeks, 4.0 hrs per week
Contact Hours: 28
Classroom: 10
Laboratory: 18
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 5
Average Enrollment: 12

Energy
Instructor: Bradley, Wendell
(507) 931-4300
Course Number: 104A
Department: Physics
Credits: 1
Student Level: All levels
Duration: 7 Weeks, 4.0 hrs per week
Contact Hours: 28
Classroom: 28
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 5
Average Enrollment: 12

Indepen. Stud.-Sol. Ener. Res. Projects
Instructor: Fuller, Richard
(507) 931-4300
Course Number: 191-491
Department: Physics
Credits: 1
Student Level: Junior or Senior
Duration: 14 Weeks, 5.0 hrs per week
Contact Hours: 70
Laboratory: 70
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 3
Average Enrollment: 3

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MANKATO STATE UNIVERSITY (2360)
MANKATO, Minnesota 56001
(507) 389-1111

SOLAR RELATED COURSES

Energy and Management
Instructor: Mordue, Dale
(507) 389-6536
Course Number: 101
Department: Physics and Electronics Engineering Technology
Credits: 4
Student Level: All levels
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 30
Laboratory: 10
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Solar Systems Design
Number of Times Taught: 3
Average Enrollment: 6

Residential Solar Energy
Instructor: Johnson, Iver H.
(507) 389-6621
Course Number: 491
Department: Industrial and Technical Studies
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 35

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MINN MNPLS SNT PAUL, U OF (3969)
MINNEAPOLIS, Minnesota 55455
(612) 373-2851

SOLAR RELATED COURSES

Solar Energy Utilization
Instructor: Liu, Benjamin Y.H.
Course Number: ME 5712
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 45

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MINNESOTA DULUTH, U OF (2388)
DULUTH, Minnesota 55812
(218) 726-8000

SOLAR RELATED COURSES

Energy Resources: Sources, Use and Conservation
Instructor: Oakland, Lewis J.
(218) 726-7210
Course Number: PHYS 1000
Department: Letters & Science-Physics
Credits: 4
Student Level: All levels
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 35

Environmental Studies
Instructor: Sydor, Michael
(218) 726-7205
Course Number: PHY 3050
Department: Letters & Science/Physics

Credits: 3
Student Level: Junior or Senior
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 1
Average Enrollment: 6

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MOORHEAD STATE UNIVERSITY (2367)
MOORHEAD, Minnesota 56560
(218) 236-2011

SOLAR RELATED COURSES

Solar Energy
Instructor: Mathiason, Dennis
(218) 236-2136
Course Number: 103
Department: Chemistry
Credits: 4
Student Level: All levels
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Solar System Components; Space Heating
Number of Times Taught: 2
Average Enrollment: 40

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SAINT CLOUD ST UNIVERSITY (2377)
SAINT CLOUD, Minnesota 56301
(612) 255-0121

SOLAR RELATED COURSES

Solar Energy
Instructor: Trummel, Donald
(612) 255-2011
Course Number: 495/595
Department: Physics
Credits: 2
Student Level: All levels
Duration: 8 Weeks, 3.0 hrs per week
Contact Hours: 24
Classroom: 19
Laboratory: 5
Number of Times Taught: 2
Average Enrollment: 20

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SAINT OLAF COLLEGE (2382)
NORTHFIELD, Minnesota 55057
(507) 663-2222

SOLAR RELATED COURSES

**Physic Dept. Courses*
Department: Physics

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SAINT TERESA, COLLEGE OF (2344)
WINONA, Minnesota 55987
(507) 452-9302

PROGRAMS AND CURRICULA

Solar Energy Dynamics
Degree: NO,
Contact: Homer, Oscar
(507) 454-2930
Students Taking or Completing Offering: Educator

SOLAR RELATED COURSES

Solar Energy Dynamics
Instructor: Homer, Oscar
Department: Biology-Chemistry
Program or Curriculum: Solar Energy Dynamics
Student Level: College Graduate
Duration: 3 Weeks, 40.0 hrs per week
Contact Hours: 120
Classroom: 60
Laboratory: 60

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WM MITCHELL COLLEGE LAW (2391)
SAINT PAUL, Minnesota 55105
(612) 227-9171

SOLAR RELATED COURSES

Energy Law & Policy
Instructor: Prince, J. D.
(612) 227-9171
Course Number: 393
Department: College of Law
Credits: 2
Student Level: College Graduate
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Solar Energy Policy Development; Solar Law/Legislation

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LAKEWOOD CMTY COLLEGE (6774)
WHITE BEAR LAKE, Minnesota 55110
(612) 770-1331

PROGRAMS AND CURRICULA

Energy Engineering Technology
Degree: AD, Applied Science-Energy
Contact: Wischmann, Robert
(612) 770-1331

SOLAR RELATED COURSES

Energy Concepts
Instructor: Wischmann, Robert
(612) 770-1331
Course Number: NS 138
Department: Natural Science
Program or Curriculum: Energy Engineering Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 9
Average Enrollment: 30

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ROCHESTER CMTY COLLEGE (2373)
ROCHESTER, Minnesota 55901
(507) 285-7210

SOLAR RELATED COURSES

Adv. Sol. Energy for the Homeowner
Department: Civil Engr. Technology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36

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Colleges/Universities

DELTA STATE UNIVERSITY (2403)
CLEVELAND, Mississippi 38732
(601) 846-6664

PROGRAMS AND CURRICULA

Energy Program for High School Teachers
Contact: Myers, Richard S.
(601) 843-9741
Students Taking or Completing Offering: Educator

SOLAR RELATED COURSES

Special Topics in Chemistry-Energy
Instructor: Myers, Richard S.
(601) 843-9741
Course Number: CHE 392
Department: Physical Sciences
Program or Curriculum: Energy Program for High School Teachers
Credits: 3
Student Level: College Graduate
Duration: 2 Weeks, 28.0 hrs per week
Contact Hours: 56
Classroom: 56
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 24

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MISSISSIPPI ST UNIVERSITY (2423)
MISSISSIPPI STATE, Mississippi 39762
(601) 325-3221

PROGRAMS AND CURRICULA

Mechanical Engineering
Degree: PhD, MS, BS, Mechanical Engineering
Contact: Carley, C. T.
(601) 325-4915

SOLAR RELATED COURSES

Solar Energy Thermal Processes
Instructor: Forbes, Richard
(601) 325-4915
Course Number: ME 4313
Department: Mechanical Engineering
Program or Curriculum: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 40
Laboratory: 2
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 30

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SOUTHERN MISSISSIPPI, U OF (2441)
HATTIESBURG, Mississippi 39401
(601) 266-7101

SOLAR RELATED COURSES

Solar Heating and Cooling
Instructor: Brent, Charles R.
(601) 266-7212
Course Number: MET 444/544
Department: Sci. and Tech./Indus. Technology
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 18

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Community/Junior Colleges

HINDS JUNIOR COLLEGE (2407)
RAYMOND, Mississippi 39154
(601) 857-5261

SOLAR RELATED COURSES

Solar Energy
Instructor: Durham, J. David
(615) 857-5261
Course Number: CEU 0073
Department: Physical Science
Student Level: All levels
Duration: 6 Weeks, 2.0 hrs per week
Contact Hours: 12
Classroom: 12
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 25

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Colleges/Universities

CENTRAL METHODIST COLLEGE (2453)
FAYETTE, Missouri 65248
(816) 248-3391

SOLAR RELATED COURSES

Research Topics in Solar Energy
Instructor: Peery, Larry J.
(816) 248-3391
Course Number: I43
Department: Physics-Astronomy
Credits: 3
Student Level: All levels
Duration: 3 Weeks, 20.0 hrs per week
Contact Hours: 60
Classroom: 15
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 12

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CENTRAL MO ST UNIVERSITY (2454)
WARRENSBURG, Missouri 64093
(816) 429-4111

SOLAR RELATED COURSES

Energy Conservation
Instructor: Ulrich, Robert
(816) 429-4626
Course Number: SAFE 4040
Department: Public Service
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 60
Classroom: 60
Number of Times Taught: 10
Average Enrollment: 14

Solar & Other Energy Alternatives
Instructor: Norris, Raymond
(816) 429-4941
Course Number: E/E 4000
Department: Electricity & Electronics
Credits: 2
Student Level: Junior or Senior
Duration: 3 Weeks, 12.0 hrs per week
Contact Hours: 36
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Space Heating; Space Cooling

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MISSOURI STHN ST COLLEGE (2488)
JOPLIN, Missouri 64801
(417) 624-8100

SOLAR RELATED COURSES

Seminar-Solar Energy Design
Instructor: Morgan, Ronald
(417) 624-8100
Course Number: 498
Department: Drafting & Design
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 5.0 hrs per week
Contact Hours: 80
Classroom: 16
Laboratory: 64
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 2
Average Enrollment: 20

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MISSOURI- COLUMBIA, U OF (2516)
COLUMBIA, Missouri 65201
(314) 882-2121

SOLAR RELATED COURSES

Ener. Systs., Res-Risks, Benefits
Instructor: Meyer, Walter/ Bull, Stanley R.
(314) 882-3550
Course Number: NE301
Department: Energy Systems and Resources
Credits: 2
Student Level: College Graduate
Duration: 1 Weeks, 40.0 hrs per week
Contact Hours: 40
Classroom: 30
Laboratory: 10
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 6
Average Enrollment: 39

Engin. Eval-Ener. Systs., Resources
Instructor: Meyer, Walter
(314) 882-3550
Course Number: EEMAENE315
Department: Energy Systems and Resources Program
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy

Number of Times Taught: 3
Average Enrollment: 26

Meet Ener. Crisis-Comp. Risks, Benefits
Instructor: Meyer, Walter/ Bull, Stanley R.
(314) 882-3550
Course Number: NE301
Department: Energy Systems and Resources
Credits: 4
Student Level: College Graduate
Duration: 3 Weeks, 40.0 hrs per week
Contact Hours: 120
Classroom: 90
Laboratory: 30
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 37

Principles of Direct Energy Conversion
Instructor: Warder, Richard C.
(314) 882-8345
Course Number: MAE359
Department: Mechanical & Aerospace Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conversion; Photovoltaics
Number of Times Taught: 2
Average Enrollment: 20

Solar Energy Utilization
Instructor: Moore, Gordon L.
(314) 882-2785
Course Number: MAE339
Department: Mechanical & aerospace Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 22

Teachers Energy Symposium
Instructor: Meyer, W./ Bull, S.R.
(314) 882-3550
Course Number: NE301
Department: Energy Systems and Resources
Credits: 1
Student Level: College Graduate
Duration: 1 Weeks, 20.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 70

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MISSOURI- KANSAS CITY, U OF (2518)
KANSAS CITY, Missouri 64110
(816) 276-1000

SOLAR RELATED COURSES

Solar Energy Utilization
Instructor: Stewart, Jr. W. E.
(816) 276-1672
Course Number: 301
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Materials Research; Passive Solar Technology; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 25

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MISSOURI- ROLLA, U OF (2517)
ROLLA, Missouri 65401
(314) 341-4114

PROGRAMS AND CURRICULA

Solar Energy Conversion
Degree: MS, Electrical Engineering
Contact: Boone, Jack L.
(314) 341-4357

SOLAR RELATED COURSES

Solar Energy Conversion
Instructor: Boone, Jack L.
(314) 341-4357
Course Number: EE335
Department: Elec. Engineering
Program or Curriculum: Solar Energy Conversion
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar Collector Evaluation/Design; Solar Systems Design
Average Enrollment: 10

Solar Energy Conversion-Lab
Instructor: Boone, Jack L.
(314) 341-4357
Course Number: EE 336

Department: Elec. Engin.
Program or Curriculum: Solar Energy Conversion
Credits: 1
Student Level: College Graduate
Duration: 15 Weeks, 1.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar Collector Evaluation/Design; Solar Systems Design
Average Enrollment: 10

Solar Heating and Cooling
Instructor: Armaly, Bassem F. (314) 341-4671
Course Number: ME 365
Program or Curriculum: Solar Energy Conversion
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 20

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MISSOURI- SAINT LOUIS, U OF (2519)
SAINT LOUIS, Missouri 63121
(314) 453-0111

SOLAR RELATED COURSES

**Solar Heating and Cooling*
Department: Mech. Engr.
Student Level: College Graduate

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SOUTHEAST MO ST UNIVERSITY (2501)
CAPE GIRARDEAU, Missouri 63701
(314) 334-8211

SOLAR RELATED COURSES

Introduction to Solar Applications
Instructor: Freeman, Robert W. (314) 651-2172
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 32
Laboratory: 32
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating

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SOUTHWESTERN MO ST UNIVERSITY (2503)
SPRINGFIELD, Missouri 65802
(417) 836-5000

PROGRAMS AND CURRICULA

Engineering Physics-Solar Emphasis
Degree: BS,
Contact: Banks, L.E. (417) 836-5131
Students Taking or Completing Offering: Solar Engineer

SOLAR RELATED COURSES

Basics of Solar Energy
Instructor: Banks, L.E. (417) 836-5131
Course Number: 131
Department: Physics
Program or Curriculum: Engineering Physics-Solar Emphasis
Credits: 1
Student Level: All levels
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Classroom: 16
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 40

Solar Energy Laboratory
Instructor: Banks, L. E. (417) 836-5131
Course Number: 141
Department: Physics
Program or Curriculum: Engineering Physics-Solar Emphasis
Credits: 1
Student Level: All levels
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Laboratory: 32
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation
Number of Times Taught: 1

Solar System Analysis
Instructor: Banks, L.E. (417) 836-5131
Course Number: 265
Department: Physics
Program or Curriculum: Engineering Physics - Solar Emphasis
Credits: 2
Student Level: Junior or Senior
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Solar Economics; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Process Heat; Industrial

Solar System Design
Instructor: Banks, L.E. (417) 836-5131
Course Number: 265
Department: Physics
Program or Curriculum: Engineering Physics-Solar Emphasis
Credits: 1
Student Level: Junior or Senior
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Laboratory: 32
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design
Average Enrollment: 1

Solar Thermal Analysis
Instructor: Banks, L.E. (417) 836-5131
Course Number: 265
Department: Physics
Program or Curriculum: Engineering Physics-Solar Emphasis
Credits: 2
Student Level: Junior or Senior
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Space Heating
Number of Times Taught: 1
Average Enrollment: 10

Wind Energy
Instructor: Northrip, J.W. (417) 836-5405
Course Number: 131
Department: Physics
Program or Curriculum: Engineering Physics-Solar Emphasis
Credits: 1
Student Level: All levels
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Classroom: 16
Topics Covered Extensively: Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 40

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WASHINGTON UNIVERSITY (2520)
SAINT LOUIS, Missouri 63130
(314) 889-5000

SOLAR RELATED COURSES

Energy Effective Building Design
Instructor: Associates; W. Tao and (314) 644-1400
Course Number: 546
Department: Architecture
Credits: 2
Student Level: College Graduate
Duration: 14 Weeks, 2.0 hrs per week
Contact Hours: 28
Classroom: 28
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics
Average Enrollment: 14

Solar Energy Technology and Policy
Instructor: Icerman, Larry (314) 889-5482
Course Number: THA 143
Department: Technology and Human Affairs
Credits: 2
Student Level: All levels
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 2
Average Enrollment: 70

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WEBSTER COLLEGE (2521)
SAINT LOUIS, Missouri 63119
(314) 968-0500

SOLAR RELATED COURSES

Energy Appropiate to the Task
Instructor: McConnell, Bill (314) 968-0500
Department: Science
Credits: 3
Student Level: All levels
Duration: 16 Weeks; 3.0 hrs per week
Contact Hours: 48

Topics Covered Extensively: Energy Conservation; Passive Solar Technology
Number of Times Taught: 2
Average Enrollment: 10

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Community/Junior Colleges

CROWDER COLLEGE (2459)
NEOSHO, Missouri 64850
(417) 451-3223

SOLAR RELATED COURSES

Basic Solar Design
Instructor: Boyt, Art
(417) 451-5365
Department: Science
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Maintenance; Domestic Hot Water; Elec'l Generation, Small Scale; Space Heating; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 23

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SAINT LOUIS CC- MERAMEC (2472)
KIRKWOOD, Missouri 63122
(314) 966-7500

SOLAR RELATED COURSES

Fund. of Solar Ener. and Ener. Cons.
Instructor: Strutman, Warren
(314) 966-7747
Course Number: 12,906
Department: Ener. and Tech.-Cont. ED.
Student Level: High School Graduate
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar Home Construction; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating; Space Cooling

Colleges/Universities

MONTANA C MINRL SCI- TECHN (2531)
BUTTE, Montana 59701
(406) 792-8321

SOLAR RELATED COURSES

Heat Transfer
Instructor: Alexander, Richard
(406) 792-8321
Course Number: ES 526
Department: Engineering Science
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer

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MONTANA STATE UNIVERSITY (2532)
BOZEMAN, Montana 59715
(406) 994-4361

SOLAR RELATED COURSES

Ener. Train. Shop-Second. Sci. Instructs.
Instructor: Mussulman, R. L.
(406) 994-2203
Course Number: 570
Department: Mechanical Engineering
Credits: 4
Student Level: College Graduate
Duration: 2 Weeks, 20.0 hrs per week
Contact Hours: 40
Classroom: 30
Laboratory: 10
Topics Covered Extensively Alternate Energy Sources; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 5

Energy Course for Homebuilders
Instructor: Martindale, W. R.
(406) 994-2203
Course Number: 570
Department: Mechanical Engineering
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 65

Energy Efficient Bldg. for Contractors
Instructor: Warrington, Robert
(406) 994-2203
Department: Continuing Education
Student Level: All levels
Number of Times Taught: 2

Energy: Limits, Problems and Prospects
Instructor: Kirkpatrick, Larry
(406) 994-3614
Course Number: PHY 252
Department: Letters & Science/Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Number of Times Taught: 5
Average Enrollment: 35

Solar Energy Design
Instructor: Warrington, Robert O.
(406) 994-2203
Course Number: ME 480
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Heat and Energy Transfer; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Space Heating
Number of Times Taught: 2
Average Enrollment: 10

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MONTANA, UNIVERSITY OF (2536)
MISSOULA, Montana 59801
(406) 243-0211

SOLAR RELATED COURSES

Alternative Energy & the Ecosphere
Instructor: Sheridan, R.
(406) 243-2613
Course Number: 178-9
Department: Botany-Liberal Arts
Credits: 3
Student Level: All levels
Duration: 9 Weeks, 3.0 hrs per week
Contact Hours: 27
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; 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; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 3
Average Enrollment: 200

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WESTERN MONTANA COLLEGE (2537)
DILLON, Montana 59725
(406) 683-7251

SOLAR RELATED COURSES

Solar Energy
Instructor: Streeper, Joseph B. (406) 683-7102
Course Number: 2/3/491
Department: Science
Credits: 2
Student Level: All levels
Contact Hours: 30
Classroom: 30
Laboratory: 10
Number of Times Taught: 1
Average Enrollment: 22

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Community/Junior Colleges

FLATHEAD VLY CMTY COLLEGE (6777)
KALISPELL, Montana 59901
(406) 755-5222

SOLAR RELATED COURSES

Alternative Energy & Conservation
Instructor: Blood, Lex (406) 755-5222
Course Number: 176
Department: C
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 19
Laboratory: 14
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Small Scale; Process Heat, Agricultural; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 50

Energy For A Technological Society
Instructor: Blood, Lex (406) 755-5222
Course Number: 173
Department: Earth Sciences, Geology
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 19
Laboratory: 14
Topics Covered Extensively: Energy Conservation
Number of Times Taught: 2
Average Enrollment: 25

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Other Educational Institutions

ALTERNATIVE ENERGY RESOURCE ORG. (90270)
435 Stapleton Bldg.
Billings, Montana 59101

SOLAR RELATED COURSES

**Solar Energy Workshop*
Duration: 1 Weeks
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating

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Colleges/Universities

HASTINGS COLLEGE (2548)
HASTINGS, Nebraska 68901
(402) 463-2402

SOLAR RELATED COURSES

Environmental Science 260
Course Number: 260
Department: Physics
Credits: 4
Student Level: Junior or Senior
Duration: 14 Weeks, 5.0 hrs per week
Contact Hours: 70
Classroom: 56
Laboratory: 14
Number of Times Taught: 6
Average Enrollment: 24

Environmental Science 460
Course Number: 460
Department: Physics
Credits: 4
Student Level: Junior or Senior
Duration: 14 Weeks, 5.0 hrs per week
Contact Hours: 70
Classroom: 56
Laboratory: 14
Number of Times Taught: 2
Average Enrollment: 20

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MIDLAND LUTHERAN COLLEGE (2553)
FREMONT, Nebraska 68025
(402) 721-5480

SOLAR RELATED COURSES

Solar Home Heating
Instructor: Kruse, James
(402) 721-5480
Department: Continuing Ed.
Student Level: All levels
Duration: 7 Weeks, 3.0 hrs per week
Contact Hours: 21
Classroom: 21
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Home Construction; Solar Systems Design; Space Heating
Number of Times Taught: 4
Average Enrollment: 30

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NEBRASKA- LINCOLN, U OF (2565)
LINCOLN, Nebraska 68588
(402) 472-7211

SOLAR RELATED COURSES

Solar Energy Engineering
Instructor: Anderson, Edward E.
(402) 472-1678
Course Number: 414/814
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 20

Summer Instit. and Curr. Dev.-Ener. Edu.
Instructor: McCurdy, Donald W.
(402) 472-3155
Course Number: 993S
Department: Teachers College-Sec. Educ.
Credits: 3
Student Level: College Graduate
Duration: 3 Weeks, 30.0 hrs per week
Contact Hours: 90
Classroom: 30
Laboratory: 60
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar Home Construction; Elec'l Generation, Central; Space Heating
Number of Times Taught: 2
Average Enrollment: 30

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Community/Junior Colleges

CENTRAL TECH CMTY COLLEGE (29007)
GRAND ISLAND, Nebraska 68801
(308) 384-5220

SOLAR RELATED COURSES

Solar Energy Fundamentals
Instructor: Krueger, Alan
(402) 463-6811
Course Number: 330.54
Department: Ret/Heating
Credits: 2
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Laboratory: 40
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design

Number of Times Taught: 46

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METROPOLITAN TECHNICAL CC (12586)
OMAHA, Nebraska 68137
(402) 457-5100

PROGRAMS AND CURRICULA

Solar Technicial Training Program
Degree: Solar Systems
Contact: Kafka, James 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

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MID PLAINS CC- N PLATTE (2557)
NORTH PLATTE, Nebraska 69101
(308) 532-8740

SOLAR RELATED COURSES

**Solar Heat. Instruction - Familiarization*
Department: Bldg & Construc. / Ref. & Air Cond.
Topics Covered Extensively: Intro. to Solar Energy

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SOUTHEAST CC MILFORD CAM (4723)
MILFORD, Nebraska 68405
(402) 761-2131

SOLAR RELATED COURSES

Heat. and A/C System Theroy
Instructor: Lundgren, Stan
Course Number: 5700227
Department: Construction Occupations
Credits: 2
Student Level: All levels
Duration: 6 Weeks, 5.0 hrs per week
Contact Hours: 32
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy

Residential A/C Theory I
Instructor: Lundgren, S.
Course Number: 4400441
Department: Construction Occupations
Credits: 3
Student Level: All levels
Duration: 11 Weeks, 5.0 hrs per week
Contact Hours: 54
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy

Solar Energy
Instructor: Roll, Dean
Course Number: 5700253
Department: Architectural Technology
Credits: 2
Student Level: Freshman or Sophomore
Duration: 7 Weeks, 5.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Energy Storage; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 15

Solar Energy 4400653
Instructor: Roll, Dean
Course Number: 4400653
Department: Construction
Credits: 2
Student Level: All levels
Duration: 6 Weeks, 5.0 hrs per week
Contact Hours: 32
Topics Covered Extensively: Energy Conversion; 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; Space Cooling

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Colleges/Universities

NEVADA LAS VEGAS, U OF (2569)
LAS VEGAS, Nevada 89154
(702) 739-3011

PROGRAMS AND CURRICULA

Solar Systems
Contact: Tryon, John G.
(702) 739-3701
Students Taking or Completing Offering: Contractor, Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician, Heating, Ventilation, and Air Cond. Worker

SOLAR RELATED COURSES

Solar Heating
Instructor: Tryon, John G.
(702) 739-3701
Course Number: EGG475X
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

Solar Systems-Domestic Hot Water
Instructor: Tryon, John G.
(702) 739-3701
Department: Cont. Ed., Nev. Sol. Ener. Assoc.
Program or Curriculum: Solar Systems
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 16
Classroom: 13
Topics Covered Extensively: Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 20

Solar Systems-Economics
Instructor: Tryon, John G.
(702) 739-3701
Department: Cont. Ed., Nev. Sol. Ener. Asso.
Program or Curriculum: Solar Systems
Student Level: All levels
Duration: 2 Weeks, 10.0 hrs per week
Contact Hours: 20
Classroom: 20
Topics Covered Extensively: Solar Economics; Domestic Hot Water; Swimming Pool Heating; Space Heating

Solar Systems-Heat. & Cool. of Bldgs.
Instructor: Tryon, John G.
(702) 739-3701
Department: Cont. Ed., Nev. Sol. Ener. Asso.
Program or Curriculum: Solar Systems
Student Level: All levels
Duration: 7 Weeks, 4.0 hrs per week
Contact Hours: 28
Classroom: 28
Topics Covered Extensively: Marketing/Market Analysis; Solar System Components; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 15

Solar Systems-Swimming Pools
Instructor: Tryon, John G.
(702) 739-3701
Department: Cont. Ed., Nev. Sol. Ener. Asso.
Program or Curriculum: Solar Systems
Student Level: All levels
Duration: 2 Weeks, 4.5 hrs per week
Contact Hours: 9
Classroom: 6
Topics Covered Extensively: Plumbing Techniques; Solar System Components; Solar Economics; Solar Systems Design; Solar Systems Installation; Swimming Pool Heating
Number of Times Taught: 1
Average Enrollment: 20

Topics in Physics: Solar Energy
Instructor: Dundon, J.M.
(702) 739-3539
Course Number: PHY 100B
Department: Sci. Math., & Engineering/Physics
Credits: 1
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 15
Number of Times Taught: 2
Average Enrollment: 40

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NEVADA RENO, U OF (2568)
RENO, Nevada 89557
(702) 784-1110

SOLAR RELATED COURSES

Solar Energy 483-783
Instructor: Hallelt, J.
(702) 784-6792
Course Number: 483-783
Department: Arts and Sci.-Physics
Credits: 3

Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer
Number of Times Taught: 2
Average Enrollment: 15

Solar Engineering
Instructor: McKee, R. B.
(702) 784-6880
Course Number: 374
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Classroom: 30
Laboratory: 45
Topics Covered Extensively: Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 10

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Community/Junior Colleges

CLARK CO CMTY COLLEGE (10362)
LAS VEGAS, Nevada 89030
(702) 643-6060

PROGRAMS AND CURRICULA

Solar Energy Technology
Degree: AD, OT, Solar Energy Tech., Applied Science
Contact: Comarow, David
(702) 843-6060
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 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 110
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 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 Weeks, 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

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Colleges/Universities

DARTMOUTH COLLEGE (2573)
HANOVER, New Hampshire
(603) 646-1110

PROGRAMS AND CURRICULA

**Solar Studies-Bldg. Heat. and Photov.*

SOLAR RELATED COURSES

**Intro. to Solar Energy*
Department: Thayer School of Eng'r
Program or Curriculum: *Solar Studies-Bldg. Heat. and Photov.
Student Level: All levels
Topics Covered Extensively: Intro. to Solar Energy

**Solar Energy Design*
Department: Thayer School of Eng'r
Program or Curriculum: *Solar Studies-Bldg. Heat. and Photov.
Student Level: All levels
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design

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NEW ENGLAND COLLEGE (2579)
HENNIKER, New Hampshire
(603) 428-2211

SOLAR RELATED COURSES

Energy Issues
Instructor: Lemons, John (603) 428-2388
Course Number: ES202
Department: Environmental Studies
Credits: 4
Student Level: All levels
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation
Average Enrollment: 40

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NH PLYMOUTH ST COLLEGE,U (2591)
PLYMOUTH, New Hampshire
(603) 536-1550

SOLAR RELATED COURSES

Solar Energy Survey
Course Number: 74.111
Department: Natural Science
Credits: 2
Student Level: Freshman or Sophomore
Duration: 8 Weeks, 3.0 hrs per week
Contact Hours: 24
Classroom: 24
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Energy Storage; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 40

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Vocational/Technical Colleges

NH VOC- TECH C 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: 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: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 1
Average Enrollment: 20

Principles of Solar Design
Instructor: Magnon, David
(603) 668-6706
Course Number: M943EV
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
Topics Covered Extensively: Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design

Solar Construction & Installation Tech.
Instructor: Magnon, David
(603) 668-6706
Course Number: M944EV
Department: Evening Extension
Program or Curriculum: Solar Energy Certificate Program
Credits: 4
Student Level: All levels
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance

Solar Energy - a Prime Energy Resource
Instructor: Magnon, David
(603) 668-6706
Course Number: M942EV
Department: Evening Extension
Program or Curriculum: Solar Energy Certificate Program
Credits: 4
Student Level: All levels
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; 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
Number of Times Taught: 4
Average Enrollment: 25

Solar Seminar - Integrated Projects
Instructor: Magnon, David
(603) 668-6706
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

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NH VOC- TECH C NASHUA (9236)
NASHUA, New Hampshire
(603) 882-6923

SOLAR RELATED COURSES

Energy and Energy Sources
Instructor: Mihager, Lawrence
Course Number: 826
Department: Math/Science
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Space Heating
Number of Times Taught: 1
Average Enrollment: 20

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Other Educational Institutions

NEW ENGLAND CENTER FOR APPROPRIATE TECH. (90250)
15 Garrison Ave.
Durham, New Hampshire 03824

SOLAR RELATED COURSES

**Passive Solar Workshops-incls. Greenhouse*
Instructor: O'Donnell, Richard
(603) 862-2764
Topics Covered Extensively: Passive Solar Technology

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Colleges/Universities

FAIRLEIGH DICKINSON UNIVERSITY (2607)
TEANECK, New Jersey
(201) 836-6300

SOLAR RELATED COURSES

Solar Energy
Instructor: Wieden, S.
(201) 836-6300
Course Number: PH431
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Appropriate Technology; Materials Research; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 10

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GLASSBORO STATE COLLEGE (2609)
GLASSBORO, New Jersey
(609) 445-5000

PROGRAMS AND CURRICULA

Energy and Trans. Concentration
Degree: MA, BA; Arts
Contact: Weiss, Leigh
(609) 445-6209
Students Taking or Completing Offering: Educator, Do-it-yourself Homeowner, Installer-Residential (Solar System), Installer-Commercial (Solar System), Solar Technician

SOLAR RELATED COURSES

Advanced Solar Energy Systems
Instructor: Weiss, Leigh B.
(609) 445-6209
Department: Industrial Education & Technology
Program or Curriculum: Energy and Trans Concentration
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 60
Laboratory: 36
Topics Covered Extensively: Energy Conservation; Energy Storage; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

Solar Energy
Instructor: Weiss, Leigh B.
(609) 445-6209
Department: Industrial Education & Technology
Program or Curriculum: Energy and Trans Concentration
Credits: 3
Student Level: Junior or Senior
Duration: 17 Weeks, 6.0 hrs per week
Contact Hours: 102
Classroom: 70
Laboratory: 32
Topics Covered Extensively: Energy Conservation; Energy Storage; Intro. to Solar Energy; 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; Space Heating
Number of Times Taught: 8
Average Enrollment: 20

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MONTCLAIR STATE COLLEGE (2617)
UPPER MONTCLAIR, New Jersey
(201) 893-4000

PROGRAMS AND CURRICULA

Industrial Powers
Degree: BA, BS,
Students Taking or Completing Offering: Educator, Electrician, Plumber, Sheet Metal Worker

SOLAR RELATED COURSES

Alternate Energy Conversion Systems
Instructor: Greenwald, Martin
(201) 893-4163
Course Number: 484
Department: Industrial Educ. & Technology
Program or Curriculum: Industrial Powers
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 32
Laboratory: 32
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Solar Economics; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems

Number of Times Taught: 8
Average Enrollment: 20

Wind Energy Conversion Systems
Instructor: Greenwald, Martin
(201) 893-4163
Course Number: 485
Department: Industrial Educ. & Technology
Program or Curriculum: Industrial Powers
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 32
Laboratory: 32
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Marketing/Market Analysis; Solar Economics; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l Generation, Small Scale; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 25

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NJ INSTITUTE TECHNOLOGY (2621)
NEWARK, New Jersey
(201) 645-5321

PROGRAMS AND CURRICULA

Mech. Engrg. & Technology
Degree: BS, Mech. Engrg., Mech. Engrg. Tech.
Contact: Kirchner, R.
(201) 645-5378
Students Taking or Completing Offering: Architect, Solar Engineer, Other

SOLAR RELATED COURSES

Introduction to Solar Energy
Instructor: Kirchner, R.
(201) 645-5378
Course Number: ME 480
Department: Mechanical Engineering
Program or Curriculum: Mech. Engrg. & Technology
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Collector Evaluation/Design
Number of Times Taught: 5
Average Enrollment: 20

Solar Energy Applications
Instructor: Kirchner, R.
(201) 645-5378
Course Number: MET417
Department: Mechanical Engineering
Program or Curriculum: Mech. Engrg. & Technology
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 45
Laboratory: 3
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 4

Solar Heating Design
Instructor: Kirchner, R.
(201) 645-5378
Department: Mechanical Engineering
Program or Curriculum: Mech. Engrg. & Technology
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Economics; Solar Systems Design; Domestic Hot Water; Space Heating

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PRINCETON UNIVERSITY (2627)
PRINCETON, New Jersey
(609) 452-3000

PROGRAMS AND CURRICULA

Energy Conversion and Resources
Degree: PhD, MS, BA, BS, Mechanical Engineering
Contact: Bogdonoff, Seymour M.
(609) 452-5125
Students Taking or Completing Offering: Architect, Educator, Researcher, Solar Engineer

SOLAR RELATED COURSES

Characteristics and Technology of Materials
Instructor: Royce, B. S. H.
(609) 452-4681
Course Number: ENGR 202
Department: Mechanical and Aerospace Engineering
Program or Curriculum: Energy Conversion and Resources

Credits: 3
Student Level: Freshman or Sophomore
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Materials Research; Photovoltaics
Number of Times Taught: 5
Average Enrollment: 13

Ener. and the Envir.: A Quantitative App.
Instructor: Socolow, R. (609) 452-5446
Course Number: ENGR 213
Department: Mechanical and Aerospace Engineering
Program or Curriculum: Energy Conversion and Resources
Credits: 3
Student Level: Freshman or Sophomore
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Energy Policy Development; Solar System Components; Solar Economics; Space Heating
Number of Times Taught: 7
Average Enrollment: 30

Intro. to Solar Thermal Engineering
Instructor: Antal, M. J. (609) 452-5136
Course Number: ENGR 101
Department: Mechanical and Aerospace Engineering
Program or Curriculum: Energy Conversion and Resources
Credits: 3
Student Level: Freshman or Sophomore
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 20
Laboratory: 19
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; Solar System Components; Solar Home Construction; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 50

Physical Processes of Energy Conversion
Instructor: Miles, R. B. (609) 452-5131
Course Number: MAE 328
Department: Mechanical and Aerospace Engineering
Program or Curriculum: Energy Conversion and Resources
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Energy Conversion; Energy Storage
Number of Times Taught: 5
Average Enrollment: 20

Special Topics in Power & Propulsion
Instructor: Antal, M. J. (609) 452-5136
Course Number: MAE 587
Department: Mechanical and Aerospace Engineering
Program or Curriculum: Energy Conversion and Resources
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Biomass Conversion; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Process Heat, Agricultural; Process Heat, Industrial; Space Heating
Number of Times Taught: 3
Average Enrollment: 10

States of Matter
Instructor: Royce, B. S. H. (609) 452-4681
Course Number: MAE 324
Department: Mechanical and Aerospace Engineering
Program or Curriculum: Energy Conversion and Resources
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Materials Research; Photovoltaics
Number of Times Taught: 1
Average Enrollment: 10

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RAMAPO C OF NEW JERSEY (9344)
MAHWAH, New Jersey
(201) 825-2800

PROGRAMS AND CURRICULA

Alternative Energy
Degree: BA, BS, Environmental Studies, Human Ecology
Contact: Harrison, Eugene (201) 825-2800

Students Taking or Completing Offering: Educator, Researcher, Do-it-yourself Homeowner, Other

SOLAR RELATED COURSES

Alternative Energy Design
Instructor: Makofske, W. (201) 825-2800
Course Number: 400
Department: Environmental Studies
Program or Curriculum: Alternative Energy
Credits: 4
Student Level: Junior or Senior
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 48
Laboratory: 16
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; 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; Space Heating; Wind Power, Small Systems

Alternative Energy Sources
Instructor: Makofske, William (201) 825-2800
Course Number: 300
Department: Environmental Studies
Program or Curriculum: Alternative Energy
Credits: 4
Student Level: Junior or Senior
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 64
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar System Components
Number of Times Taught: 3
Average Enrollment: 40

Alternative Energy Workshop
Instructor: Greenwald, M./ Makoske, W. (201) 825-2800
Course Number: 300
Department: Environmental Studies
Program or Curriculum: Alternative Energy
Credits: 4
Student Level: All levels
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 24
Laboratory: 40
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Number of Times Taught: 6
Average Enrollment: 25

Energy Efficient Solar Design
Instructor: Makofske, W. (201) 825-2800
Course Number: 300
Department: Environmental Studies
Program or Curriculum: Alternative Energy
Credits: 4
Student Level: Junior or Senior
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 64
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; 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: 3
Average Enrollment: 50

Energy, Power and the Environment
Instructor: Makoske, W. (201) 825-2800
Course Number: 200-300
Department: Environmental Studies
Program or Curriculum: Alternative Energy
Credits: 4
Student Level: All levels
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 64
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 40

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RUTGERS U NEW BRUNSWICK (6964)
NEW BRUNSWICK, New Jersey
(201) 932-1766

SOLAR RELATED COURSES

Solar Thermal Ener. Collect. and Stor.
Instructor: Briggs, David G. (201) 923-3656
Course Number: 650:474
Department: Mech. Indus. and Aerospace Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy

Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 63

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STOCKTON STATE COLLEGE (9345)
POMONA, New Jersey
(609) 652-1776

SOLAR RELATED COURSES

Solar Energy
Instructor: Taylor, Harold (609) 652-1776
Course Number: PHYS3320
Department: Natural Sciences and Mathematics
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 53
Classroom: 53
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating
Number of Times Taught: 4
Average Enrollment: 30

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Community/Junior Colleges

BROOKDALE CMTY COLLEGE (8404)
LINCROFT, New Jersey
(201) 842-1900

SOLAR RELATED COURSES

Solar Energy: Its Nature and Use
Instructor: Ziss, Paul (201) 842-1900
Course Number: NSC78A
Department: Extension-Natural and Applied Sciences
Credits: 2
Student Level: College Graduate
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Intro. to Solar Energy

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MIDDLESEX COUNTY COLLEGE (2615)
EDISON, New Jersey
(201) 548-6000

SOLAR RELATED COURSES

**Workshop Appr. to Teach. Train. in Energ.*
Department: Project Watte

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Vocational/Technical Colleges

MERCER CO AREA VOC. TECH. SCHOOLS (90560)
1085 Old Trenton Rd.
TRENTON, New Jersey 08690

SOLAR RELATED COURSES

**Install Solar Heat. & Cool.*
Department: Plumbing. Heating, & Refrig.
Topics Covered Extensively: Plumbing Techniques; Solar System Components; Solar Systems Installation; Domestic Hot Water; Space Heating; Space Cooling

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OCEAN COUNTY VOCATIONAL TECHNICAL SCHOOLS (90380)
Route 571
Jackson, New Jersey 08527

PROGRAMS AND CURRICULA

**Sol. Ener. Theory - Heat., Vent., A/C Tech.*
Degree: Evening School Certificate

SOLAR RELATED COURSES

**Sol. Ener. Theory - Heat., Vent., A/C Tech.*
Department: Evening School
Program or Curriculum: *Sol. Ener. Theory - Heat., Vent., A/ C Tech.
Student Level: All levels
Duration: 15 Weeks
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

**Solar Energy Workshop*
Department: Evening School
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

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PASSAIC SCHOOL OF DRAFTING (90080)
657 Main Avenue
Passaic, New Jersey 07055

PROGRAMS AND CURRICULA

Solar Energy Design
Degree: NO, Architectural Draftsman
Contact: Adamoff, O. J.
(201) 777-4909
Students Taking or Completing Offering:
Trade Specialty

SOLAR RELATED COURSES

Arch. Drafting (Solar Energy Des.)
Instructor: Stix, G.H.
(201) 777-4909
Department: Arch. Drafting
Program or Curriculum: Solar Energy Design
Student Level: High School Graduate
Duration: 4 Weeks, 25.0 hrs per week
Contact Hours: 100
Classroom: 10
Laboratory: 90
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar Collector Evaluation/Design; Solar Systems Design

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SALEM COUNTY VOCATIONAL TECHNICAL SCHOOLS (90420)
R.D. #2, Box 350
Woodstown, New Jersey 08098

PROGRAMS AND CURRICULA

**Plumbing and Heating Trades*

SOLAR RELATED COURSES

**Introduction to Solar Heating*
Department: Continuing Education
Contact Hours: 36
Topics Covered Extensively: Space Heating; Space Cooling

**Unit on Solar Energy*
Program or Curriculum: *Plumbing and Heating Trades
Student Level: All levels
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water

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UNION CO TECHNICAL INST (6139)
SCOTCH PLAINS, New Jersey
(201) 889-2000

SOLAR RELATED COURSES

Solar Heating I
Instructor: Mai, Frank
(201) 889-2000
Course Number: HV-201-71
Department: Heating Ventilating-Air Conditioning
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 15
Laboratory: 30
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 Economics; 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: 2
Average Enrollment: 20

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Other Educational Institutions

ESSEX COUNTY TECHNICAL CAREERS CENTER (90390)
91 West Market St.
Newark, New Jersey

PROGRAMS AND CURRICULA

**Day Program - Sol. Heat. Systems*
Degree: Certificate

**Night Program - Sol. Heat Systems*
Degree: Certificate

SOLAR RELATED COURSES

**Solar Heating Systems - (Day Course)*
Department: Adult Education
Program or Curriculum: *Day Program - Sol. Heat. Systems
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

*Solar Heating Systems - (Night Course)
Department: Adult Education
Program or Curriculum: *Night Program - Sol. 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

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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
Program or Curriculum: Solar Energy Unit Installer Program
Student Level: High School Graduate
Duration: 26 Weeks, 5.0 hrs per week
Contact Hours: 130
Topics Covered Extensively: Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Plumbing Techniques; Solar System Components; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Space Heating

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Colleges/Universities

NEW MEXICO HIGHLANDS U (2653)
LAS VEGAS, New Mexico 87701
(505) 425-7511

PROGRAMS AND CURRICULA

Solar Greenhouse Construction
Degree: NO,
Contact: Martinez, E. Eloy
(505) 425-7511

SOLAR RELATED COURSES

Introduction to Solar Heating
Instructor: Yarger, Frederick L.
(505) 425-7511
Course Number: 135
Department: Physics
Credits: 2
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction
Number of Times Taught: 7
Average Enrollment: 20

Solar Greenhouse Construction
Instructor: Coca, Michael
Department: Industrial Education
Program or Curriculum: Solar Greenhouse Construction
Student Level: All levels
Duration: 8 Weeks, 3.0 hrs per week
Contact Hours: 24
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Solar Home Construction; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 8

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NM MAIN CAMPUS, U OF (10313)
ALBUQUERQUE, New Mexico 87131
(505) 277-0111

SOLAR RELATED COURSES

Applied Solar Energy-Engineering Systems
Instructor: Wessling, F. C.
(505) 277-4937
Course Number: ME 425
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 3
Average Enrollment: 18

Energy Utilization and Conversion
Instructor: Houghton, A. V.
(505) 277-5604
Course Number: 382
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Photovoltaics; Solar Energy Policy Development; Solar System Components
Number of Times Taught: 7
Average Enrollment: 22

Power Generating Systems
Instructor: Houghton, A. V.
(505) 277-5604
Course Number: 483
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Marketing/Market Analysis; Materials Research; Plumbing Techniques; Sheet Metal Techniques
Number of Times Taught: 3
Average Enrollment: 25

Solar Energy System Design and Analysis
Instructor: Wessling, F. C.
(505) 277-4937
Course Number: M.E. 525
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 2
Average Enrollment: 10

Solar Energy Use
Instructor: Ebenezer, J.
(505) 277-5221
Course Number: 385
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Passive

Solar Technology; Solar System Components; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 170

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NM STATE U MAIN CAMPUS (2657)
LAS CRUCES, New Mexico 88003
(505) 646-2035

PROGRAMS AND CURRICULA

Solar Engineering
Degree: PhD, MS, Mechanical Engr.
Contact: Smith, P. R.
(505) 646-3501
Students Taking or Completing Offering:
Researcher, Solar Engineer

SOLAR RELATED COURSES

Solar Energy
Instructor: Mancini, T. R.
(505) 646-3501
Course Number: 555
Department: Mechanical Engr.
Program or Curriculum: Solar Engineering
Credits: 3
Student Level: College Graduate
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 15

Solar Energy Utilization
Instructor: Mancini, T.R./ Fenton, D.L.
(505) 646-3501
Course Number: 455
Department: Mechanical Engineering
Program or Curriculum: Solar Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 10
Average Enrollment: 30

Solar Heating and Cooling
Instructor: Lumsdaire, E./ Mancini, T.R.
(505) 646-3501
Course Number: 565
Department: Mechanical Engr.
Program or Curriculum: Solar Engineering
Credits: 3
Student Level: College Graduate
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design; Space Heating; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

Solar Thermal Power
Instructor: Mulholland, G. P.
(505) 646-3501
Course Number: 575
Department: Mechanical Engr.
Program or Curriculum: Solar Engineering
Credits: 3
Student Level: College Graduate
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Materials Research; Solar System Components; Solar Law/Legislation; Solar Systems Design; Solar Systems Testing and Evaluation; Elec'l Generation, Central
Number of Times Taught: 1
Average Enrollment: 8

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SANTA FE, COLLEGE OF (2649)
SANTA FE, New Mexico 87501
(505) 982-6011

SOLAR RELATED COURSES

Elect. from the Wind
Instructor: Dankoff, Mark
(505) 471-2573
Department: Continuing Education

Student Level: College Graduate
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Classroom: 12
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction
Number of Times Taught: 15
Average Enrollment: 10

Solar Energy
Instructor: Haggard, Keith
(505) 983-1006
Department: Continuing Education
Student Level: College Graduate
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Classroom: 12
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction; Wind Power, Small Systems
Number of Times Taught: 15
Average Enrollment: 10

Solar Greenhouses
Instructor: Yanda, Bill
(505) 983-1006
Department: Continuing Education
Student Level: College Graduate
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Classroom: 12
Topics Covered Extensively: Passive Solar Technology; Solar Home Construction; Wind Power, Small Systems
Number of Times Taught: 15
Average Enrollment: 10

Solar-Adobe Design and Construction
Instructor: Wilson, Quentin/ Chalom, Mark
(505) 583-2356
Department: Continuing Education
Student Level: All levels
Duration: 8 Weeks, 3.0 hrs per week
Contact Hours: 24
Classroom: 24
Topics Covered Extensively: Solar Home Construction; Space Heating; Space Cooling

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NORTHERN NM COMMUNITY COLLEGE (29087)
EL RITO, New Mexico 87530
(505) 581-4501

SOLAR RELATED COURSES

Solar-Adobe Design and Construction
Instructor: Wilson, Quentin C.
(505) 583-2356
Department: Continuing Education/Community Services
Student Level: All levels
Duration: 8 Weeks, 3.0 hrs per week
Contact Hours: 24
Classroom: 24
Topics Covered Extensively: Solar Home Construction; Solar Systems Design
Number of Times Taught: 7
Average Enrollment: 12

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Community/Junior Colleges

Colleges/Universities

ADELPHI UNIVERSITY (2666)
GARDEN CITY, New York 11530
(516) 294-8700

PROGRAMS AND CURRICULA

Energy Institute
Degree: MS, BS, Physics, Energy Studies
Contact: Docher, John (516) 294-8700
Students Taking or Completing Offering: Educator, Researcher

SOLAR RELATED COURSES

Physics of Energy
Instructor: Burke, Edward (516) 294-8700
Course Number: 117
Department: Physics
Program or Curriculum: Energy Institute
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 10

Solar Heating and Cooling
Instructor: Garrell, Martin (516) 294-8700
Course Number: 670
Department: Physics
Program or Curriculum: Energy Institute
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar Energy Policy Development; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 10

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BARD COLLEGE (2671)
ANNANDALE-ON-HUDSON, New York 12504
(914) 758-6822

SOLAR RELATED COURSES

Alternative Energy Sources
Instructor: Brody, Burton (914) 758-6822
Department: Physics
Credits: 4
Student Level: All levels
Duration: 13 Weeks, 4.0 hrs per week
Contact Hours: 42
Classroom: 32
Laboratory: 2
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Elec'l Generation, Small Scale; Space Heating
Number of Times Taught: 1
Average Enrollment: 30

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CLARKSON COLLEGE OF TECHN (2699)
POTSDAM, New York 13676
(315) 268-6400

SOLAR RELATED COURSES

Alternate Sources of Energy
Instructor: Clark, James (315) 268-6588
Course Number: ME 315
Department: Mechanical and Industrial Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Solar Systems Design; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 3
Average Enrollment: 35

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COLUMBIA U MAIN DIVISION (2707)
NEW YORK, New York 10027
(212) 280-1754

SOLAR RELATED COURSES

Solar Energy Applications
Instructor: Sanders, W.T. (212) 280-4126
Course Number: MEE4224X
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 36

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; Space Cooling

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CORNELL U STATUTORY C (11693)
ITHACA, New York 14853
(607) 256-1000

SOLAR RELATED COURSES

Energy and Man
Instructor: Albright, L. D.
(607) 256-4535
Course Number: 201
Department: Agr. and Life Sci., Agr. Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 4
Average Enrollment: 25

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CUNY BROOKLYN COLLEGE (2687)
BROOKLYN, New York 11210
(212) 780-5485

PROGRAMS AND CURRICULA

Energy Related Topics
Contact: Celenza, L. S.
(212) 780-5813

SOLAR RELATED COURSES

Energy in a Technological Society
Instructor: Celenza
(212) 780-5813
Department: Physics
Program or Curriculum: Energy Related Topics
Credits: 3
Student Level: College Graduate
Duration: 2 Weeks, 23.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Elec'l Generation, Central; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

Energy in a Technological Society Phys 0.3
Instructor: Celenza
(212) 780-5813
Course Number: PHYS 0.3
Department: Physics
Program or Curriculum: Energy Related Topics
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar Economics; Solar Home Construction; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 3
Average Enrollment: 70

Energy Technology
Instructor: Skorinko
(212) 780-5817
Course Number: PHYS 38
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar Economics; Elec'l Generation, Central; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems

Seminar Series on Energy and Solar Energy
Instructor: Schwartz, Brian
(212) 780-5687
Department: Science
Student Level: Junior or Senior
Topics Covered Extensively: Photovoltaics

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CUNY C OF STATEN ISLAND (29040)
STATEN ISLAND, New York 10301
(212) 720-3000

SOLAR RELATED COURSES

Solar Energy
Instructor: Nankivell, John
(212) 390-7524
Course Number: MET 108
Department: Mechanical Technology
Credits: 3

Student Level: High School Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Number of Times Taught: 1
Average Enrollment: 46

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CUNY CITY COLLEGE (2688)
NEW YORK, New York 10031
(212) 690-6741

SOLAR RELATED COURSES

Prins. Appls. of Solar Energy
Instructor: Lusting, M.
(212) 690-6050
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy
Average Enrollment: 18

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CUNY GRAD SCH & U CENTER (4063)
NEW YORK, New York 10036
(212) 790-4395

SOLAR RELATED COURSES

Direct Energy Conversion
Instructor: Shulman, Carl
(212) 690-4241
Course Number: EE 5688
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Photovoltaics; Elec'l Generation, Small Scale
Number of Times Taught: 1
Average Enrollment: 6

Solar Energy Thermal Process
Instructor: Hewett, Thomas A.
(914) 345-3212
Course Number: ME 5533
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: 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: 12

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HAMILTON COLLEGE (2728)
CLINTON, New York 13323
(315) 859-4011

SOLAR RELATED COURSES

Physics of Energy
Instructor: Ring, James W.
(315) 859-7510
Course Number: WT170
Department: Physics
Student Level: Freshman or Sophomore
Duration: 6 Weeks, 12.0 hrs per week
Contact Hours: 72
Classroom: 36
Laboratory: 36
Number of Times Taught: 3
Average Enrollment: 20

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MANHATTAN COLLEGE (2758)
BRONX, New York 10471
(212) 548-1400

SOLAR RELATED COURSES

Direct Energy Conversion
Instructor: Ley, James
(212) 548-1400
Course Number: 735
Department: Engineering, Electrical Engin.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Conversion
Number of Times Taught: 2
Average Enrollment: 10

Energy Conversion Systems
Instructor: Koplik, Bernard
(212) 548-1400
Course Number: 710
Department: Engineering, Mech. Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion

Energy Sources
Instructor: Ley, James
(212) 548-1400
Course Number: 466
Department: Engineering, Elec. Engin.
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate

Energy Sources; Energy Conversion
Number of Times Taught: 5
Average Enrollment: 15

Radiation Heat Transfer
Instructor: Koplik, Bernard
(212) 548-1400
Course Number: 709
Department: Engineering, Mechanical Eng
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Heat and Energy Transfer

Solar Energy Systems
Instructor: Koplik, Bernard
(212) 548-1400
Course Number: 711
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Solar System Components; Intro. to Solar Energy; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 15

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NAZARETH C OF ROCHESTER (2779)
ROCHESTER, New York 14610
(716) 586-2525

SOLAR RELATED COURSES

Energy, Our Servant-Our Problem
Instructor: Gannaway, Susan
(716) 586-2525
Course Number: CHM 111
Department: Chemistry
Credits: 3
Student Level: Freshman or Sophomore
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation
Number of Times Taught: 2
Average Enrollment: 30

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NEW YORK UNIVERSITY (2785)
NEW YORK, New York 10012
(212) 598-1212

PROGRAMS AND CURRICULA

Solar Energy
Degree: Certificate of Participation
Contact: Philipps, Denis Sinclair
(212) 598-2101

SOLAR RELATED COURSES

Prac., Tech. Prob. Solv. IV-Sol. Ener.
Instructor: Hahn, Marshall S.
(212) 598-3356
Department: Technology and Industrial Education
Credits: 3
Student Level: College Graduate
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 16

Solar Energy
Instructor: Wilke, Douglas A.
(516) 759-9050
Department: NYMC/Continuing Education
Program or Curriculum: Solar Energy
Credits: 1
Student Level: College Graduate
Duration: 1 Weeks, 24.0 hrs per week
Contact Hours: 24
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; Plumbing Techniques; Solar Energy Policy Development; Sheet Metal Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 10
Average Enrollment: 30

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POLYTECHNIC INST NEW YORK (2796)
BROOKLYN, New York 11201
(212) 643-5000

SOLAR RELATED COURSES

Solar Energy for Heating and Cooling
Instructor: Scarl, Donald
(516) 694-5500
Course Number: ES929
Department: Interdepartmental
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 4
Average Enrollment: 40

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RENSSELAER POLY INSTITUTE (2803)
TROY, New York 12181
(518) 270-6000

SOLAR RELATED COURSES

Energy Conscious Design
Instructor: Kroner, Walter
(518) 270-6461
Course Number: 10.4T01
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 25

Heat Transfer in Solar Devices
Instructor: Modest, M. F./ Scaringe, R.
(518) 270-6545
Course Number: 37.470
Department: ME, AE & M
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating; Space Cooling

Solar Energy System
Instructor: Shen, C. N.
(518) 270-6486
Course Number: 35.446
Department: Electrical and Systems Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 20

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ROCHESTER INST TECHNOLOGY (2806)
ROCHESTER, New York 14623
(716) 464-2411

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Walter, W. W.
Course Number: EMEM 601
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Classroom: 44
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 22

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ROCHESTER, UNIVERSITY OF (2894)
ROCHESTER, New York 14627
(716) 275-2121

SOLAR RELATED COURSES

Energy Conversion
Instructor: Lubin, M.
(716) 275-5284
Course Number: MAS 252
Department: Mechanical and Aerospace Sciences
Credits: 4
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42

Classroom: 42
Topics Covered Extensively: Energy Conversion
Number of Times Taught: 5
Average Enrollment: 20

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SAINT BONAVENTURE U (2817)
SAINT BONAVENTURE, New York 14778
(716) 375-2000

SOLAR RELATED COURSES

Alternative Energy Sources
Instructor: Neeson, John (716) 375-2516
Course Number: PHSC 115
Department: Physics
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Heat and Energy Transfer

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SAINT JOHN FISHER COLLEGE (2821)
ROCHESTER, New York 14618
(716) 586-4140

SOLAR RELATED COURSES

Energy: Its Science and Technology
Instructor: Heininger, Clarence (716) 586-4140
Course Number: SCI 200
Department: Chemistry
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 12

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SUNY AT ALBANY (2835)
Albany, New York 12222
(518) 457-3300

PROGRAMS AND CURRICULA

Solar Energy Meteor. and Train. Site
Degree: PhD, MS, BS, Atmospheric Sciences
Contact: Stewart, Ronald (518) 457-7584
Students Taking or Completing Offering: Educator, Researcher, Solar Technician

SOLAR RELATED COURSES

Solar Energy Workshop
Instructor: Stewart, Ronald (518) 457-7584
Department: Atmospheric Sci. Research Center
Program or Curriculum: Solar Energy Meteor. and Train. Site
Credits: 3
Student Level: College Graduate
Duration: 1 Weeks, 40.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 25

Solar Radiation
Instructor: Czapski, Ulrich (518) 457-3991
Course Number: 2639
Department: Atmospheric Science
Program or Curriculum: Solar Energy Meteor. and Train. Site
Credits: 3
Student Level: College Graduate
Duration: 20 Weeks, 3.0 hrs per week
Contact Hours: 60
Number of Times Taught: 1
Average Enrollment: 10

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SUNY AT BINGHAMTON (2836)
BINGHAMTON, New York 13901
(607) 798-2000

PROGRAMS AND CURRICULA

Physics-Specialization in Solar Energy
Degree: BA, BS, Physics-Specialization in Solar Energy
Contact: Stannard, C. R. (607) 798-2217
Students Taking or Completing Offering: Educator, Researcher, Solar Engineer

SOLAR RELATED COURSES

Energy Sources and Conversion
Instructor: DePuy, George
(607) 798-2631
Course Number: BT1992
Department: General Studies
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 35
Classroom: 35
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; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Small Scale; Space Heating; Space Cooling; Wind Power, Small Systems

Introduction to Solid State Physics
Instructor: Stannard, C. R.
(607) 798-2217
Course Number: 284
Department: Physics
Program or Curriculum: Physics-Specialization in Solar Energy
Credits: 4
Student Level: Junior or Senior
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Topics Covered Extensively: Energy Conversion; Materials Research; Photovoltaics
Number of Times Taught: 8
Average Enrollment: 6

Solar Energy
Instructor: Stannard, C. R.
(607) 798-2217
Department: Physics
Program or Curriculum: Physics-Specialization in Solar Energy
Credits: 4
Student Level: All levels
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 42
Laboratory: 14
Topics Covered Extensively: Biomass Conversion; Energy Conservation; Energy Conversion; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation

The Environment and Physical Principles
Instructor: Stannard, C. R.
(607) 798-2217
Course Number: 110
Department: Physics
Program or Curriculum: Physics-Specialization in Solar Energy
Credits: 4
Student Level: All levels
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 42
Laboratory: 14
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 2
Average Enrollment: 30

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SUNY AT BUFFALO MAIN CAM (2037)
BUFFALO, New York 14260
(716) 831-9000

SOLAR RELATED COURSES

Advanced Thermodynamics
Instructor: Springer, R.
(716) 831-5472
Course Number: ENS 529
Department: Engineering Science
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 10
Average Enrollment: 10

Direct Energy Conversion
Instructor: Springer, R.
(716) 831-5472
Course Number: NUE 570
Department: Engineering Science
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Photovoltaics; Elec'l Generation, Small Scale
Number of Times Taught: 10
Average Enrollment: 8

Electrophysics Laboratory I
Instructor: Malone, D.
(716) 636-2422
Course Number: EE 557
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Laboratory: 45
Topics Covered Extensively: Energy Conversion; Photovoltaics

Electrophysics Laboratory II
Instructor: Malone, D.
(716) 636-2422
Course Number: EE 558
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Laboratory: 45
Topics Covered Extensively: Energy Conversion; Photovoltaics

Energy Engineering I
Instructor: Springer, R.
(716) 831-5472
Course Number: ENS 410/510
Department: Engineering Science
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Alternate Energy Sources; Energy Storage
Number of Times Taught: 5
Average Enrollment: 25

Energy Engineering II
Instructor: Springer, R.
(716) 831-5472
Course Number: ENS 411/530
Department: Engineering Science
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Laboratory: 60
Topics Covered Extensively: Energy Conservation; Energy Conversion; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 5
Average Enrollment: 10

Energy Systems I
Instructor: Gebhardt, B.
(716) 636-2593
Course Number: ME 431
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Elec'l Generation, Central

Energy Systems II
Instructor: Gebhardt, B.
(716) 636-2593
Course Number: ME 432
Department: Mechanical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Elec'l Generation, Central

Environmental Heat & Mass Transfer
Instructor: Gebhardt, B.
(716) 636-2593
Course Number: ME 568
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer

Heat and Mass Transport
Instructor: Springer, R.
(716) 831-5472
Course Number: ENS 302
Department: Engineering Science
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 15
Average Enrollment: 25

Heat Transfer I
Instructor: Gebhardt, B.
(716) 636-2593
Course Number: ME 545
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Collector Evaluation/Design

Heat Transfer II
Instructor: Gebhardt, B.
(716) 636-2593
Course Number: ME 546
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Collector Evaluation/Design

Physical Electronics
Instructor: Malone, D.
(716) 636-2422
Course Number: EE350
Department: Electrical Engineering
Credits: 4
Student Level: Junior or Senior

Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Photovoltaics

Radiation Heat Transfer
Instructor: Gebhardt, B.
(716) 636-2593
Course Number: ME 547
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer

Semi-Conductor Electronics
Instructor: Malone, D.
(716) 636-2422
Course Number: EE 464
Department: Electrical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Conversion; Photovoltaics

Semi-Conductors I
Instructor: Malone, D.
(716) 636-2422
Course Number: EE 563
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Conversion; Photovoltaics

Semi-Conductors II
Instructor: Malone, D.
(716) 636-2422
Course Number: EE 564
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Conversion; Photovoltaics

Solar Energy Engineering
Instructor: Springer, R.
(716) 831-5472
Course Number: ENS 463/552
Department: Engineering Science
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Small Scale; Space Heating; Space Cooling
Number of Times Taught: 5
Average Enrollment: 5

Solid-State Electrical Engineering I
Instructor: Malone, D.
(716) 636-2422
Course Number: EE 554
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Photovoltaics

Solid-State Electrical Engineering II
Instructor: Malone, D.
(716) 636-2422
Course Number: EE 555
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Photovoltaics

Solid-State Optical Devices
Instructor: Malone, D.
(716) 636-2422
Course Number: EE 656
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Photovoltaics

Transport Phenomena in Chem. Engin II
Instructor: Ulbrecht, J.
(716) 636-2911
Course Number: CHE 510
Department: Chemical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 10

Transport Phenomena in Chemical Engineering I
Instructor: Ulbrecht, J.
(716) 636-2911
Course Number: CHE509
Department: Chemical Engineering
Credits: 3

Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 10

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SUNY AT STONY BROOK MAIN CAM (2838)
STONY BROOK, New York 11794
(516) 246-5000

SOLAR RELATED COURSES

Energy and the Environment 110
Instructor: Lee, L. L.
(516) 246-6102
Course Number: PHY 110
Department: Physics
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 10
Average Enrollment: 25

Energy and the Environment 549
Instructor: Fox, David
(516) 246-6106
Course Number: CEN 549
Department: Physics
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 8
Average Enrollment: 45

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SUNY C ENVRNMTL SCI- FORESTRY (2851)
SYRACUSE, New York 13210
(315) 473-8611

SOLAR RELATED COURSES

Energy: Production and Conservation
Instructor: Palmer, David G.
(315) 473-8796
Course Number: ERE611
Department: Environmental and Resource Engineering
Credits: 3
Student Level: College Graduate
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation

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SUNY COLLEGE AT BROCKPORT (2841)
BROCKPORT, New York 14420
(716) 395-2211

SOLAR RELATED COURSES

Solar Energy
Instructor: Greer, Ira W.
(716) 395-2636
Course Number: ESC 425
Department: Earth Sciences
Credits: 1
Student Level: Junior or Senior
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Classroom: 16
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Solar System Components; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 50

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SUNY COLLEGE AT FREDONIA (2844)
FREDONIA, New York 14063
(716) 673-3111

SOLAR RELATED COURSES

Energy & Man
Instructor: Connelly, John J.
(716) 673-3305
Course Number: PH103
Department: Physics
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation
Number of Times Taught: 12

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SUNY COLLEGE AT GENESEO (2845)
GENESEO, New York 14454
(716) 245-5211

SOLAR RELATED COURSES

Ener. Ed. Workshop/Solar Energy
Instructor: Kinsey, K. F.
(716) 245-5283
Course Number: INT 979
Department: Physics
Credits: 1
Student Level: College Graduate
Duration: 1 Weeks, 15.0 hrs per week
Contact Hours: 15

Number of Times Taught: 2
Average Enrollment: 15

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SUNY COLLEGE AT OSWEGO (2848)
OSWEGO, New York 13126
(315) 341-2500

SOLAR RELATED COURSES

Ener. Tech., Eff. Res. Fuel Util.
Instructor: Hinrichs, R./ Salvagin, C.
Department: Phys/Earth Sci/Indus. Arts
Credits: 3
Student Level: All levels
Duration: 6 Weeks, 6.7 hrs per week
Contact Hours: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; 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

Energy From Nature to Man
Instructor: Hinrichs, R.
(315) 341-2388
Course Number: 105
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 8
Average Enrollment: 40

Energy Technologies and Efficient Res. Fuel Utilization
Instructor: Schneider, Raymond
(315) 341-4252
Course Number: ES 315-515
Department: Earth Sciences and Industrial Arts
Credits: 3
Student Level: All levels
Duration: 6 Weeks, 6.5 hrs per week
Contact Hours: 39
Classroom: 39
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 48

Thermodynamics and Applications
Instructor: Hinrichs, R.
(315) 341-2388
Course Number: 340
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Space Heating
Number of Times Taught: 3
Average Enrollment: 30

Using Solar Energy for Res. Heating
Instructor: Gerbracht, Carlton
(315) 341-3028
Course Number: CE 380
Department: Industrial Arts
Student Level: College Graduate
Duration: 4 Weeks, 1.5 hrs per week
Contact Hours: 6
Classroom: 6
Topics Covered Extensively: Intro. to Solar Energy; Solar Systems Installation
Number of Times Taught: 2
Average Enrollment: 40

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SUNY COLLEGE PLATTSBURGH (2849)
PLATTSBURGH, New York 12901
(518) 564-2000

PROGRAMS AND CURRICULA

Environmental Sci. (Alternate Energy)
Degree: BA, Environmental Science
Contact: Dawson, James C.
(518) 564-2178
Students Taking or Completing Offering: Contractor, Do-it-yourself Homeowner, Solar Technician

SOLAR RELATED COURSES

Energy Systems
Instructor: Kissner, Fritz
(518) 564-2178
Course Number: ENV 309
Department: Institute for Man and Environment
Program or Curriculum: Environmental Sci. (Alternate Energy)
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology;

Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Energy Policy Development; Solar System Components
Number of Times Taught: 6
Average Enrollment: 60

Energy-Resources and Conservation
Instructor: Barnett, S. G.
(518) 564-3107
Course Number: GEL 385
Department: Earth Sciences
Program or Curriculum: Environmental Sci. (Alternate Energy)
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Heat and Energy Transfer
Number of Times Taught: 6
Average Enrollment: 40

Residential Research Semester
Instructor: Dawson, James C.
(518) 564-2178
Course Number: ENV 313-318
Department: Institute for Man and Environment
Program or Curriculum: Environmental Sci. (Alternate Energy)
Credits: 15
Student Level: Junior or Senior
Duration: 15 Weeks, 45.0 hrs per week
Contact Hours: 675
Classroom: 75
Laboratory: 600
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Plumbing Techniques; Sheet Metal Techniques; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 35

Solar Energy
Instructor: Szydlik, Paul
(518) 564-2048
Course Number: PHY 301
Department: Physics
Program or Curriculum: Environmental Sci. (Alternate Energy)
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 3
Average Enrollment: 15

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SYRACUSE U MAIN CAMPUS (2882)
SYRACUSE, New York 13210
(315) 423-1870

SOLAR RELATED COURSES

Solar Energy Applications
Instructor: LaGraff, John E.
(315) 423-4366
Course Number: MEE 587
Department: Mechanical and Aerospace Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Intro. to Solar Energy; Solar Collector Evaluation/Design; Space Heating
Number of Times Taught: 3
Average Enrollment: 30

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UNION COLLEGE (2889)
SCHENECTADY, New York 12308
(518) 370-6000

SOLAR RELATED COURSES

Solar Energy Analysis and Design
Instructor: Aubrey, William C.
(518) 370-6266
Course Number: ME 144
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.3 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling

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US MERCHANT MARINE ACAD (2892)
KINGS POINT, New York 11024
(516) 482-8200

SOLAR RELATED COURSES

Physics of Solar Energy
Instructor: Drago, P.
Course Number: M436
Department: Mathematics and Science
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 27
Laboratory: 3
Topics Covered Extensively: Heat and Energy Transfer; Solar Collector Evaluation/Design; Domestic Hot Water
Number of Times Taught: 3
Average Enrollment: 35

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VASSAR COLLEGE (2895)
POUGHKEEPSIE, New York 12601
(914) 452-7000

SOLAR RELATED COURSES

Environmental Physics
Instructor: Stearns, R.L.
Course Number: 102
Department: Physics
Credits: 3
Student Level: All levels
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Number of Times Taught: 5
Average Enrollment: 20

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Community/Junior Colleges

ADIRONDACK CMTY 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

SOLAR RELATED COURSES

Seminar in Solar Energy
Instructor: Harrington, Charles (518) 747-0274
Course Number: TECH 191
Department: Occ. Ed.
Program or Curriculum: Seminar in Solar Energy
Credits: 3
Student Level: All levels
Duration: 17 Weeks, 6.0 hrs per week
Contact Hours: 102
Classroom: 51
Laboratory: 51
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 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: 5
Average Enrollment: 25

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CAYUGA CO CMTY 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

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COLUMBIA-GREENE CC (6789)
HUDSON, New York 12534
(518) 828-4181

SOLAR RELATED COURSES

Solar Energy
Instructor: Drum, Donald A.
(518) 828-4181
Course Number: CE 005
Department: Continuing Education
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 71

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CUNY NEW YORK CITY CC (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
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer
Number of Times Taught: 70
Average Enrollment: 25

Environmental Design Laboratory
Instructor: Farkas, Stanley
(212) 239-1662
Course Number: EC111
Department: Environmental Control Technology
Program or Curriculum: Environmental Control Technology
Credits: 1
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 3
Topics Covered Extensively: Plumbing Techniques
Average Enrollment: 20

Environmental System Design
Instructor: Finger, A.
(212) 239-1658
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: 90
Classroom: 30
Laboratory: 60
Number of Times Taught: 16
Average Enrollment: 18

Hydronic Systems Design
Instructor: Pita, Edward
(212) 239-1662
Course Number: EC220
Department: Environmental Control Technology
Program or Curriculum: Environmental Control Technology
Credits: 3
Student Level: High School Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 40
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 24
Average Enrollment: 25

Refrigeration II
Instructor: Lomask
(212) 239-1696
Course Number: EC410
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: Energy Conservation; Energy Storage; Heat and Energy Transfer
Number of Times Taught: 16
Average Enrollment: 25

Sum. Inst.-Ener. Ed. (Sec. Sch. Teach.)
Instructor: Lomack, S.
(212) 962-0407
Department: Environmental Con. Tech. & Cont. Edu.

Student Level: College Graduate
Duration: 3 Weeks, 30.0 hrs per week
Contact Hours: 90
Classroom: 80
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
Average Enrollment: 80

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GENESEE COMMUNITY COLLEGE (6782)
BATAVIA, New York 14020
(716) 343-0055

SOLAR RELATED COURSES

Solar Energy
Instructor: Cole, Ronald J.
(716) 343-0055
Course Number: 192
Department: Math-Science
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 37
Laboratory: 23
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Domestic Hot Water; Swimming Pool Heating; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 26

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MOHAWK VLY CMTY COLLEGE (2871)
UTICA, New York 13501
(315) 792-5500

PROGRAMS AND CURRICULA

Solar Energy Technology
Degree: Solar Energy Technology
Contact: Dunning, Francis
(315) 792-5514

SOLAR RELATED COURSES

Solar Energy I-Ener. and Ener. Cons.
Instructor: Dunning, Francis
(315) 792-5514
Course Number: CC530
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: 30
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 5
Average Enrollment: 30

Solar Energy II (Installation)
Instructor: Dunning, Francis
(315) 792-5514
Course Number: D2986
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: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 30

Solar III (Sol. Ener. Sys. Des. and Ana.)
Instructor: Dunning, Francis
(315) 792-5514
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: 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: Dunning, Francis
(315) 792-5514
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: Dunning, Francis (315) 792-5514
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: Dunning, Francis (315) 792-5514
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

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MONROE COMMUNITY COLLEGE (2872)
ROCHESTER, New York 14623
(716) 442-9950

SOLAR RELATED COURSES

Alternative Sources of Energy
Instructor: Dowd, Janis (716) 275-9318
Course Number: CEU 036-181
Department: Community Services
Student Level: All levels
Duration: 8 Weeks, 1.0 hrs per week
Contact Hours: 8
Classroom: 8
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 Home Construction; Solar Collector Evaluation/Design
Number of Times Taught: 3
Average Enrollment: 40

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ORANGE CO CMTY COLLEGE (2876)
MIDDLETOWN, New York 10940
(914) 343-1121

SOLAR RELATED COURSES

Design of Solar Energy Systems
Instructor: Large, George (914) 343-1121
Department: Physical Sciences
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
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; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 25

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ROCKLAND CMTY COLLEGE (2877)
SUFFERN, New York 10901
(914) 356-4650

SOLAR RELATED COURSES

Solar Energy - Its use in the 1970's
Instructor: Cataldo, Ronald (914) 356-1527
Course Number: CF 189
Department: Continuing Ed. and Community Service
Student Level: High School Graduate
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Number of Times Taught: 2
Average Enrollment: 20

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SUNY AGRL & TECH C CANTON (2855)
CANTON, New York 13617
(315) 386-7204

SOLAR RELATED COURSES

Practical Applications of Solar Energy
Instructor: Emhof, Carson
(315) 386-7218
Course Number: 30302
Department: Ener. Tech. Division
Credits: 2
Student Level: High School Graduate
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Classroom: 30
Number of Times Taught: 3
Average Enrollment: 40

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SUNY AGRL & TECH C DELHI (2857)
DELHI, New York 13753
(607) 746-4111

PROGRAMS AND CURRICULA

Construction Tech./ Civil Tech.
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
Department: Physical Sciences
Program or Curriculum: Construction Tech./ Civil Tech.
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
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
Department: Physical Sciences
Program or Curriculum: Construction Tech./ Civil Tech.
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
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
Department: Physical Sciences
Program or Curriculum: Construction Tech./ Civil Tech.
Credits: 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
Department: Physical Sciences
Program or Curriculum: Construction Tech/ Civil Tech.
Credits: 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

Mechanical Equipment for Buildings
Instructor: Hampel, John
(607) 746-4386
Course Number: 3741
Department: Construction Technology
Program or Curriculum: Construction Tech./ Civil Tech.
Credits: 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
Department: Construction Technology
Program or Curriculum: Construction Tech/ Civil Tech.
Credits: 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
Department: Civil Technology
Program or Curriculum: Construction Tech./ Civil Tech
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Classroom: 30
Laboratory: 60
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage
Number of Times Taught: 20
Average Enrollment: 30

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TOMPKINS-CORTLAND CC (6788)
DRYDEN, New York 13053
(607) 844-8211

SOLAR RELATED COURSES

Home Use of the Sun's Energy
Instructor: Klein, Gary
(607) 844-8211
Course Number: CEET 708
Department: Lifelong Learning
Student Level: All levels
Duration: 8 Weeks, 3.0 hrs per week
Contact Hours: 24
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Systems Installation
Number of Times Taught: 3
Average Enrollment: 14

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WESTCHESTER CMTY COLLEGE (2881)
VALHALLA, New York 10595
(914) 347-6800

SOLAR RELATED COURSES

Alternate Energy Resources & Lab.
Instructor: Lee, Diana
(914) 347-6930
Course Number: 190 172-3
Department: Physical Science
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Classroom: 45
Laboratory: 30
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 Heating and Energy Cons.
Instructor: Wojan, C.
(914) 347-6930
Department: Mechanical Technology
Student Level: All levels
Duration: 6 Weeks, 2.0 hrs per week
Contact Hours: 12
Classroom: 12
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; 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 Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 13

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Other Educational Institutions

AIAA PROFESSIONAL STUDY SERIES (90500)
1290 Avenue of the Americas
NY, New York 10019

SOLAR RELATED COURSES

**Wind Engineering*
Instructor: Sforza, Pasquale
(212) 581-4300
Duration: 2.0 Days

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

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AMERICAN SOCIETY OF MECHANICAL ENGINEERING (90510)
345 E. 47th St.
NY, New York 10017
(212) 644-7743

PROGRAMS AND CURRICULA

*Professional Development
(212) 644-7743

SOLAR RELATED COURSES

*Short Courses
Program or Curriculum: *Professional Development

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BROOME-DELAWARE-TIOGA BOLES (90450)
Ed. Center, Upper Glenwood Rd.
Binghamton, New York 13905

SOLAR RELATED COURSES

*Solar Training in Electronics Course

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NASSAU COUNTY BOLES (90460)
Valentines Rd. & The Plains Rd.
Westbury, New York 11590

SOLAR RELATED COURSES

*Sol. Ener. Tech. in Heat. A/C Courses

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NY INST TECHN MAIN CAMPUS (4804)
OLD WESTBURY, New York 11568
(516) 686-7516

SOLAR RELATED COURSES

Special Studies in Architecture
Instructor: Wilkie, Duglas (516) 759-9050
Course Number: 6201
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 30

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SARATOGA-WARREN BOCES-MYERS OCC. CNT. (90470)
Henning Rd.
Saratoga Springs, New York 12866

SOLAR RELATED COURSES

*Sol. Ener. Tech. in Heat. A/C Courses

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Colleges/Universities

APPALACHIAN ST UNIVERSITY (2906)
BOONE, North Carolina 28608
(704) 262-2000

SOLAR RELATED COURSES

Solar Energy for Homes
Instructor: Mamola, Karl C.
(704) 262-3090
Course Number: 3530
Department: Physics
Credits: 1
Student Level: All levels
Duration: 8 Weeks, 2.0 hrs per week
Contact Hours: 16
Classroom: 16
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 90

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DUKE UNIVERSITY (2920)
DURHAM, North Carolina 27706
(919) 684-8111

PROGRAMS AND CURRICULA

Energy Conservation
Degree: MS, Civil, Electrical, Mechanical Engineering
Contact: Chaddock, Jack B.
(919) 684-2832

SOLAR RELATED COURSES

Materials Science and Energy Technology
Instructor: Shepard, Marion L.
(919) 684-2832
Course Number: ME 113
Department: Engineering
Program or Curriculum: Energy Conservation
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy; Materials Research; Photovoltaics
Number of Times Taught: 4
Average Enrollment: 12

Solar Electric Power Systems
Instructor: Wang, Paul P.
(919) 684-3123
Course Number: EE 155
Department: Engineering
Program or Curriculum: Energy Conservation
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Intro. to Solar Energy; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Elec'l Generation, Central; Elec'l Generation, Small Scale; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 7

Solar Energy Thermal Processes
Instructor: Chaddock, Jack B.
(919) 684-2832
Course Number: ME 254
Department: Engineering
Program or Curriculum: Energy Conservation
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 10

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EAST CAROLINA UNIVERSITY (2923)
GREENVILLE, North Carolina 27834
(919) 757-6212

SOLAR RELATED COURSES

Solar Energy
Instructor: Adler, Carl/ Byrd, William
(919) 757-6739
Course Number: 5640
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 28
Laboratory: 28
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 20

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NC AGRL & TECH STATE U (2905)
GREENSBORO, North Carolina 27411
(919) 379-7500

SOLAR RELATED COURSES

Energy Conversion
Instructor: Klett, D. E.
(919) 379-7620
Course Number: 563
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 15

Solid State Energy Conversion
Instructor: Stefanakos, E. K.
(919) 379-7761
Course Number: 608
Department: Electrical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Intro. to Solar Energy; Photovoltaics; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 10

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NC AT ASHEVILLE, U OF (2907)
ASHEVILLE, North Carolina 28804
(704) 258-0200

SOLAR RELATED COURSES

Design of Solar Heated Homes
Instructor: Cole, Robert S.
(704) 258-0200
Course Number: PHY 272
Department: Physics
Credits: 2
Student Level: All levels
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 4
Average Enrollment: 60

Passive Solar Systems
Instructor: Cole, Robert s.
(704) 258-0200
Department: Physics
Credits: 2
Student Level: All levels
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction

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NC AT CHARLOTTE, U OF (2975)
CHARLOTTE, North Carolina 28223
(704) 597-2000

SOLAR RELATED COURSES

**Energy Conversion I*
(704) 597-2301
Course Number: ESM412
Department: Engineering
Topics Covered Extensively: Energy Conservation

**Energy Conversion II*
(704) 597-2301
Course Number: ESM413
Department: Engineering
Topics Covered Extensively: Energy Conversion; Photovoltaics

**Heating & Air Conditioning*
(704) 597-2301
Course Number: MET441
Topics Covered Extensively: Solar System Components; Space Heating; Space Cooling

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NC AT GREENSBORO, U OF (2976)
GREENSBORO, North Carolina 27412
(919) 379-5000

SOLAR RELATED COURSES

Energy Options and the Environment
Instructor: Meisner, Gerald W.
(919) 379-5330
Course Number: PHYS. 334
Department: Arts and Sciences/Physics
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation;

Passive Solar Technology
Number of Times Taught: 10
Average Enrollment: 25

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NC STATE U RALEIGH (2972)
RALEIGH, North Carolina 27607
(919) 737-2011

SOLAR RELATED COURSES

Energy Conservation Techniques
Instructor: Barnes, Donald
(919) 737-2203
Course Number: ARC 592-G
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Conservation; Energy Storage; Passive Solar Technology; Solar Home Construction; Space Heating
Number of Times Taught: 1
Average Enrollment: 20

Energy Conversion in Bio. Systems
Instructor: Suggs, Charles W.
(919) 737-3101
Course Number: BAE 303
Department: Biological and Agricultural Engineering
Credits: 2
Student Level: Junior or Senior
Duration: 15 Weeks, 2.0 hrs per week
Contact Hours: 30
Classroom: 30
Average Enrollment: 18

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WSTN CAROLINA UNIVERSITY (2981)
CULLOWHEE, North Carolina 28723
(704) 293-7211

PROGRAMS AND CURRICULA

Faculty Dev. in Ener. for Ind. Eds.
Degree: MS, BS,
Contact: Cook, J./ Dalley, R.
(704) 227-7368
Students Taking or Completing Offering: Educator

SOLAR RELATED COURSES

Faculty Dev. in Ener. for Ind. Eds.
Instructor: Cook, J./ Dalley, R.
(704) 227-7368
Department: Industrial Education & Technology
Program or Curriculum: Faculty Dev. in Ener. for Ind. Eds.
Credits: 3
Student Level: College Graduate
Duration: 1 Weeks, 40.0 hrs per week
Contact Hours: 40
Classroom: 30
Laboratory: 10
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water

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Community/Junior Colleges

CARTERET TECHNICAL INST (8081)
MOREHEAD CITY, North Carolina 28557
(919) 726-2811

PROGRAMS AND CURRICULA

Solar Energy: Fundamentals and Construction
Degree: Institute Certificate
Contact: Nelson, J. Lenn
(919) 726-1171
Students Taking or Completing Offering: Do-it-yourself Homeowner

SOLAR RELATED COURSES

Solar Energy: Fundamentals and Construction
Instructor: Whitehurst, Brooks
(919) 726-1171
Course Number: FIS 3031D
Department: Community Services
Program or Curriculum: Fundamentals and Construction
Student Level: High School Graduate
Duration: 9 Weeks, 3.0 hrs per week
Contact Hours: 27
Classroom: 9
Laboratory: 18
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water
Number of Times Taught: 5
Average Enrollment: 18

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CEN PIEDMONT CMTY COLLEGE (2915)
CHARLOTTE, North Carolina 28204
(704) 373-6566

SOLAR RELATED COURSES

Applied Solar Energy
Instructor: Farkas, Al
(704) 373-6633
Course Number: ARC-4310
Department: Technology-Arch.Tech.Prog.
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
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 Economics; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 15
Average Enrollment: 12

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COASTAL CAROLINA CC (8084)
JACKSONVILLE, North Carolina 28540
(919) 455-1221

PROGRAMS AND CURRICULA

Heat Pumps and Electives
Degree: Heating, Air Conditioning and Refrigeration
Contact: Rawls, Preston C.
(919) 455-1221
Students Taking or Completing Offering: Mechanical or Electrical Contractor, Do-it-yourself Homeowner

SOLAR RELATED COURSES

Heat Pumps and Electives
Instructor: Hewitt, Robert L.
(919) 455-1221
Course Number: AHR 1130
Department: Occupational
Program or Curriculum: Heat Pumps and Electives
Student Level: All levels
Duration: 11 Weeks, 9.0 hrs per week
Contact Hours: 99
Classroom: 33
Laboratory: 66
Topics Covered Extensively: Intro. to Solar Energy; Sheet Metal Techniques; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 12

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GASTON COLLEGE (2973)
DALLAS, North Carolina 28034
(704) 922-3136

SOLAR RELATED COURSES

Practical Solar Energy
Instructor: McArver, Fred
(704) 922-3136
Department: Continuing Education
Student Level: High School Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Number of Times Taught: 3
Average Enrollment: 20

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GUILFORD TECHNICAL INST (4838)
JAMESTOWN, North Carolina 27282
(919) 292-1101

SOLAR RELATED COURSES

Solar Hot Water Systems
Instructor: Eller, Wayne C.
(919) 292-1101
Course Number: 3EBF
Department: Continuing Education
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 25
Laboratory: 5
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar Collector Evaluation/Design; Domestic Hot Water
Number of Times Taught: 3
Average Enrollment: 18

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JAMES SPRUNT INSTITUTE (7687)
KENANSVILLE, North Carolina 28349
(919) 296-1341

SOLAR RELATED COURSES

Building and Trades
Instructor: Smith, Prentice
(919) 296-1341
Department: Vocational Programs
Credits: 5
Student Level: High School Graduate
Duration: 11 Weeks, 5.0 hrs per week
Contact Hours: 55
Classroom: 18
Laboratory: 37
Number of Times Taught: 4
Average Enrollment: 15

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SAMPSON TECHNICAL INST (7892)
CLINTON, North Carolina 28328
(919) 592-8081

PROGRAMS AND CURRICULA

Air Conditioning, Heating, and Refrig.
Degree: Diploma
Contact: Peacock, Sherwood
(919) 592-8081
Students Taking or Completing Offering:
Installer-Commercial (Solar System), Solar Technician

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STANLY TECHNICAL INST (11194)
ALBEMARLE, North Carolina 28001
(704) 982-0121

SOLAR RELATED COURSES

Solar Energy Systems
Instructor: Griffin, James E.
(704) 463-5820
Course Number: W970
Student Level: All levels
Number of Times Taught: 2
Average Enrollment: 9

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TRI-COUNTY TECHNICAL INST (9430)
MURPHY, North Carolina 28906
(704) 837-6810

SOLAR RELATED COURSES

Solar Energy
Department: Continuing Ed.
Student Level: All levels
Contact Hours: 18
Number of Times Taught: 2
Average Enrollment: 15

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VANCE-GRANVL CMTY COLLEGE (9903)
HENDERSON, North Carolina 27536
(919) 492-2061

SOLAR RELATED COURSES

Carpentry
Instructor: Norwood, Mike
(919) 492-3371
Course Number: 3001 W974
Department: Occupational Education
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 15
Topics Covered Extensively: Energy Conservation; Energy Conversion; Plumbing Techniques
Number of Times Taught: 2
Average Enrollment: 20

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Vocational/Technical Colleges

CAPE FEAR TECHNICAL INST (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
Department: Engineering Division
Program or Curriculum: General Occupational Technologies
Credits: 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 (Elect.)
Instructor: Bordeaux, Ralph
(919) 343-0481
Course Number: T-EGY103
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'l Generation, Small Scale; Wind Power, Small Systems

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

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CLEVELAND CO TECH INST (8082)
SHELBY, North Carolina 28150
(704) 482-8351

SOLAR RELATED COURSES

Resource Conservation
Instructor: Smith, Iverson
(704) 482-8351
Department: Industrial, Environmental Sciences
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 5.0 hrs per week
Contact Hours: 55
Classroom: 22
Laboratory: 33

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PAMLICO TECHNICAL INST (7031)
GRANTSBORO, North Carolina 28529
(919) 249-1851

PROGRAMS AND CURRICULA

Solar Energy
Degree: Certificate
Contact: Prescott, Matthew
(919) 249-1851
Students Taking or Completing Offering: Educator, Contractor, Do-it-yourself Homeowner, Installer-Residential (Solar System), Solar Technician

SOLAR RELATED COURSES

Solar Energy
Instructor: Whitehurst, Brooks
(919) 249-1051
Department: Continuing Ed.
Program or Curriculum: Solar Energy
Student Level: All levels
Duration: 4 Weeks, 11.0 hrs per week
Contact Hours: 44
Classroom: 11
Laboratory: 33
Topics Covered Extensively: Solar Systems Installation; Domestic Hot Water
Number of Times Taught: 2
Average Enrollment: 18

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RANDOLPH TECHNICAL INST (5447)
ASHEBORO, North Carolina 27203
(919) 629-1471

SOLAR RELATED COURSES

Introduction to Solar Energy
Instructor: Hicks, Eugene B.
(919) 629-1471
Department: Continuing Education
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 15

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SOUTHWESTERN TECH INST (8466)
SYLVA, North Carolina 28779
(704) 586-4091

PROGRAMS AND CURRICULA

Solar Energy Systems-Res. and Comm. 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

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TECH INST OF ALAMANCE (5463)
HAW RIVER, North Carolina 27258
(919) 578-2002

SOLAR RELATED COURSES

Current Trends
Instructor: Payne, David M.
(919) 578-2002
Course Number: AHR 233
Department: Air Conditioning and Refrigeration
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Classroom: 22
Laboratory: 22
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 16

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Colleges/Universities

MAYVILLE STATE COLLEGE (2993)
MAYVILLE, North Dakota 58257
(701) 786-2301

SOLAR RELATED COURSES

Energy and the Environment
Instructor: Carlson, Kenneth T.
(701) 786-2301
Course Number: 322
Department: Science
Credits: 4
Student Level: Junior or Senior
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Number of Times Taught: 1
Average Enrollment: 12

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ND STATE U MAIN CAMPUS (9265)
FARGO, North Dakota 58102
(701) 237-8011

SOLAR RELATED COURSES

**Energy Conservation in Bldgs.*
Department: Eng'r and Architecture
Student Level: Junior or Senior

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Community/Junior Colleges

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

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Vocational/Technical Colleges

ND STATE SCHOOL 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 System), 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

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Colleges/Universities

AIR FORCE INST TECHNOLOGY (3009)
DAYTON, Ohio 45433
(513) 255-2079

SOLAR RELATED COURSES

Contemporary Energy Applications
Instructor: Stan, Robert
(513) 255-4552
Course Number: 462
Department: Engineering Technology
Credits: 3
Student Level: College Graduate
Duration: 1 Weeks, 35.0 hrs per week
Contact Hours: 35
Number of Times Taught: 1
Average Enrollment: 30

Radiation Heat Transfer
Instructor: Hitchcock, James E.
(513) 255-3069
Course Number: ME 6.73
Department: Aero and Astro. School of Engineering
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 15
Average Enrollment: 8

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AKRON MAIN CAMPUS, U OF (3123)
AKRON, Ohio 44325
(216) 375-7111

SOLAR RELATED COURSES

Energy Conversion
Instructor: Gross, Richard J.
(216) 375-7736
Course Number: 4600:415
Department: Engineering/ Mechanical Engr.
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 7
Average Enrollment: 20

Physics, Energy and Man
Instructor: Wilson, C.W.
(216) 375-7079
Course Number: 3650:141
Department: Physics/Arts and Sciences
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 7
Average Enrollment: 35

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ANTIOCH COLLEGE (8795)
YELLOW SPRINGS, Ohio 45387
(513) 767-1424

SOLAR RELATED COURSES

Independent Study in Solar Energy
Instructor: Taylor, Charles
(513) 767-7331
Course Number: P 196
Department: Sci. Inst.-Phys., Envir. Studies
Credits: 5
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 14.0 hrs per week
Contact Hours: 140
Classroom: 20
Laboratory: 40
Topics Covered Extensively: Intro. to Solar Energy; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 5

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CINCINNATI MAIN CAM, U OF (3125)
CINCINNATI, Ohio 45221
(513) 475-8000

PROGRAMS AND CURRICULA

Mechanical Engineering Technology
Degree: BS, Mech. Eng'r Tech.
Contact: Garrett, Ronald W.
(513) 475-6541
Students Taking or Completing Offering: Solar Engineer, Installer-Residential (Solar System), Installer-Commercial (Solar System)

SOLAR RELATED COURSES

E.T. Lab on Alt. Energy Systems
Instructor: Smith, David Lee
(513) 475-6426
Course Number: 23-300-413
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Laboratory: 40

Topics Covered Extensively: Alternate Energy Sources; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Wind Power, Small Systems
Number of Times Taught: 5
Average Enrollment: 8

E.T. Seminar on the Energy Crisis
Instructor: Smith, David Lee (513) 475-6426
Course Number: 23-300-411
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Solar Economics
Number of Times Taught: 8
Average Enrollment: 10

E.T. Studio on Ener. Conscious Des.
Instructor: Smith, David Lee (513) 475-6426
Course Number: 23-300-510
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 9.0 hrs per week
Contact Hours: 90
Laboratory: 90
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 12
Average Enrollment: 12

Solar Heating and Cooling
Instructor: Garrett, Ronald W. (513) 475-6541
Course Number: 32-195-467
Department: Applied Science/Mechanical Engr. Tech.
Program or Curriculum: Mechanical Engineering Technology
Credits: 4
Student Level: Junior or Senior
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Classroom: 44
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 35

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DAYTON, UNIVERSITY OF (3127)
DAYTON, Ohio 45469
(513) 229-0123

PROGRAMS AND CURRICULA

Energy Conversion
Degree: MS, BS, Mechanical Engineering
Contact: Smith, Howard E. (513) 229-2835
Students Taking or Completing Offering: Educator, Researcher, Other

SOLAR RELATED COURSES

Direct Energy Conversion
Instructor: Chuang, Henry N. (513) 229-2835
Course Number: MEE 514
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Photovoltaics; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 5
Average Enrollment: 10

Energy Conversion Systems
Instructor: Chuang, Henry N. (513) 229-2835
Course Number: MEE 402
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Intro. to Solar Energy
Number of Times Taught: 4
Average Enrollment: 25

Solar Heating Analysis
Instructor: Chuang, Henry N. (513) 229-2835
Course Number: MEE 567
Department: Mechanical Engineering
Program or Curriculum: Energy Conversion
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Classroom: 45
Laboratory: 3
Topics Covered Extensively: Energy

Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 12

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DEFIANCE COLLEGE (3041)
DEFIANCE, Ohio 43512
(419) 784-4010

SOLAR RELATED COURSES

Energy Alternatives
Instructor: Miller, Harry G.
(419) 784-4010
Course Number: 11-50
Department: Physics & Mathematics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 4 Weeks, 15.0 hrs per week
Contact Hours: 60
Classroom: 50
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion
Number of Times Taught: 4
Average Enrollment: 12

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KENT STATE U MAIN CAMPUS (3051)
KENT, Ohio 44242
(216) 672-2121

PROGRAMS AND CURRICULA

Architects & Energy
Contact: Kremers
(216) 672-2789
Students Taking or Completing Offering: Architect, Do-it-yourself Homeowner

SOLAR RELATED COURSES

Architects & Energy 62598
Instructor: Kremers
(216) 672-2789
Course Number: 62598
Department: Architecture
Program or Curriculum: Architects & Energy
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 10

Energy Conversion Utilization
Instructor: Loughridge, R./ Lees, J./ Phillips, J.
(216) 672-2892
Course Number: 20001
Department: Technology
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 6.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Process Heat, Industrial; Space Heating; Space Cooling

Power Technology
Instructor: Lees, James
(216) 672-2892
Course Number: 31032
Department: Technology
Credits: 5
Student Level: All levels
Duration: 10 Weeks, 10.0 hrs per week
Contact Hours: 100
Classroom: 50
Laboratory: 50
Number of Times Taught: 21
Average Enrollment: 20

Solar Energy Today
Instructor: Kremers
(216) 672-2789
Course Number: CONT.ED.
Department: Architecture
Program or Curriculum: Architects & Energy
Credits: 2
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 25

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OHIO NORTHERN UNIVERSITY (3089)
ADA, Ohio 45810
(419) 634-9921

SOLAR RELATED COURSES

Solar Energy Engineering
Instructor: Farrington, Frank
(419) 634-9921
Course Number: 204590.03
Department: Mech. Engr.
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 26

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OHIO STATE U MAIN CAMPUS (6883)
COLUMBUS, Ohio 43210
(614) 422-6446

SOLAR RELATED COURSES

Intro. To Agricultural Engin. Design
Instructor: Bondurant, Btron L.
(614) 422-6131
Course Number: AE 223
Department: Agricultural Engineering
Credits: 2
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 10
Laboratory: 30
Number of Times Taught: 9
Average Enrollment: 15

Solar Energy Thermal Systems
Instructor: Sepsy, C. F.
Course Number: ME 614
Department: Mech. Engr.
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 2
Average Enrollment: 35

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OHIO STATE U MANSFIELD BR (3093)
MANSFIELD, Ohio 44906
(419) 747-6561

SOLAR RELATED COURSES

Solar Energy
Instructor: Clark, D. L.
(419) 755-4011
Department: Continuing Education
Student Level: All levels
Duration: 4 Weeks, 2.5 hrs per week
Contact Hours: 10
Classroom: 10
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Solar Collector Evaluation/Design; Space Heating
Average Enrollment: 65

Wind Energy
Instructor: Clark, D. L.
(419) 755-4011
Department: Continuing Education
Student Level: All levels
Duration: 4 Weeks, 2.5 hrs per week
Contact Hours: 10
Classroom: 10
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Solar Collector Evaluation/Design; Space Heating; Wind Power, Small Systems
Average Enrollment: 45

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TOLEDO, UNIVERSITY OF (3131)
TOLEDO, Ohio 43606
(419) 537-2072

SOLAR RELATED COURSES

Energy Conversion I
Instructor: Eltimsahy, Adel H.
(419) 537-2638
Course Number: 436:361
Department: Electrical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Energy Conversion
Number of Times Taught: 2
Average Enrollment: 40

Power: Electronics I
Instructor: Stuart, T.
(419) 537-2251
Course Number: 436:468
Department: Electrical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Energy Conversion

Number of Times Taught: 3
Average Enrollment: 10

Power: Electronics II
Instructor: Stuart, T.
(419) 537-2251
Course Number: 436:469
Department: Electrical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Energy Conversion
Number of Times Taught: 3
Average Enrollment: 10

Solar Energy Utilization
Instructor: Eltimasahy, Adel H.
(419) 537-2638
Course Number: 436-4/563
Department: Electrical Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 30
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Photovoltaics; Solar System Components; Solar Systems Design; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 15

Solar Heating and Cooling
Course Number: 484:641
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 10

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WALSH COLLEGE (3135)
CANTON, Ohio 44720
(216) 499-7090

SOLAR RELATED COURSES

Solar Heating
Instructor: Over, Calvin S.
Course Number: CE0109
Department: Continuing Education
Student Level: All levels
Duration: 5 Weeks, 1.0 hrs per week
Contact Hours: 5
Classroom: 5
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 0

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XAVIER UNIVERSITY (3144)
CINCINNATI, Ohio 45207
(513) 745-3000

SOLAR RELATED COURSES

Experiments in Physics
Instructor: Toepker, Terrence
(513) 745-3626
Course Number: PH330
Department: Physics
Credits: 3
Student Level: College Graduate
Duration: 5 Weeks, 7.5 hrs per week
Contact Hours: 38
Classroom: 12
Laboratory: 26
Number of Times Taught: 1
Average Enrollment: 3

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YOUNGSTOWN ST UNIVERSITY (3145)
YOUNGSTOWN, Ohio 44555
(216) 746-1851

SOLAR RELATED COURSES

Adv. Topics in Solar Energy Engr.
Instructor: Alexander, Charles
(216) 742-3013
Course Number: EE972
Department: Elec. Engineering
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Appropriate Technology; Energy Storage; 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; Elec'l Generation, Central; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 12

Introduction to Modern Technology
Instructor: Alexander, Charles
(216) 742-3013
Course Number: EE 555
Department: Elec. Engin.
Credits: 4

Student Level: Freshman or Sophomore
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Number of Times Taught: 1
Average Enrollment: 21

Solar Energy Engineering
Instructor: Alexander, Charles
(216) 742-3013
Course Number: EE971
Department: Elec. Engineering
Credits: 4
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Heat and Energy Transfer; Photovoltaics; Domestic Hot Water; Elec'l Generation, Central; Space Heating
Number of Times Taught: 6
Average Enrollment: 10

Solar Energy Engineering 831
Instructor: Alexander, Charles
(216) 742-3013
Course Number: EE 831
Department: Elec. Engin.
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Heat and Energy Transfer; Photovoltaics; Solar System Components; Domestic Hot Water; Elec'l Generation, Central; Space Heating
Number of Times Taught: 9
Average Enrollment: 33

Solar Energy Systems, Syn. and Opt.
Instructor: Alexander, Charles
(216) 742-3013
Course Number: EE832
Department: Elec. Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Appropriate Technology; Energy Storage; 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; Elec'l Generation, Central; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 13

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Community/Junior Colleges

LAKELAND CMTY COLLEGE (6804)
MENTOR, Ohio 44060
(216) 951-1000

SOLAR RELATED COURSES

Solar Heating
Instructor: Susel, Frank
(216) 951-1000
Course Number: LL50558
Department: Lifelong Learning
Student Level: All levels
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 5

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SINCLAIR CMTY COLLEGE (3119)
DAYTON, Ohio 45402
(513) 226-2500

SOLAR RELATED COURSES

Intro to Solar Heating and Cooling
Instructor: Nataraj, Nataraj S.
(513) 226-2835
Course Number: EGR 125
Department: Engineering and Indus. Tech
Credits: 3
Student Level: All levels
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 27
Laboratory: 6
Number of Times Taught: 2
Average Enrollment: 15

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Vocational/Technical Colleges

CENTRAL OHIO TECHNICAL C (11046)
NEWARK, Ohio 43055
(614) 366-1351

SOLAR RELATED COURSES

Environmental Control
Instructor: Pond, Robert
(614) 366-1351
Course Number: 3443
Department: Division of Engineering Technologies
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 60
Classroom: 24
Laboratory: 36
Topics Covered Extensively: Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Installation; Space Heating; Space Cooling

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COLUMBUS TECHNICAL INST (6867)
COLUMBUS, Ohio 43216
(614) 221-6743

SOLAR RELATED COURSES

Solar Energy
Instructor: Pierce, David
(614) 221-6743
Department: Architecture
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Classroom: 22
Laboratory: 22
Topics Covered Extensively: Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

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MUSKINGUM AREA TECH C (8133)
ZANESVILLE, Ohio 43701
(614) 454-2501

SOLAR RELATED COURSES

Solar Home Heating
Instructor: Goehring, C.
(216) 454-2501
Course Number: ACE 186
Department: Lifelong Learning
Student Level: All levels
Duration: 5 Weeks, 2.0 hrs per week
Contact Hours: 10
Classroom: 10
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Intro. to Solar Energy; Solar System Components; Solar Systems Design; Solar Systems Installation
Number of Times Taught: 3
Average Enrollment: 10

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NORTHWEST TECH COLLEGE (8677)
ARCHBOLD, Ohio 43502
(419) 267-5511

SOLAR RELATED COURSES

Here Comes The Sun
(419) 267-5511
Student Level: All levels
Duration: 1 Weeks, 11.0 hrs per week
Contact Hours: 11
Topics Covered Extensively: Energy Storage; 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; Swimming Pool Heating; Space Heating

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Other Educational Institutions

NHAW - HOME STUDY INSTITUTE (90400)
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

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Colleges/Universities

OKLA STATE U MAIN CAMPUS (3170)
STILLWATER, Oklahoma 74074
(405) 624-5000

PROGRAMS AND CURRICULA

Elec. Engin.-Emphasis on Energy
Degree: PHD, MS, BS, Electrical Engineering
Contact: Bacon, C.M.
(405) 624-5156

SOLAR RELATED COURSES

Alternative Energy Systems
Instructor: Proppe, Jody
(405) 624-6266
Department: Architecture Extension
Student Level: All levels
Duration: 1 Weeks, 7.0 hrs per week
Contact Hours: 7
Classroom: 7
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology

Des. and Cons. of Energy Sav. Homes
Instructor: Bose, Jim/ Irby, Dean
(405) 624-5638
Department: Technology Extension
Student Level: All levels
Duration: 1 Weeks, 16.0 hrs per week
Contact Hours: 16
Classroom: 16
Topics Covered Extensively: Alternate Energy Sources; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance
Number of Times Taught: 2
Average Enrollment: 25

Design of Solar Systems
Instructor: Dubensky, Robert
Department: Technology Extension
Student Level: All levels
Duration: 1 Weeks, 8.0 hrs per week
Contact Hours: 8
Classroom: 8
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 100

Direct Energy Conversion I
Instructor: Ramakumar, R.
(405) 624-5170
Course Number: 4133
Department: Electrical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Intro. to Solar Energy
Number of Times Taught: 17
Average Enrollment: 25

Direct Energy Conversion II
Instructor: Ramakumar, R.
(405) 624-5170
Course Number: 5153
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Intro. to Solar Energy; Photovoltaics; Elec'l Generation, Central; Elec'l Generation, Small Scale; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 11

Earth Sheltered Housing Design
Instructor: Proppe, Jody
(405) 624-6266
Department: Architecture Extension
Student Level: All levels
Duration: 1 Weeks, 14.0 hrs per week
Contact Hours: 14
Classroom: 14
Number of Times Taught: 9
Average Enrollment: 70

Elect. Engr. Aspects-Wind Ener. Systems
Instructor: Hughes, W.L./ Lingelbach, D.
(405) 624-5168
Department: Cont. Education
Student Level: All levels
Duration: 1 Weeks, 7.0 hrs per week
Contact Hours: 7
Topics Covered Extensively: Energy Conversion; Elec'l Generation, Central; Elec'l Generation, Small Scale; Wind Power, Small Systems

Energy Conservation and Management
Instructor: Turner, W.C.
(405) 624-6055
Department: Industrial Engineering and Management
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 30
Laboratory: 18
Topics Covered Extensively: Energy Conservation

Energy Conservation and Management
Instructor: Turner, W.C.
(405) 624-6055
Course Number: INDEN4923
Department: Indusu. Engr. and Management
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week

Contact Hours: 48
Classroom: 32
Laboratory: 16
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Storage; Solar Economics; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Small Systems

Environmental Power Systems
Instructor: Bryant, John
(405) 624-6043
Course Number: 5763
Department: Architecture
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 1
Average Enrollment: 6

Hot Air Panel Cons.
Instructor: Bose, Jim
(405) 624-5638
Department: Technology Extension
Student Level: All levels
Duration: 1 Weeks, 8.0 hrs per week
Contact Hours: 8
Classroom: 8
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Systems Design
Number of Times Taught: 6
Average Enrollment: 50

Illumination and Power Distribution
Instructor: Bryant, John
(405) 624-6043
Course Number: 5724
Department: Architecture
Credits: 4
Student Level: College Graduate
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 64
Topics Covered Extensively: Energy Conservation
Number of Times Taught: 5
Average Enrollment: 6

Intro. to Solar Heating
Instructor: Dubensky, Robert
Department: Technology Extension
Student Level: All levels
Duration: 1 Weeks, 8.0 hrs per week
Contact Hours: 8
Classroom: 8
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Systems Design
Number of Times Taught: 22
Average Enrollment: 27

Lighting/Energy Design
Instructor: Proppe, Jody
(405) 624-6266
Department: Architecture Extension
Student Level: College Graduate
Duration: 1 Weeks, 14.0 hrs per week
Contact Hours: 14
Classroom: 7
Laboratory: 7
Topics Covered Extensively: Energy Conservation

Solar Controls & Storage
Instructor: Dubensky, Robert
Department: Technology Extension
Student Level: All levels
Duration: 1 Weeks, 8.0 hrs per week
Contact Hours: 8
Classroom: 8
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Systems Design
Number of Times Taught: 2
Average Enrollment: 50

Solar Energy
Instructor: Parker, Jerald D.
(405) 624-5900
Course Number: MAE5010
Department: Ener. Tech. and Arch/ School of MAE
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 30

Solar Heating and Energy Saving Systems
Instructor: Bose, James E.
(405) 624-5638
Course Number: GENT4050
Department: Technology
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Plumbing Techniques; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 45

Solar Heating Appl.
Instructor: Bose, Jim
(405) 624-5638
Department: Technology Extension
Student Level: All levels
Duration: 1 Weeks, 8.0 hrs per week
Contact Hours: 8
Classroom: 8
Topics Covered Extensively: Alternate Energy Sources; Solar Economics; Solar Home Construction
Number of Times Taught: 2
Average Enrollment: 20

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OKLAHOMA NORMAN CAM, U OF (3184)
NORMAN, Oklahoma 73019
(405) 325-0311

SOLAR RELATED COURSES

Energy Conservation in Buildings - Seminar
Instructor: Calvert, Floyd O.
(405) 325-2444
Course Number: 6023
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Passive Solar Technology
Number of Times Taught: 4
Average Enrollment: 20

Energy Conservation Seminar
Instructor: Calvert, Floyd O.
(405) 325-2444
Course Number: ARCH 6023
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Conservation; Passive Solar Technology
Number of Times Taught: 4
Average Enrollment: 20

Solar Energy Thermal Processes
Instructor: Turkington, D.B.
(405) 325-5011
Course Number: AME 6730
Department: Aerospace, Mech. and Nuclear Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 13

Special Top-Physical Chemistry
Instructor: Murphy, George
(405) 325-3691
Course Number: 6670
Department: Chemistry
Credits: 2
Student Level: College Graduate
Duration: 2 Weeks, 13.0 hrs per week
Contact Hours: 25
Classroom: 25

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TULSA, UNIVERSITY OF (3185)
TULSA, Oklahoma 74104
(918) 939-6351

SOLAR RELATED COURSES

Solar Energy Seminar
Instructor: Ketcham, Bruce V.
(918) 939-6351
Course Number: E.S.3093
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 35

Solar Heating and Cooling Fundamentals
Instructor: Ketcham, Bruce V.
(918) 939-6351
Course Number: E.S. 3093
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 35

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Colleges/Universities

OREGON INST OF TECHNOLOGY (3211)
KLAMATH FALLS, Oregon 97601
(503) 882-6321

SOLAR RELATED COURSES

Seminar (Solar Heating)
Instructor: King, William N.
(503) 882-6321
Course Number: MET 207
Department: Mechanical Engineering Technology
Credits: 1
Student Level: All levels
Duration: 5 Weeks, 2.0 hrs per week
Contact Hours: 10
Classroom: 10
Topics Covered Extensively: Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 74

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OREGON MAIN CAMPUS, U OF (3223)
EUGENE, Oregon 97403
(503) 686-3111

PROGRAMS AND CURRICULA

Solar Energy Center
Degree: no,
Contact: Reynolds, John S.
(503) 686-3631
Students Taking or Completing Offering: Architect, Educator, Researcher, Solar Technician

SOLAR RELATED COURSES

Environmental Control Systems 321
Instructor: Reynolds, John S.
(503) 686-3631
Course Number: ARCH 321
Department: Architecture
Program or Curriculum: Solar Energy Center
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Plumbing Techniques; 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: 5
Average Enrollment: 140

Environmental Control Systems 322
Instructor: Reynolds, John S.
(503) 686-3631
Course Number: ARCH 322
Department: Architecture
Program or Curriculum: Solar Energy Center
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Plumbing Techniques; 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: 5
Average Enrollment: 140

Environmental Control Systems 323
Instructor: Reynolds, John S.
(503) 686-3631
Course Number: ARCH 323
Department: Architecture
Program or Curriculum: Solar Energy Center
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Plumbing Techniques; 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: 5
Average Enrollment: 140

Sun as a Future Energy Source
Instructor: McDaniels, D. K.
(503) 686-4765
Course Number: PH. 116
Department: Physics
Program or Curriculum: Solar Energy Center
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30

Topics Covered Extensively: Energy Conservation; 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; Elec'l Generation, Central; Space Heating
Number of Times Taught: 10
Average Enrollment: 200

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OREGON STATE UNIVERSITY (3210)
CORVALLIS, Oregon 97331
(503) 754-1133

SOLAR RELATED COURSES

Atmospheric Radiative Processes
Instructor: Rao, C.R.N.
(503) 754-4557
Course Number: 560/561
Department: Atmospheric Sciences
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 30
Topics Covered Extensively: Heat and Energy Transfer

Farm Structures 361
Instructor: Hellickson, Martin L.
(503) 754-2041
Course Number: AET 361
Department: Agricultural Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 9 Weeks, 5.0 hrs per week
Contact Hours: 45
Classroom: 27
Laboratory: 18
Average Enrollment: 25

Farm Structures 461
Instructor: Hellickson, Martin L.
(503) 754-2041
Course Number: AE 461
Department: Agricultural Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 9 Weeks, 5.0 hrs per week
Contact Hours: 45
Classroom: 27
Laboratory: 18
Average Enrollment: 25

Solar Energy Thermal Processes
Instructor: Larson, Milton B.
(503) 754-4646
Course Number: ME 406
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 12

Solar Rad. and Meteorological Measurement
Instructor: Rao, C.R.N.
(503) 754-1554
Course Number: 420/421
Department: Atmospheric Sciences
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 7.0 hrs per week
Contact Hours: 70
Classroom: 20
Laboratory: 40
Topics Covered Extensively: Intro. to Solar Energy

Special Studies
Instructor: Hellickson, Martin L.
(503) 754-2041
Course Number: AE 199
Department: Agricultural Engineering
Credits: 1
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 1.0 hrs per week
Contact Hours: 10
Classroom: 3
Laboratory: 7
Number of Times Taught: 3
Average Enrollment: 30

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PACIFIC UNIVERSITY (3212)
FOREST GROVE, Oregon 97116
(503) 357-6151

SOLAR RELATED COURSES

Ener. Cons. in the Residential Sector
Instructor: Griffith, Tom/ Story, Joe
(503) 357-6151
Course Number: 555
Department: Science/Social Science
Credits: 3
Student Level: College Graduate
Duration: 3 Weeks, 15.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector

Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating
Number of Times Taught: 1

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Community/Junior Colleges

CLACKAMAS CMTY COLLEGE (4878)
OREGON CITY, Oregon 97045
(503) 656-2631

SOLAR RELATED COURSES

Introduction to Appropriate Energy
Instructor: Aronson, Mike
(503) 656-2631
Department: Physical Science
Credits: 3
Student Level: All levels
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 22
Laboratory: 11
Topics Covered Extensively: Intro. to Solar Energy; Passive Solar Technology; Solar Systems Design; Space Heating

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LINN-BENTON CMTY COLLEGE (6938)
ALBANY, Oregon 97321
(503) 928-2361

PROGRAMS AND CURRICULA

Engineering Tech.-Solar Energy Option
Degree: AD, Engineering Tech
Contact: Miller, Dave
(503) 928-2361

SOLAR RELATED COURSES

Alternative 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'l Generation, Small Scale; Wind 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 Energy; Solar System Components; Solar Economics; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l 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'l Generation, Small Scale; Space Heating; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 12

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ROGUE COMMUNITY COLLEGE (10182)
GRANTS PASS, Oregon 97526
(503) 479-5541

SOLAR RELATED COURSES

Nat. Ener. Convts., Dom. Sol. Water Heater
Instructor: Lilly, Joseph
(503) 479-5541
Course Number: 642
Department: Science and Small Farm Management
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 5.0 hrs per week
Contact Hours: 70
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; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Law/Legislation; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 14

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Colleges/Universities

CALIFORNIA STATE COLLEGE (3316)
CALIFORNIA, Pennsylvania 15419
(412) 938-4000

SOLAR RELATED COURSES

Energy and Power
Instructor: Hallidy, William
(412) 938-4153
Department: Physical Science
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 2
Average Enrollment: 25

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DICKINSON COLLEGE (3253)
CARLISLE, Pennsylvania 17013
(717) 243-5121

SOLAR RELATED COURSES

Appro. Tech-Is Small Beautiful?
Instructor: Kromkowski, F.
(717) 243-5121
Course Number: ES112
Department: Environmental Science
Credits: 4
Student Level: All levels
Duration: 3 Weeks, 15.0 hrs per week
Contact Hours: 45
Classroom: 39
Topics Covered Extensively: Appropriate Technology
Number of Times Taught: 1
Average Enrollment: 9

Environmental Economics
Instructor: Houston, C.
(717) 243-5121
Course Number: ECON 222
Department: Economics
Credits: 4
Student Level: All levels
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Marketing/Market Analysis
Number of Times Taught: 2
Average Enrollment: 35

Meteorology
Instructor: Laws, K.
(717) 243-5121
Course Number: PHS 202
Department: Physics
Credits: 4
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Number of Times Taught: 7
Average Enrollment: 50

Topics in Contemporary Physics
Instructor: Long, H.
(717) 243-5121
Course Number: PHS 461
Department: Physics & Astronomy
Credits: 4
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 2
Average Enrollment: 7

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DREXEL UNIVERSITY (3256)
PHILADELPHIA, Pennsylvania 19104
(215) 895-2000

SOLAR RELATED COURSES

Solar Energy
Instructor: Larson, Donald C.
(215) 895-2724
Course Number: N775
Department: Science/Physics
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Number of Times Taught: 3

Solar Heating and Cooling
Instructor: Larson, Donald
(215) 895-2724
Department: Continuing Professional Education
Student Level: College Graduate
Duration: 8 Weeks, 2.5 hrs per week
Contact Hours: 20
Classroom: 18
Laboratory: 2
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 4
Average Enrollment: 30

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GANNON COLLEGE (3266)
ERIE, Pennsylvania 16501
(814) 456-7523

SOLAR RELATED COURSES

Design Project for Solar Heat
Instructor: Dowell, Milt
(814) 838-1683
Course Number: E160
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 6.0 hrs per week
Contact Hours: 84
Topics Covered Extensively: Space Heating
Average Enrollment: 1

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GETTYSBURG COLLEGE (3268)
GETTYSBURG, Pennsylvania 17325
(717) 334-3131

SOLAR RELATED COURSES

Energy and Environment
Instructor: Cowan, David J.
(717) 334-3131
Course Number: 140
Department: Physics
Credits: 3
Student Level: All levels
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 4
Average Enrollment: 35

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INDIANA U OF PENNSYLVANIA (8810)
INDIANA, Pennsylvania 15701
(412) 357-2100

SOLAR RELATED COURSES

Solar Energy
Instructor: Hershman, K.E.
(412) 357-2192
Course Number: PY 481
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 18

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KUTZTOWN STATE COLLEGE (3322)
KUTZTOWN, Pennsylvania 19530
(215) 683-3511

SOLAR RELATED COURSES

Our Physical Ecosystem
Instructor: Walter, Karl F.
(215) 683-3511
Course Number: PHY 015
Department: Physical Science
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Energy Conservation
Number of Times Taught: 6
Average Enrollment: 10

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PA ST U SHENANGO VLY CAM (3345)
SHARON, Pennsylvania 16146
(412) 981-1640

PROGRAMS AND CURRICULA

Solar Heating and Cooling Technology
Degree: Short Course Certificate
Contact: Houlihan, John F.
(412) 981-1640

SOLAR RELATED COURSES

Fundamentals of Solar Energy
Instructor: Houlihan, J. F.
(421) 981-1640
Course Number: PHYS. 296
Department: Physics
Program or Curriculum: Solar Heating and Cooling Technology
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

Intro.
Topics Covered Extensively: Intro. to Solar Energy; Space Heating; Wind Power, Central Systems

Intro. to Solar Energy
Instructor: Houlihan, John F. (412) 981-1640
Course Number: PHYS. 297
Department: Physics
Program or Curriculum: Solar Heating and Cooling Technology
Credits: 2
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
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. (412) 981-1640
Course Number: PHYS.297
Department: Physics
Program or Curriculum: Solar Heating and Cooling Technology
Credits: 1
Student Level: All levels
Duration: 2 Weeks, 40.0 hrs per week
Contact Hours: 80
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

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PA STATE U ALLENTOWN CAM (3330)
FOGELSVILLE, Pennsylvania 18051
(215) 285-4811

SOLAR RELATED COURSES

**Solar Workshop-Cooling for Homes*
Topics Covered Extensively: Space Cooling

**Solar Workshop-Domestic Hot Water Sys.*
Topics Covered Extensively: Domestic Hot Water

**Solar Workshop-Passive Sol. Heat.*
Topics Covered Extensively: Passive Solar Technology

**Solar Workshop-Solar Space Heat. Sys.*
Topics Covered Extensively: Space Heating

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PA STATE U MAIN CAMPUS (6965)
UNIVERSITY PARK, Pennsylvania 16802
(814) 865-4700

SOLAR RELATED COURSES

Solar Energy Building System Design
Instructor: Gilman, Stanley F. (814) 865-6394
Course Number: AE-497
Department: Architectural Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks; 7.0 hrs per week
Contact Hours: 70
Classroom: 40
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 21

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PENNSYLVANIA,U OF (3378)
PHILADELPHIA, Pennsylvania 19104
(215) 243-5000

PROGRAMS AND CURRICULA

Energy Engineering
Degree: MS, Science in Engineering
Contact: Eisenberg, Larry (215) 243-8507
Students Taking or Completing Offering: Educator, Researcher, Solar Engineer

SOLAR RELATED COURSES

Energy Conversion
Instructor: Fegley, Ken
Course Number: 566
Department: Systems Engineering
Program or Curriculum: Energy Engineering
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week

Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Heat and Energy Transfer
Number of Times Taught: 4
Average Enrollment: 15

Materials for Energy Engineering
Instructor: Laird, Campbell
Course Number: 555
Department: Material Science
Program or Curriculum: Energy Engineering
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Energy Storage; Materials Research
Number of Times Taught: 4
Average Enrollment: 15

Prin. of Solar Energy Utilization
Instructor: Lior, Noam
Course Number: 591
Department: Mechanical Engineering
Program or Curriculum: Energy Engineering
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 4
Average Enrollment: 15

Solid State Energy Conversion
Instructor: Wolf, Martin
Course Number: EES 524
Department: Electrical Eng. & Science
Program or Curriculum: Energy Engineering
Credits: 3
Student Level: College Graduate
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 3
Average Enrollment: 15

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PHILA COLLEGE OF ART (3350)
PHILADELPHIA, Pennsylvania 19102
(215) 893-3100

SOLAR RELATED COURSES

Alternate Energy-Solar
Instructor: Andrews, Jack
(215) 893-3170
Course Number: EN 212
Department: Industrial and Environmental Design
Credits: 2
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction
Number of Times Taught: 3
Average Enrollment: 18

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SAINT VINCENT COLLEGE (3368)
LATROBE, Pennsylvania 15650
(412) 539-9761

SOLAR RELATED COURSES

Solar Energy
Instructor: Heid, Roland L.
(412) 539-9761
Department: Physics
Student Level: All levels
Duration: 6 Weeks, 3.0 hrs per week
Contact Hours: 18
Classroom: 18

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SWARTHMORE COLLEGE (3370)
SWARTHMORE, Pennsylvania 19081
(215) 544-7900

SOLAR RELATED COURSES

Alternate Energy Technologies
Instructor: Bowler, D. L./ Barns, C./ Orthlieb, F.
(215) 544-7900
Course Number: E 7
Department: Engineering
Credits: 1
Student Level: Freshman or Sophomore
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 70
Classroom: 52
Laboratory: 18
Number of Times Taught: 3
Average Enrollment: 6

Solar Heating-Design
Instructor: Bowler, D. L./ Barns, C./ Orthlieb, F.
(215) 544-7900
Course Number: E 90

Department: Engineering
Credits: 1
Student Level: Junior or Senior
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 104
Classroom: 52
Laboratory: 52
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 15

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TEMPLE UNIVERSITY (3371)
PHILADELPHIA, Pennsylvania 19122
(215) 787-7000

SOLAR RELATED COURSES

**Energy & Building Design*
Instructor: Ridenour, Steve
Department: Architecture
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Passive Solar Technology; Solar Systems Design; Space Heating; Wind Power, Small Systems

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WESTMINSTER COLLEGE (3392)
NEW WILMINGTON, Pennsylvania 16142
(412) 946-8761

SOLAR RELATED COURSES

Energy Use and Alternate Energy Sources
Instructor: Zehr, Floyd J.
Course Number: SC. 14
Department: Physics
Credits: 4
Student Level: All levels
Duration: 14 Weeks, 5.0 hrs per week
Contact Hours: 70
Classroom: 49
Laboratory: 21
Topics Covered Extensively: Alternate Energy Sources
Average Enrollment: 6

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WIDENER COLLEGE (3313)
CHESTER, Pennsylvania 19013
(215) 876-5551

SOLAR RELATED COURSES

Energy I
Instructor: Madonna, L. A.
(215) 876-5551
Course Number: 437
Department: Center of Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 42
Laboratory: 14
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology
Average Enrollment: 15

Energy II
Instructor: Madonna, L. A.
(215) 876-5551
Course Number: 438
Department: Center of Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 42
Laboratory: 14
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer

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WILKES COLLEGE (3394)
WILKES-BARRE, Pennsylvania 18703
(717) 824-4651

SOLAR RELATED COURSES

Alternate Energy Sources
Instructor: Nejib, U.R.
(717) 824-4651
Course Number: EE390
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 46
Classroom: 28
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Passive Solar Technology; Photovoltaics; Elec'l Generation, Central; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 15

Energy Cons.-Alts. and Methods
Instructor: Nejib, Umid R.
(717) 824-4651
Course Number: ED594
Department: Engineering
Credits: 3
Student Level: College Graduate
Duration: 3 Weeks, 38.0 hrs per week
Contact Hours: 114
Classroom: 36
Laboratory: 24
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Solar Energy Policy Development; Elec'l Generation, Central
Number of Times Taught: 1
Average Enrollment: 32

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Community/Junior Colleges

BUCKS COUNTY CMTY COLLEGE (3239)
NEWTOWN, Pennsylvania 18940
(215) 968-5861

SOLAR RELATED COURSES

Understanding Solar Energy
Instructor: Greenhaugh, Sam
(215) 968-5861
Department: Science
Student Level: All levels
Duration: 7 Weeks, 3.0 hrs per week
Contact Hours: 21
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 35

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DELAWARE CO CMTY COLLEGE (7110)
MEDIA, Pennsylvania 19063
(215) 353-5400

SOLAR RELATED COURSES

Conserving Energy Saves Consumer Dollars
Instructor: Mabrey, Marjorie
(215) 353-5400
Department: Community Education
Student Level: All levels
Duration: 2 Weeks, 10.0 hrs per week
Contact Hours: 20

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HARRISBURG AREA CC (3273)
HARRISBURG, Pennsylvania 17110
(717) 236-9533

PROGRAMS AND CURRICULA

Solar Heating
Degree: Certificate-non-cred. Adult Ed.
Contact: Brown, Hazel
(717) 236-9535
Students Taking or Completing Offering: Do-it-yourself Homeowner, Other

SOLAR RELATED COURSES

Sol. Heat.-Food, Heat Prod. Greenhouse
Department: Community Resources Institute
Program or Curriculum: Solar Heat
Student Level: All levels
Duration: 3 Weeks, 3.0 hrs per week
Contact Hours: 9
Classroom: 9
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; Elec'l Generation, Small Scale; Process Heat, Industrial; Space Heating
Number of Times Taught: 2
Average Enrollment: 20

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KEYSTONE JUNIOR COLLEGE (3280)
LA PLUME, Pennsylvania 18440
(717) 945-5141

PROGRAMS AND CURRICULA

Solar Engineering Technology
Degree: AD, Applied Sci. in Sol. Engr. Tech.
Contact: Kutch, Dennis/ Cupilleri, Tom
(717) 945-5141
Students Taking or Completing Offering: Solar Technician

SOLAR RELATED COURSES

Siz., Inst., and Oper.-Sol. Heat. (Res. Bl.)
Instructor: Kutch, Dennis
(717) 945-5141
Department: Solar Energy Study & Res. Cnl.
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
Course Number: 220
Department: Solar Energy Study & Res. Cnt.
Program or Curriculum: Solar Engineering Technology
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 30
Laboratory: 18
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Economics; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Space Heating

Train.-Des. of Sol. Heat. Sys. for Bldgs.
Instructor: Kutch, Dennis
(717) 945-5141
Department: Solar Energy Study & Res. Cnt.
Program or Curriculum: Solar Engineering Technology
Student Level: Junior or Senior
Duration: 2 Weeks, 36.0 hrs per week
Contact Hours: 72
Classroom: 42
Laboratory: 30
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

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LEHIGH CO CMTY COLLEGE (6810)
SCHNECKSVILLE, Pennsylvania 18078
(215) 799-2121

PROGRAMS AND CURRICULA

Alternate Energy Technologies
Degree: AD, Applied Science
Contact: Walker, J. Robert
(215) 799-1515

SOLAR RELATED COURSES

Alternate Energy Technologies
Instructor: Walker, J. Robert
(215) 799-1515
Course Number: PHY 102
Department: Physics and Technologies
Program or Curriculum: Alternate Energy Technologies
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; Passive Solar Technology; Solar System Components; Domestic Hot Water

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NORTHAMPTON CO AREA CC (7191)
BETHLEHEM, Pennsylvania 18017
(215) 865-5351

SOLAR RELATED COURSES

Des. & Util. of Emerging Ener. Sources
Instructor: Ensminger, Frank E.
(215) 865-5351
Department: Vocational/Technical
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Classroom: 30
Laboratory: 60
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 Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

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WILLIAMSPORT AREA CC (3395)
WILLIAMSPORT, Pennsylvania 17701
(717) 326-3761

PROGRAMS AND CURRICULA

Plumbing and Heating
Degree: Certificate of Applied Arts
Contact: Krause, George C.
(717) 326-3761
Students Taking or Completing Offering: Installer-Residential (Solar System), Plumber, Trade Specialty

SOLAR RELATED COURSES

Plumbing and Heating
Instructor: Beatty, Franklin P.
Course Number: 842
Department: Building Technology, Plumbing and Heating
Program or Curriculum: Plumbing and Heating

Student Level: Freshman or Sophomore
Duration: 8 Weeks, 25.0 hrs per week
Contact Hours: 200
Classroom: 64
Laboratory: 136
Number of Times Taught: 4
Average Enrollment: 18

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Program or Curriculum: Energy Technology
Credits: 4
Student Level: High School Graduate
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 60
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Intro. to Solar Energy; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 35

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Vocational/Technical Colleges

PENNSYLVANIA INSTITUTE OF TECHNOLOGY (90180)
414 Sansom St.
Upper Darby, Pennsylvania 19082

PROGRAMS AND CURRICULA

Energy Technolgoy
Degree: AD; Specialized Technology
Contact: Thomas, Richard B.
Students Taking or Completing Offering: Solar Technician, Electrician

SOLAR RELATED COURSES

Advanced Solar Design
Instructor: Thomas, Richard (215) 352-7100
Course Number: K
Program or Curriculum: Energy Technology
Credits: 2
Student Level: High School Graduate
Duration: 12 Weeks, 4.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 35

Basic Solar Design
Instructor: Thomas, Richard B. (215) 352-7100
Course Number: D
Program or Curriculum: Energy Technology
Credits: 1
Student Level: High School Graduate
Duration: 12 Weeks, 5.0 hrs per week
Contact Hours: 60
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Home Construction; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 35

Energy Conversion
Instructor: Thomas, Richard (215) 352-7100
Course Number: B

Other Educational Institutions

NEW ENGLAND FUEL INSTITUTE (90230)
20 Summer St. Box 888
Watertown, Pennsylvania 02172

SOLAR RELATED COURSES

**Basic Solar Heating Tech.*
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

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PA STATE U CAPITOL CAMPUS (6814)
MIDDLETOWN, Pennsylvania 17057
(717) 787-7737

SOLAR RELATED COURSES

Solar Energy-Practical Applications
Instructor: Aungst, William K. (717) 787-7956
Course Number: MET 420
Department: Mechanical Design Engineering Technology
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 50
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components;

Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 33

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THE SCHOOL OF LIVING (90290)
PO Box 3233
York, Pennsylvania 17402

SOLAR RELATED COURSES

Alternative Energy
Topics Covered Extensively: Alternate Energy Sources

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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: Refrig., 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
Topics Covered Extensively: Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation

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Colleges/Universities

PR MAYAGUEZ,U OF (3944)
MAYAGUEZ, Puerto Rico
(809) 832-4040

PROGRAMS AND CURRICULA

Research in Solar Energy-Related Areas
Degree: PHD, MS, OTHER, Sciences
Contact: Rodriguez, Pablo
(809) 832-4040
Students Taking or Completing Offering:
Educator, Researcher

SOLAR RELATED COURSES

Physics of Energy Systems
Instructor: Azziz, Nestor
(809) 832-4040
Course Number: PHYS 428
Department: Physics/Arts and Sciences
Program or Curriculum: Research in Solar Energy-Related Areas
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Classroom: 30
Laboratory: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 2
Average Enrollment: 6

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Colleges/Universities

BROWN UNIVERSITY (3401)
PROVIDENCE, Rhode Island
(401) 863-1000

SOLAR RELATED COURSES

Photovoltaic Solar Cells
Instructor: Loferski, Joseph J.
(401) 863-2671
Course Number: EN 292
Department: Engineering
Credits: 4
Student Level: College Graduate
Duration: 20 Weeks, 3.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively:
Photovoltaics
Number of Times Taught: 1
Average Enrollment: 10

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RHODE ISLAND, U OF (3414)
KINGSTON, Rhode Island
(401) 792-1000

SOLAR RELATED COURSES

Residential Solar Heating
Instructor: Wilson, C. J.
(401) 792-2186
Course Number: EXT
Department: Engineering (Extension)
Student Level: All levels
Duration: 8 Weeks, 3.0 hrs per week
Contact Hours: 24
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Space Heating
Number of Times Taught: 3
Average Enrollment: 50

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Vocational/Technical Colleges

HALL INSTITUTE (90120)
330 Harborside Blvd.
Providence, Rhode Island 02905

PROGRAMS AND CURRICULA

Solar Energy Seminar
Degree: Certificate of Completion
Contact: Rogers, Charles K.
(401) 461-6000
Students Taking or Completing Offering:
Architect, Educator, Do-it-yourself Homeowner

SOLAR RELATED COURSES

Solar Energy Seminar
Instructor: Rogers, Charles K.
(401) 461-6000
Program or Curriculum: Solar Energy Seminar
Student Level: High School Graduate
Duration: 4 Weeks, 3.0 hrs per week
Contact Hours: 12
Classroom: 12
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; Domestic Hot Water; Space Heating
Number of Times Taught: 8
Average Enrollment: 70

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Colleges/Universities

CENTRAL WESLEYAN COLLEGE (3422)
CENTRAL, South Carolina 29630
(803) 639-2453

SOLAR RELATED COURSES

Energy
Instructor: Schmutz, J. L.
(803) 639-2453
Department: Science/Social Science
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 30
Laboratory: 15
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Solar Economics

Solar Energy
Instructor: Schmutz, J. L.
(803) 639-2453
Course Number: 400
Department: Science
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 5
Laboratory: 40
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 4

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CLEMSON UNIVERSITY (3429)
CLEMSON, South Carolina 29631
(803) 656-3311

PROGRAMS AND CURRICULA

Energy Systems
Degree: PhD, MS, Science, Philosophy, Mechanical Engineering
Contact: Bishop, Eugene H.
(803) 656-3470
Students Taking or Completing Offering: Researcher, Solar Engineer, Mechanical or Electrical Contractor, Contractor

SOLAR RELATED COURSES

Energy Conversion
Instructor: Lathrop, J. W.
(803) 656-3371
Course Number: 403
Department: Electrical and Computer Engineering
Program or Curriculum: Energy Systems
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Energy Conversion; Energy Storage; Intro. to Solar Energy; Photovoltaics; Solar Systems Design; Elec'l Generation, Small Scale
Number of Times Taught: 5
Average Enrollment: 20

Energy Conversion
Instructor: Hester, J. C.
(803) 656-3291
Course Number: ME 816
Department: Mechanical Engineering
Program or Curriculum: Energy Systems
Credits: 3
Student Level: College Graduate
Duration: 3 Weeks, 16.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 5
Average Enrollment: 6

Energy Sources for the Future
Instructor: McKelvey, John P.
(803) 656-3417
Course Number: PHYS 245
Department: Physics and Astronomy
Program or Curriculum: Energy Systems
Credits: 3
Student Level: All levels
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion
Number of Times Taught: 5
Average Enrollment: 50

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SC MAIN CAMPUS, U OF (3448)
COLUMBIA, South Carolina 29208
(803) 777-0411

SOLAR RELATED COURSES

Solar Heating and Cooling
Instructor: McMillan
(803) 777-2252
Course Number: 536
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 36

Laboratory: 6
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Systems Design
Number of Times Taught: 3
Average Enrollment: 40

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Community/Junior Colleges

MIDLAND$ TECH COLLEGE (3993)
COLUMBIA, South Carolina 29250
(803) 796-1266

SOLAR RELATED COURSES

Air Conditioning
Instructor: Sallman, John B. (803) 782-5471
Course Number: MET 232
Department: Mechanical Engineering
Credits: 4
Student Level: All levels
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Classroom: 33
Laboratory: 33
Number of Times Taught: 2
Average Enrollment: 10

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PIEDMONT TECH COLLEGE (3992)
GREENWOOD, South Carolina 29646
(803) 223-8357

SOLAR RELATED COURSES

Solar Energy for Climate Control
Instructor: Ledford, John (803) 223-8357
Course Number: ACR 204
Department: Heating and Air Conditioning
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Classroom: 44
Topics Covered Extensively: Energy Conservation; Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 25

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TRI-COUNTY TECH COLLEGE (4926)
PENDLETON, South Carolina 29670
(803) 646-3227

SOLAR RELATED COURSES

Solar Energy and The Home Owner
Instructor: Fairey, Philip W. (803) 646-3227
Department: Continuing Education
Student Level: All levels
Duration: 12 Weeks, 2.0 hrs per week
Contact Hours: 24

Solar Energy Applications
Instructor: Edwards, Joe (803) 646-3227
Course Number: ACR-240
Department: Air Conditioning and Refrigeration
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 8.0 hrs per week
Contact Hours: 88
Classroom: 22
Laboratory: 66
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Plumbing Techniques; Solar System Components; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water

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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 (803) 324-3130
Course Number: ACR 204
Department: Air Conditioning
Program or Curriculum: Conversion of Solar Energy
Credits: 4
Student Level: High School Graduate
Duration: 11 Weeks, 8.0 hrs per week
Contact Hours: 88
Classroom: 22
Laboratory: 66

Topics Covered Extensively: Plumbing Techniques; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 18

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Vocational/Technical Colleges

BEAUFORT TECH ED CENTER (9910)
BEAUFORT, South Carolina 29902
(803) 524-3380

PROGRAMS AND CURRICULA

Refrigeration and Air Conditioning-Solar Energy Appli.
Degree: AD, Refrigeration and Air Conditioning, General Tech.
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 Appli.
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

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CHESTERFLD-MARLBORO TECH (7602)
CHERAW, South Carolina 29520
(803) 537-5286

SOLAR RELATED COURSES

Climate Control Technology
Instructor: Smith, Donald R. (003) 537-5206
Course Number: 204
Department: Air Cond., Ref. and Heating
Credits: 4
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Classroom: 44

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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 System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water
Number of Times Taught: 4
Average Enrollment: 25

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GREENVILLE TECH COLLEGE (3991)
GREENVILLE, South Carolina 29606
(803) 242-3170

SOLAR RELATED COURSES

**Refrigeration Tech. Courses*
Department: Refrigeration Tech.

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HORRY-GEORGETOWN TECH C (4925)
CONWAY, South Carolina 29526
(803) 347-3186

SOLAR RELATED COURSES

Air Condition Tech. Courses
Department: Air Cond. Tech.

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SPARTANBURG TECH COLLEGE (3994)
SPARTANBURG, South Carolina 29303
(803) 576-5770

SOLAR RELATED COURSES

Basic Solar Heating
Instructor: Watts, John R.
(803) 576-5770
Department: Continuing Education
Student Level: All levels
Duration: 2 Weeks, 4.0 hrs per week
Contact Hours: 8
Classroom: 8
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Space Heating
Number of Times Taught: 2
Average Enrollment: 35

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SUMTER AREA TECH COLLEGE (3995)
SUMTER, South Carolina 29150
(803) 773-9371

SOLAR RELATED COURSES

Air Cond. Tech. Courses
Department: Air Condtioning Tech.

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Other Educational Institutions

SC AT SUMTER, U OF (12112)
SUMTER, South Carolina 29150
(803) 777-6865

SOLAR RELATED COURSES

Introduction to Engineering
Instructor: Nerbun, R.C.
(803) 775-6341
Course Number: ENGR110
Department: Engineering
Credits: 3
Student Level: High School Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 4
Average Enrollment: 17

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TRIDENT TECHNICAL COLLEGE (8818)
P O 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

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Colleges/Universities

SD MAIN CAMPUS, U OF (3474)
VERMILLION, South Dakota 57069
(605) 677-5641

SOLAR RELATED COURSES

The Energy Crisis
Instructor: Jones, Robert W.
(605) 624-5649
Course Number: ESC/PHY 385
Department: Earth Science/Physics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion
Number of Times Taught: 5
Average Enrollment: 18

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SD SCH MINES & TECHNOLOGY (3470)
RAPID CITY, South Dakota 57701
(605) 394-2411

SOLAR RELATED COURSES

Energy Conversion Technology
Instructor: Cheung
(605) 394-2408
Course Number: ME 499
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 2
Average Enrollment: 13

Solar Energy
Instructor: Chiang, C. W.
(605) 394-2401
Course Number: ME 619
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 2
Average Enrollment: 11

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SD STATE UNIVERSITY (3471)
BROOKINGS, South Dakota 57007
(605) 688-4111

SOLAR RELATED COURSES

Design of Thermal Systems
Instructor: Eno, B.
(605) 688-4817
Course Number: ME 418
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Energy Conversion; 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: 12

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Colleges/Universities

MEMPHIS STATE UNIVERSITY (3509)
MEMPHIS, Tennessee 38152
(901) 454-2000

SOLAR RELATED COURSES

Fundamentals of Solar Engineering
Instructor: Perry, Edward H.
(901) 454-2174
Course Number: MECH 4317
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 4
Average Enrollment: 20

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MIDDLE TENN ST UNIVERSITY (3510)
MURFREESBORO, Tennessee 37130
(615) 898-2300

SOLAR RELATED COURSES

Solar Home Design
Instructor: Mathis, William H.
(615) 898-2778
Course Number: 470C
Department: Industrial Studies
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 40
Laboratory: 8
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Space Heating
Number of Times Taught: 2
Average Enrollment: 17

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TENN AT CHATTANOOGA,U OF (3529)
CHATTANOOGA, Tennessee 37401
(615) 755-4011

SOLAR RELATED COURSES

Energy Systems
Instructor: Russell, Lynn D.
(615) 755-4121
Course Number: 586
Department: School of Engineering
Credits: 4
Student Level: College Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Topics Covered Extensively: Energy Conversion
Number of Times Taught: 2
Average Enrollment: 10

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TENNESSEE KNOXVILLE, U OF (3530)
KNOXVILLE, Tennessee 37916
(615) 974-2591

SOLAR RELATED COURSES

**Solar Energy Utilization*
Course Number: EN4740
Department: Mech. & Aero Eng'r
Credits: 3
Student Level: Junior or Senior
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Space Heating; Space Cooling

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TENNESSEE NASHVILLE, U OF (3533)
NASHVILLE, Tennessee 37203
(615) 251-1111

SOLAR RELATED COURSES

Energy Conversion Systems
Instructor: Knight, Charles V.
(615) 251-1341
Course Number: ME4150
Department: Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 5
Average Enrollment: 22

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TENNESSEE TECHNOLOGICAL U (3523)
COOKEVILLE, Tennessee 38501
(615) 528-3241

SOLAR RELATED COURSES

Solar Energy Processes and Systems
Instructor: Hewitt, Jr. Hudy C.
(615) 528-3269
Course Number: ME541

Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 12

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VANDERBILT UNIVERSITY (3535)
NASHVILLE, Tennessee 37240
(615) 322-7311

PROGRAMS AND CURRICULA

**Electrical Eng'r.*

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Community/Junior Colleges

CLEVELAND ST CMTY COLLEGE (3999)
CLEVELAND, Tennessee 37311
(615) 472-7141

PROGRAMS AND CURRICULA

Fac. Dev. Workshop in Energy Alternatives
Contact: Guy, Buford (615) 472-7141
Students Taking or Completing Offering: Educator

SOLAR RELATED COURSES

Fac. Dev. Workshop in Energy Alternatives
Instructor: Guy, Buford (615) 472-7141
Department: Community Services and Continuing Education
Program or Curriculum: Fac. Dev. Workshop in Energy Alternatives
Credits: 6
Student Level: College Graduate
Duration: 2 Weeks, 30.0 hrs per week
Contact Hours: 60
Classroom: 50
Laboratory: 10
Topics Covered Extensively: Alternate Energy Sources

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MOTLOW STATE CMTY COLLEGE (6836)
TULLAHOMA, Tennessee 37388
(615) 455-8511

PROGRAMS AND CURRICULA

Energy Engineering Technology
Degree: AD, Engr. Tech.-Ener. Engr. 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 Technology
Credits: 3
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

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Colleges/Universities

AMERICAN TECHNOLOGICAL U (11854)
KILLEEN, Texas 76541
(817) 526-1261

PROGRAMS AND CURRICULA

Energy Management Sciences
Degree: MS, Science
Contact: Smith, Robin/ Kincel, John (817) 526-1171
Students Taking or Completing Offering: Educator, Researcher, Solar Engineer, Other

SOLAR RELATED COURSES

Alternative Energy Sources
Department: Mgmnt. & Business
Program or Curriculum: Energy Managrment Sciences
Student Level: College Graduate
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conversion; Wind Power, Small Systems

Applied Solar Energy
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Energy Conservation; Energy Storage; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Process Heat, Industrial; Space Heating; Space Cooling

Basics of Solar Energy
Department: Mgmt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling

Computer Simulation
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate

Direct Energy Conversion
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Energy Conservation; Energy Conversion; Intro. to Solar Energy; Photovoltaics

Economics of Alt. Ener. Sources
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Solar Economics

Legislative Aspects of Solar Tech.
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Solar Law/Legislation

Mgmnt. of Energy Res. and Development
Instructor: French, Robert L. (817) 526-1271
Course Number: MSBA5382
Department: Management & Business
Program or Curriculum: Energy Management Sciences
Credits: 3
Student Level: College Graduate
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Solar Economics
Number of Times Taught: 1
Average Enrollment: 15

Passive Systems Design
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Solar Home Construction; Space Heating; Space Cooling

Solar Agricultural Appls.
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Passive Solar Technology; Process Heat, Agricultural

Solar Heating and Cooling
Department: Mgmnt. & Business
Program or Curriculum: Energy Management

Sciences
Student Level: College Graduate
Topics Covered Extensively: Energy Storage; Materials Research; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling

Solar Systems Design
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation

Solar Thermal Storage
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Appropriate Technology; Energy Storage; Passive Solar Technology

Wind Systems
Department: Mgmnt. & Business
Program or Curriculum: Energy Management Sciences
Student Level: College Graduate
Topics Covered Extensively: Wind Power, Central Systems; Wind Power, Small Systems

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HOUSTON BAPT UNIVERSITY (3576)
HOUSTON, Texas 77074
(713) 774-7661

SOLAR RELATED COURSES

Natural Science
Instructor: Mudiselle, Jerry L.
Course Number: 1414/24
Department: Science
Credits: 8
Student Level: Freshman or Sophomore
Duration: 22 Weeks, 6.0 hrs per week
Contact Hours: 132
Classroom: 88
Laboratory: 44
Number of Times Taught: 2
Average Enrollment: 100

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NORTH TEXAS ST UNIVERSITY (3594)
DENTON, Texas 76203
(817) 788-2026

SOLAR RELATED COURSES

Energy and Our Physical Environment
Instructor: Hehn, Jack
(817) 788-2626
Course Number: PHYS 308
Department: Arts & Sciences, Physics
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Photovoltaics; Solar Energy Policy Development; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 5
Average Enrollment: 21

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OUR LADY OF LAKE U (3598)
SAN ANTONIO, Texas 78285
(512) 434-6711

SOLAR RELATED COURSES

Owner Built Solar Air Heaters
Instructor: Nawrocki, David
(512) 822-9935
Department: Continuing Education
Student Level: All levels
Duration: 1 Weeks, 5.0 hrs per week
Contact Hours: 5
Classroom: 2
Laboratory: 3

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RICE UNIVERSITY (3604)
HOUSTON, Texas 77001
(713) 527-8101

PROGRAMS AND CURRICULA

Space Solar Power Research
Degree: PhD, MS,
Contact: Freeman, John W.
(713) 527-8101
Students Taking or Completing Offering: Researcher

SOLAR RELATED COURSES

Solar Power
Instructor: Bayazitoglu, Yildiz
(713) 527-8101
Course Number: 531
Department: Mechanical Engineering, Materials Science
Program or Curriculum: Space Solar Power Research
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Small Scale; Space Heating; Space Cooling
Number of Times Taught: 1
Average Enrollment: 22

Space Util. and Industrialization
Instructor: Freeman, J.
(713) 527-8101
Course Number: 488
Department: Space Physics
Program or Curriculum: Space Solar Power Research
Credits: 3
Student Level: Junior or Senior
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36

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SOUTHERN METH UNIVERSITY (3613)
DALLAS, Texas 75275
(214) 692-2000

SOLAR RELATED COURSES

Photovoltaic Solar Energy Conversion
Instructor: Chu, Ting L.
(214) 692-3014
Course Number: EE 6395
Department: Electrical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Materials Research; Photovoltaics
Number of Times Taught: 2
Average Enrollment: 8

Solar Energy Applications
Instructor: Blum, Harold
(214) 692-3498
Course Number: TF 4391
Department: Chem. Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 5 Weeks, 9.0 hrs per week
Contact Hours: 45
Classroom: 39
Laboratory: 6
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Systems Design; Domestic Hot Water; Process Heat, Agricultural; Process Heat, Industrial; Space Heating
Number of Times Taught: 3
Average Enrollment: 10

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STHWST TEX ST UNIVERSITY (3615)
SAN MARCOS, Texas 78666
(512) 245-2111

SOLAR RELATED COURSES

Physical Sciences
Instructor: Michalk, Victor E.
(512) 245-2131
Course Number: PHY 1314
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 48
Laboratory: 16
Average Enrollment: 30

Physical Sciences
Instructor: Michalk, Victor E.
(512) 245-2131
Course Number: PHY 1313
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 48
Laboratory: 16
Average Enrollment: 30

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TEXAS A&I UNIVERSITY (3639)
KINGSVILLE, Texas 78363
(512) 595-2111

SOLAR RELATED COURSES

Environmental Chemistry
Instructor: Beram, J. A.
Course Number: 304
Department: Chemistry
Credits: 3
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Number of Times Taught: 4
Average Enrollment: 15

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TEXAS A&M U MAIN CAMPUS (10366)
COLLEGE STATION, Texas 77843
(713) 845-3211

PROGRAMS AND CURRICULA

Graduate Program- Undergraduate Program
Degree: PhD, MS, Mechanical Engineering
Contact: Jenkins, Peter E. (713) 845-1251
Students Taking or Completing Offering: Educator, Researcher, Solar Engineer

SOLAR RELATED COURSES

Advanced Solar Thermal Processes
Instructor: Jenkins, Peter E. (713) 845-1251
Course Number: 689
Department: Mechanical Engineering
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 25

Alternative Architecture
Instructor: Zweig, Peter (713) 845-1015
Course Number: 645
Department: Architecture
Credits: 3
Student Level: College Graduate
Duration: 3 Weeks, 16.0 hrs per week
Contact Hours: 48
Number of Times Taught: 2
Average Enrollment: 15

Applied Solar Energy
Instructor: Jenkins, Peter E. (713) 845-1251
Course Number: ME 462
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Small Scale; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 45

Direct Energy Conversion
Instructor: Jenkins, Peter E. (713) 845-1251
Course Number: ME 473
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 3
Average Enrollment: 32

Energy Optimization Techniques
Instructor: Degelman, Larry O. (713) 845-1015
Course Number: ARCH 689
Department: Architecture
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 40
Laboratory: 5
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 8

Environmental Control Systems
Instructor: Trost, F. J. (713) 845-1017
Course Number: ARCH 633
Department: Architecture
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 40
Laboratory: 5
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Space Heating

Average Enrollment: 15

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TEXAS AT ARLINGTON, U OF (3656)
ARLINGTON, Texas 76019
(817) 273-2011

SOLAR RELATED COURSES

Solar and Direct Energy Conversion
Instructor: Darkazalli, Ghazi
(817) 273-2561
Course Number: 6319/4391
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 20

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TEXAS AT AUSTIN, U OF (3658)
AUSTIN, Texas 78712
(512) 471-3434

PROGRAMS AND CURRICULA

Solar-related Courses
Degree: PhD, MA, BA, Architecture related
Contact: Arumi-Noe, Francisco
(512) 471-4911
Students Taking or Completing Offering: Architect

SOLAR RELATED COURSES

Applied Solar Energy
Instructor: Vliet, Gary C.
(512) 471-7571
Course Number: ME 394J
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 33
Laboratory: 6
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 5
Average Enrollment: 20

Appropriate Technology
Instructor: Garrison, Michael
(512) 471-1922
Course Number: A 355
Department: Architecture
Program or Curriculum: Solar-related Courses
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Classroom: 72
Laboratory: 18
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 28

Energy Reporting
Instructor: Steenhiste, Richard Van
(512) 471-7700
Course Number: J365
Department: Journalism
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology
Number of Times Taught: 1
Average Enrollment: 8

Energy Simulation in Architecture
Instructor: Arumi-Noe, Francisco
(512) 471-4911
Course Number: 380M
Department: Architecture
Program or Curriculum: Solar-related Courses
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Systems Design; Space Heating; Space Cooling
Average Enrollment: 10

Env. Con. Syst.-Ener. Cons. Design
Instructor: Arumi-Noe, Francisco
(512) 471-4911
Course Number: 363
Department: Architecture
Program or Curriculum: Solar-related Courses
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 6.0 hrs per week
Contact Hours: 78
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology;

Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Average Enrollment: 10

Sol. Heat., Cool., Ener. Cons.-Bldgs.
Instructor: Vliet, G./ Jones, J. (512) 471-7571
Department: Continuing, Engineering Education
Student Level: All levels
Duration: 1 Weeks, 26.0 hrs per week
Contact Hours: 26
Classroom: 26
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 4
Average Enrollment: 15

Solar Energy
Instructor: Amstead, R. H. (512) 471-1331
Course Number: ME 378 M
Department: ME
Credits: 3
Student Level: Junior or Senior
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 25

Solar Technology Assessment
Instructor: Blissett, Marlan (512) 471-4962
Course Number: PA 682 A
Department: LBJ School of Public Affairs
Credits: 8
Student Level: College Graduate
Duration: 32 Weeks, 4.0 hrs per week
Contact Hours: 128
Classroom: 100
Laboratory: 28
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Law/Legislation; Domestic Hot Water; Process Heat, Agricultural; Process Heat, Industrial; Space Heating
Average Enrollment: 20

Solar Thermal Power
Instructor: Amstead, R. H. (512) 471-1331
Course Number: ME 379 M
Department: ME
Credits: 3
Student Level: Junior or Senior
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Topics Covered Extensively: Appropriate Technology; Intro. to Solar Energy; Elec'l Generation, Central; Elec'l Generation, Small Scale
Number of Times Taught: 30
Average Enrollment: 28

Survey: Environmental Control Systems
Instructor: Arumi-Noe, Francisco (512) 471-4911
Course Number: 340M
Department: Architecture
Program or Curriculum: Solar-related courses
Credits: 3
Student Level: Junior or Senior
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Home Construction; Space Heating; Space Cooling
Number of Times Taught: 8
Average Enrollment: 25

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TEXAS AT DALLAS, U OF (9741)
RICHARDSON, Texas 75080
(214) 690-2111

PROGRAMS AND CURRICULA

Sol. Ener. in Environ. Studs.
Degree: PHD, MS, Environmental Sciences
Contact: Moore, Joe E. (214) 690-2970
Students Taking or Completing Offering: Researcher, Solar Engineer

SOLAR RELATED COURSES

Advanced Solar Energy
Instructor: Rapp, D. (214) 690-2974
Course Number: ENEG6355
Department: NSM/ES
Program or Curriculum: Sol. Ener. in Environ. Studs.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45

Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Economics; Solar Systems Design; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 8

Energy
Instructor: Rapp, D./ Fenyves, E. (214) 690-2970
Course Number: ES5354
Department: NSM/ES
Program or Curriculum: Sol. Ener. in Environ. Studs.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion
Number of Times Taught: 1
Average Enrollment: 30

Energy Consumption-Resources & Impact
Instructor: Fenyves, E.
Course Number: ENSC5320
Department: NSM/ES
Program or Curriculum: Sol. Ener. in Environ. Studs.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Intro. to Solar Energy
Number of Times Taught: 5
Average Enrollment: 20

Solar Energy
Instructor: Rapp, D. (214) 690-2974
Course Number: ENEG6347
Department: NSCM/ES
Program or Curriculum: Sol. Ener. in Environ. Studs.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Intro. to Solar Energy; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 4
Average Enrollment: 15

Solar Energy Laboratory
Instructor: Rapp, D. (214) 690-2970
Course Number: ENEG6356
Department: NSM/ES
Program or Curriculum: Sol. Ener. in Environ. Studs.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Laboratory: 90
Topics Covered Extensively: Solar System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation
Number of Times Taught: 1
Average Enrollment: 8

Thermodynamics and Energy Conversion
Instructor: Rapp, D. (214) 690-2970
Course Number: ENEG6349
Department: NSM/ES
Program or Curriculum: Sol. Ener. in Environ. Studs.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Solar Energy Policy Development; Solar Systems Design; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Cooling
Number of Times Taught: 1
Average Enrollment: 11

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TEXAS AT EL PASO, U OF (3661)
EL PASO, Texas 79968
(915) 747-5000

PROGRAMS AND CURRICULA

Solar Energy Engineering
Degree: MS, Science
Contact: Whitacre, John (915) 747-5809
Students Taking or Completing Offering: Solar Engineer

SOLAR RELATED COURSES

Applications of Solar Energy
Instructor: Whitacre, John (915) 747-5450
Course Number: ME3456
Department: Mechanical Engineering
Program or Curriculum: Solar Energy Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45

Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer; Solar System Components; Solar Systems Design; Space Heating; Space Cooling

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TEXAS CHRISTIAN U (3636)
FORT WORTH, Texas 76129
(817) 926-2461

SOLAR RELATED COURSES

Energy and the Future
Instructor: Quarles, C. A.
(817) 921-7375
Course Number: 6413
Department: Physics
Credits: 3
Student Level: All levels
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Solar Economics; Solar Collector Evaluation/Design
Number of Times Taught: 2
Average Enrollment: 40

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TEXAS TECH UNIVERSITY (3644)
LUBBOCK, Texas 79409
(806) 742-2011

PROGRAMS AND CURRICULA

Interdisciplinary Engineering
Degree: PhD, Philosophy-Inter. Engin.
Contact: Gully, A. J.
(806) 742-3456
Students Taking or Completing Offering: Researcher, Solar Engineer

SOLAR RELATED COURSES

Energy and Housing
Instructor: Kiesling, E. W.
(806) 742-3472
Department: Cat., Ener. Res. and Coll. of Engin.
Program or Curriculum: Interdisciplinary Engineering
Student Level: College Graduate
Duration: 1 Weeks, 32.0 hrs per week
Contact Hours: 32
Classroom: 32
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating

Engin. Aspects-Res., Process., Util.
Instructor: Parker, Harry W.
(806) 742-3553
Course Number: CH.E. 4333
Department: Chemical Engineering
Program or Curriculum: Interdisciplinary Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion
Number of Times Taught: 4
Average Enrollment: 12

Housing and Energy as Consumer Issues
Instructor: McKown, Cora
(806) 742-3153
Course Number: 518
Department: Home Eco., Fam Mgmnt., Hous. Cons. Sci.
Program or Curriculum: Interdisciplinary Engineering
Credits: 3
Student Level: College Graduate
Duration: 1 Weeks, 45.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Energy Conservation; Marketing/Market Analysis
Number of Times Taught: 1
Average Enrollment: 25

Interdis. Appr.-Res. Energy Ed.
Instructor: McKown, Cora
(806) 742-3153
Course Number: I518
Department: Home Eco., Fam. Mgmnt., Hous. Cons. Sci.
Program or Curriculum: Interdisciplinary Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 3 Weeks, 15.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Marketing/Market Analysis; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Systems Design; Solar Systems Installation

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TRINITY UNIVERSITY (3647)
SAN ANTONIO, Texas 78284
(512) 736-7011

PROGRAMS AND CURRICULA

Solar Energy Graduate Prog.
Degree: MS, Sci.-Appld. Sol. Ener. or Sol. Ener. Stud.
Contact: Clark, Eugene (512) 736-7504
Students Taking or Completing Offering: Researcher, Solar Engineer, Solar Technician

SOLAR RELATED COURSES

Economic Analysis of Energy and Capital Projects
Instructor: Dorner, Fred H. (512) 736-7238
Course Number: BSN 390
Department: Business Administration
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Solar Economics; Elec'l Generation, Central; Space Cooling
Number of Times Taught: 1
Average Enrollment: 18

Heat Transfer and Thermodynamics
Instructor: Andrews, Robert (512) 736-7512
Course Number: ENGR 369G
Department: Engineering Science
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 3
Average Enrollment: 18

Intro. to Solar Energy Applications
Instructor: Clark, Eugene (512) 736-7504
Course Number: PHY 119
Department: Physics
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 1
Student Level: College Graduate
Duration: 15 Weeks, 1.0 hrs per week
Contact Hours: 15
Classroom: 15
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 15

Modeling and Computer Analysis
Instructor: Treat, C. H. (512) 736-7512
Course Number: ENGR 383S
Department: Engineering Science
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Industrial; Space Cooling
Number of Times Taught: 2
Average Enrollment: 15

Photovoltaics
Instructor: Loxsom, Fred (512) 736-7421
Course Number: PHYS 350G
Department: Physics
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Photovoltaics; Solar Systems Design; Elec'l Generation, Small Scale
Number of Times Taught: 1
Average Enrollment: 10

Physics of Solar Collectors
Instructor: Clark, Eugene (512) 736-7504
Course Number: PHYS 356
Department: Physics
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; 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; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation,

Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 15

Solar and Atmospheric Radiation
Instructor: Clark, Eugene
(512) 736-7504
Course Number: PHYS 387
Department: Physics
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy; Solar Energy Policy Development; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 15

Solar Energy System Components
Instructor: Treat, C. H.
(512) 736-7512
Course Number: ENGR 362G
Department: Engineering
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer; Marketing/Market Analysis; Materials Research; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: ?
Average Enrollment: 10

Solar Energy System Design
Instructor: Treat, C. H.
(512) 736-7512
Course Number: ENGR 395S
Department: Engineering Science
Program or Curriculum: Solar Energy Graduate Prog.
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Swimming Pool Heating; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 13

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U OF HOUSTON CEN CAMPUS (3652)
HOUSTON, Texas 77004
(713) 749-2214

SOLAR RELATED COURSES

Man, Architecture and Energy
Instructor: Way, George E.
(713) 749-1188
Course Number: 430T
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Space Heating; Space Cooling
Number of Times Taught: 3
Average Enrollment: 15

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WEST TEXAS ST UNIVERSITY (3665)
CANYON, Texas 79016
(806) 656-0111

SOLAR RELATED COURSES

Solar Energy: Res. and Rural Systems
Instructor: Nelson, Vaughn
(806) 656-3904
Course Number: 39901-1
Department: Physics
Credits: 3
Student Level: All levels
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Classroom: 51
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Domestic Hot Water; Space Heating; Wind

Power, Small Systems

Wind Energy and Wind Turbines
Instructor: Nelson, Vaughn
(806) 656-3904
Course Number: 39902-1
Department: Physics
Credits: 3
Student Level: All levels
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Classroom: 51
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Solar Systems Design; Wind Power, Small Systems

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Community/Junior Colleges

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: Tesler, 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/ Solar Energy Systems Specialist
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
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

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/ Solar Energy Systems Specialist
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
Number of Times Taught: 2
Average Enrollment: 25

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GRAYSON CO JUNIOR COLLEGE (3570)
DENISON, Texas 75020
(214) 465-6030

SOLAR RELATED COURSES

Energy Resources
Instructor: Roberts, John H.
(214) 456-6030
Course Number: SCI 134
Department: Engineering/Science
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; Energy Conversion; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 15

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LEE COLLEGE (3583)
BAYTOWN, Texas 77520
(713) 427-5611

SOLAR RELATED COURSES

Environmental Science
Instructor: Lehmberg, Verne
(713) 427-5691
Course Number: BIO 413
Department: Science
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: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Solar Collector Evaluation/Design

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NAVARRO COLLEGE (3593)
CORSICANA, Texas 75110
(214) 874-6501

PROGRAMS AND CURRICULA

Solar Energy Installers/Mechanics
Degree: OTHER, Solar Energy Installers, Mechanics
Contact: Kasprzyk, Ernest
(214) 874-6501
Students Taking or Completing Offering: Installer-Residential (Solar System), Installer-Commercial (Solar System)

Solar Engineering Technology
Degree: AD, Appl. Sci.-Sol. Engin. Tech.
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 Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Swimming Pool Heating; Space Heating; Space Cooling

Collectors, Ener. Stor., Inst. and Serv.
Instructor: Norman, Albion
(214) 874-6501
Course Number: SE1044
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; Intro. to Solar Energy; 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

Intro. to Solar Heating and Cooling
Instructor: Norman, Albian
(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'l 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

Materials and Material Handling
Instructor: Myers, Arthur
(214) 874-6501
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

Non-residential Appl. and Future Tech.
Instructor: Myers, Arthur (214) 874-6501
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; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling

Operational Diagnosis
Instructor: Myers, Arthur (214) 874-6501
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: 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

Sizing Design and Retrofit
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: Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

Solar Heating and Cooling Systems
Instructor: Myers, Arthur (214) 874-6501
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
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; 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; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling
Average Enrollment: 15

Solar Practicum
Instructor: Myers, Arthur (214) 874-6501
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 (214) 874-6501
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; Elec'l Generation, Central; Elec'l 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
(214) 255-5229

PROGRAMS AND CURRICULA

Solar Energy Technician
Degree: AD, Solar Technology
Contact: Knowles, Jim
(214) 255-5325
Students Taking or Completing Offering: Solar Technician

SOLAR RELATED COURSES

Energy Science I
Instructor: Knowles, Jim
(214) 255-5260
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
(214) 255-5260
Department: Scinece/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'l Generation, Central; Elec'l 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
Topics Covered Extensively: Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation

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/Technolgoy
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
(214) 255-5260
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

Technicial 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

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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 System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Space Heating
Number of Times Taught: 1
Average Enrollment: 38

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RANGER JUNIOR COLLEGE (3603)
RANGER, Texas 76470
(817) 647-3234

PROGRAMS AND CURRICULA

A/C and Refrig. - Sol. Ener. Option
Degree: AD, Applied Science
Contact: Stiles, Alton
(817) 647-3234
Students Taking or Completing Offering:
Solar Technician

SOLAR RELATED COURSES

Air Cond. and Ref. VII
Course Number: AR 281
Department: Air Cond. & Ref.
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 Heat. and Cool.
Course Number: AR 263
Department: Air Cond. & Refrig
Program or Curriculum: A/ C and Refrig. - Sol. Ener. Option
Credits: 6
Student Level: Freshman or Sophomore
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Space Cooling

Solar Thermal Energy Systems
Instructor: Stiles, Alton
(817) 647-3234
Course Number: AR 264
Department: Air Conditioning/Refrigeration
Program or Curriculum: A/ C and Refrig. - Sol. Ener. Option
Credits: 6
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 10.0 hrs per week
Contact Hours: 160
Classroom: 32
Laboratory: 128
Topics Covered Extensively: Plumbing 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; Elec'l Generation, Small Scale; Space Heating; Space Cooling

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TYLER JUNIOR COLLEGE (3648)
TYLER, Texas 75701
(214) 597-4281

PROGRAMS AND CURRICULA

Air Conditioning & Refrig. Tech.
Degree: AD, Applied Science
Contact: Minter, Richard T.
(214) 593-4401
Students Taking or Completing Offering:
Trade Specialty

SOLAR RELATED COURSES

Introduction to Solar Systems
Instructor: Robinson, Carol T.
(214) 592-8619
Course Number: AC 113S
Department: Technology
Program or Curriculum: Air Conditioning & Refrig. Tech.
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
Average Enrollment: 31

Solar Systems Installation
Instructor: Robinson, Carol T.
(214) 592-8619
Course Number: AC 223S
Department: Technology
Program or Curriculum: Air Conditioning & Refrig. Tech.
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 6.0 hrs per week
Contact Hours: 96
Classroom: 32
Laboratory: 64
Topics Covered Extensively: Solar System Components; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating
Average Enrollment: 18

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Vocational/Technical Colleges

TEX ST TECH RIO GRANDE (9225)
HARLINGEN, Texas 78550
(512) 425-4922

SOLAR RELATED COURSES

Solar Receivers
Instructor: Vogel, Harold
(512) 425-4922
Course Number: ACT214
Department: Air Cond. and Refrigeration Tech.
Credits: 2
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 2.0 hrs per week
Contact Hours: 24
Classroom: 12
Laboratory: 12
Topics Covered Extensively: Energy Conversion; Energy Storage; Plumbing Techniques; Solar System Components; Solar Systems Installation; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 18

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TEXAS STATE TECHNICAL INSTITUTE (90480)
Sweetwater, Texas 79556

SOLAR RELATED COURSES

**Training Course*
Department: Continuing Education
Contact Hours: 48
Topics Covered Extensively: Solar System Components; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating

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Other Educational Institutions

TRI-COLLEGE CONTINUING EDUCATION/VOCATIONAL TECHNICAL TRAINING (90130)
Abilene, Texas 79604

SOLAR RELATED COURSES

Solar Energy
Instructor: Hodgson, John
(915) 698-3096
Department: Continuing Education
Student Level: All levels
Duration: 7 Weeks, 2.0 hrs per week
Contact Hours: 14
Classroom: 14
Topics Covered Extensively: Energy

Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Space Heating
Number of Times Taught: 1
Average Enrollment: 11

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Colleges/Universities

UTAH STATE UNIVERSITY (3677)
LOGAN, Utah 84322
(801) 752-4100

SOLAR RELATED COURSES

Biometeorolgy Instruments
Instructor: Dirmhirn
(801) 752-4100
Course Number: 652
Department: Agri/Soil Sci. and Biometeorology
Credits: 3
Student Level: College Graduate
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 9
Laboratory: 27
Topics Covered Extensively: Appropriate Technology; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics
Number of Times Taught: 5
Average Enrollment: 9

Biometeorology
Instructor: Dirmhirn/ Hanks/ Wooldrige
(801) 752-4100
Course Number: 709
Department: Agri./Soil Sci. and Biometeorology
Credits: 3
Student Level: College Graduate
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Appropriate Technology; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics
Number of Times Taught: 5
Average Enrollment: 10

Envirnomental Remote Sensing
Instructor: Dirmhirn, I./ Baker, K.
(801) 725-7100
Course Number: 707
Department: Soil Sci & Biomet. Argiculture
Credits: 3
Student Level: College Graduate
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Appropriate Technology; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics
Number of Times Taught: 4
Average Enrollment: 8

Environmental Field Experiments
Instructor: Dirmhirn
(801) 752-4100
Course Number: 693
Department: Argi/Soil Sci. and Biometeo
Credits: 3
Student Level: College Graduate
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 9
Laboratory: 27
Topics Covered Extensively: Appropriate Technology; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics
Number of Times Taught: 4
Average Enrollment: 9

Instrumentation Lab
Instructor: Dirmhirn
(801) 752-4100
Course Number: 752
Department: Arti/Soil Sci. and Bicmeteo.
Credits: 3
Student Level: College Graduate
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 9
Laboratory: 27
Topics Covered Extensively: Appropriate Technology; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics
Number of Times Taught: 4
Average Enrollment: 8

Solar Energy Systems
Instructor: Phillips, W.F.
(801) 752-4100
Course Number: ME546
Department: Mech. Engrg.
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 12

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UTAH, UNIVERSITY OF (3675)
SALT LAKE CITY, Utah 84112
(801) 581-7211

SOLAR RELATED COURSES

Energy Conversion
Instructor: Boehm, R. F.
(801) 581-6441
Course Number: ME 561
Department: Engin., Mech. and Indus. Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion
Number of Times Taught: 10
Average Enrollment: 35

Solar Building Design
Instructor: Boehm, R. F.
(801) 581-6441
Department: Engin., Mech. and Indus. Engineering
Student Level: College Graduate
Duration: 1 Weeks, 10.0 hrs per week
Contact Hours: 10
Classroom: 10
Topics Covered Extensively: Energy Conservation; Energy Storage; Passive Solar Technology; Solar Systems Design; Space Heating

Thermal Applications of Solar Energy
Instructor: Boehm, R. F.
(801) 581-6441
Course Number: ME 563
Department: Engin., Mech. and Indus. Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 9 Weeks, 4.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Solar Collector Evaluation/Design
Number of Times Taught: 1
Average Enrollment: 25

Thermal Systems Design
Instructor: Boehm, R. F.
(801) 581-6441
Course Number: ME 562
Department: Engin., Mech. and Indus. Engineering
Credits: 4
Student Level: Junior or Senior
Duration: 9 Weeks, 4.0 hrs per week
Contact Hours: 36
Classroom: 36
Number of Times Taught: 6
Average Enrollment: 21

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WEBER STATE COLLEGE (3680)
OGDEN, Utah 84408
(801) 399-5941

SOLAR RELATED COURSES

**Solar Energy & Bldgs.*
Instructor: Capener, Robert
Department: Physio Dept.

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Community/Junior Colleges

DIXIE COLLEGE (3671)
SAINT GEORGE, Utah 84770
(801) 673-4811

PROGRAMS AND CURRICULA

Solar Technology
Degree: Certificate of Completion
Contact: Hacking, John
(801) 673-4811

SOLAR RELATED COURSES

Intro. 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
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Marketing/Market Analysis; Materials Research; 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; Space Heating; Space Cooling
Number of Times Taught: 12
Average Enrollment: 20

Solar Energy-Home Use Appls.
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
Topics Covered Extensively: Alternate Energy Sources, Energy Conservation; Energy Conversion; Energy Storage; 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 Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 9
Average Enrollment: 18

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Vocational/Technical Colleges

UTAH TECH COLLEGE SALT LK (5220)
SALT LAKE CITY, Utah 84107
(801) 299-3411

SOLAR RELATED COURSES

Alternate Energy
Instructor: Ingram, William W.
(801) 969-3411
Course Number: ADT 057E
Department: Architect
Student Level: All levels
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 20
Laboratory: 20
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Process Heat, Agricultural; Process Heat, Industrial
Number of Times Taught: 2
Average Enrollment: 22

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Colleges/Universities

GODDARD COLLEGE (3686)
PLAINFIELD, Vermont
(802) 454-8311

PROGRAMS AND CURRICULA

**Social Ecology*
Contact: Brookchin, Murray

SOLAR RELATED COURSES

**Dwelling Solar Processes*
Instructor: Park, J./ Troia, G.
Program or Curriculum: *Social Ecology
Duration: 11 Weeks, 6.0 hrs per week
Contact Hours: 66
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating

**Energy Efficient Shelter*
Instructor: Langdon, Bill
Program or Curriculum: *Social Ecology
Duration: 11 Weeks, 2.0 hrs per week
Contact Hours: 22
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design

**Shelter Workshop*
Instructor: Langdon, B./ Higgins, A.
Program or Curriculum: *Solar Ecology
Duration: 11 Weeks, 4.0 hrs per week
Contact Hours: 44
Topics Covered Extensively: Solar Home Construction

**Solar Workshop*
Instructor: Troia, Gene
Program or Curriculum: *Social Ecology
Duration: 11 Weeks, 2.0 hrs per week
Contact Hours: 22
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation

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MARLBORO COLLEGE (3690)
MARLBORO, Vermont
(802) 254-2393

PROGRAMS AND CURRICULA

Solar Energy Program
Degree: BS, Environmental Science
Contact: Hayes, John W.
(802) 254-2393

SOLAR RELATED COURSES

Solar Energy & Building Design
Instructor: Hayes, John W.
(802) 254-2393
Department: Science
Program or Curriculum: Solar Energy Program
Credits: 3
Student Level: Freshman or Sophomore
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 25

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MIDDLEBURY COLLEGE (3691)
MIDDLEBURY, Vermont
(802) 388-4948

PROGRAMS AND CURRICULA

Senior Work in Solar Energy
Degree: BA, Physics, Environmental Studies, Physics
Contact: Wolfson, Richard
(802) 388-7956
Students Taking or Completing Offering: Educator, Researcher

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SAINT MICHAEL'S COLLEGE (3694)
WINOOSKI, Vermont
(802) 655-2000

SOLAR RELATED COURSES

The Energy Crisis
Instructor: Casavant, Dominique P.
(802) 655-2000
Course Number: 131
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36

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Community/Junior Colleges

VERMONT, CNTY COLLEGE OF (11167)
MONTPELIER, Vermont
(802) 828-2401

SOLAR RELATED COURSES

Alternative Energy
Student Level: All levels
Duration: 3 Weeks, 12.0 hrs per week
Contact Hours: 36
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 3
Average Enrollment: 10

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Colleges/Universities

FERRUM COLLEGE (3711)
FERRUM, Virginia 24088
(703) 365-2121

PROGRAMS AND CURRICULA

Energy Technology
Degree: BS,
Contact: Bier, James/ Talbert, Roy
(703) 365-2121
Students Taking or Completing Offering:
Solar Technician

SOLAR RELATED COURSES

Energy
Instructor: Bier, James
(703) 365-2121
Course Number: 414
Department: Environmental studies
Program or
Curriculum: Energy Technology
Credits: 4
Student Level: Junior or Senior
Duration: 15 Weeks, 5.0 hrs per week
Contact Hours: 75
Classroom: 45
Laboratory: 30
Topics Covered Extensively: Energy Conservation; Space Heating
Number of Times Taught: 1
Average Enrollment: 20

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LYNCHBURG COLLEGE (3720)
LYNCHBURG, Virginia 24501
(804) 845-9071

SOLAR RELATED COURSES

Solar Energy
Instructor: Sigler, J.A.
(804) 845-9171
Course Number: 538
Department: Physics
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Appropriate Technology; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Photovoltaics; Solar System Components; Solar Collector Evaluation/Design; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating
Number of Times Taught: 1
Average Enrollment: 10

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OLD DOMINION UNIVERSITY (3728)
NORFOLK, Virginia 23508
(804) 489-6000

PROGRAMS AND CURRICULA

Power/Energy Conversion Option
Degree: PhD, MS, BS, Mechanical Engineering
Contact: Goglia, G. L.
(804) 489-6485
Students Taking or Completing Offering:
Researcher, Solar Engineer, Other

Solar Energy Systems
Degree: BS, OT,
Contact: Crossman, Gary R.
(804) 489-6574

SOLAR RELATED COURSES

Air Conditioning Systems
Instructor: Ferrari, R.E.
(804) 489-6574
Course Number: MET 470
Department: Engineering/Mechan. Engn. Tech.
Program or
Curriculum: Solar Energy Systems
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer; Space Heating; Space Cooling
Number of Times Taught: 20
Average Enrollment: 20

Energy Conversion
Instructor: Kovner, E.A.
(804) 489-6574
Course Number: MET 480
Department: Engineering/Mechan. Engn. Tech.
Program or
Curriculum: Solar Energy Systems
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Photovoltaics; Elec'l Generation, Small Scale
Number of Times Taught: 6
Average Enrollment: 20

Energy Conversion
Instructor: Roberts, A. S.
(804) 489-6485
Course Number: EMIE4/513
Department: Mechanical Engineering and Mechanics
Program or
Curriculum: Power/ Energy Conversion Option
Credits: 3

Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 39
Laboratory: 0
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Photovoltaics; Elec'l Generation, Small Scale
Number of Times Taught: 8
Average Enrollment: 12

Energy Systems
Instructor: Deal, Walter F. (804) 489-6461
Course Number: 243
Department: Vocational and Industrial Arts Education
Program or Curriculum: Power/ Energy Conversion Option
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Classroom: 45
Laboratory: 45
Topics Covered Extensively: Energy Conversion; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Testing and Evaluation; Domestic Hot Water
Number of Times Taught: 4
Average Enrollment: 15

Environmental Control
Instructor: Roberts, A.S. (804) 489-6485
Course Number: ENME4/512
Department: Mechanical Engineering and Mechanics
Program or Curriculum: Power/ Energy Conversion Option
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 38
Classroom: 28
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 10
Average Enrollment: 10

Power and Energy Laboratory
Instructor: Crossman, G.R. (804) 489-6574
Course Number: MET 465/485
Department: Engineering/Mechan. Engn. Tech.
Program or Curriculum: Solar Energy Systems
Credits: 2
Student Level: All levels
Duration: 30 Weeks, 3.0 hrs per week
Contact Hours: 90
Laboratory: 90
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 20
Average Enrollment: 15

Refrigeration Systems
Instructor: Kovner, E.A. (804) 489-6574
Course Number: MET 460
Department: Engineering/Mechan. Engn. Tech.
Program or Curriculum: Solar Energy Systems
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer; Space Cooling
Number of Times Taught: 20
Average Enrollment: 20

Solar Energy Systems 490
Instructor: Crossman, G.R. (804) 498-6574
Course Number: MET 490
Department: Engineering/Mechan. Engn. Tech.
Program or Curriculum: Solar Energy Systems
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Domestic Hot Water

Solar Power Engineering
Instructor: Roberts, A. Sidney (804) 489-6485
Course Number: ENME 4/516
Department: Mechanical Engineering and Mechanics
Program or Curriculum: Power/ Energy Conversion Option
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Energy Conversion; 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: 3
Average Enrollment: 15

Thermal Power Systems
Instructor: Kovner, E.A.
(804) 489-6574
Course Number: MET 450
Department: Engineering/Mechan. Engn Tech.
Program or Curriculum: Solar Energy Systems
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Heat and Energy Transfer
Number of Times Taught: 10
Average Enrollment: 20

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VA POLY INST AND STATE U (3754)
BLACKSBURG, Virginia 24061
(703) 951-6000

SOLAR RELATED COURSES

Building Systems Technology
Instructor: Schubert, B.P.
(703) 961-5512
Department: Architecture and Urban Studies
Credits: 9
Student Level: College Graduate
Duration: 27 Weeks, 3.0 hrs per week
Contact Hours: 81
Classroom: 54
Laboratory: 27
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 40

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VIRGINIA COMMONWEALTH U (3735)
RICHMOND, Virginia 23284
(804) 770-6472

SOLAR RELATED COURSES

General Energy Education Workshop
Instructor: Honnold, J. A./ Nelson, L. D.
(804) 257-1028
Course Number: EDU 651
Department: Sociology
Credits: 3
Student Level: College Graduate
Duration: 2 Weeks, 22.0 hrs per week
Contact Hours: 44
Classroom: 44
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 1
Average Enrollment: 43

Natural Resources and Society
Instructor: Honnold, J. A./ Nelson, L. D.
(804) 257-1028
Course Number: SOC 355
Department: Sociology and Anthropology
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources
Number of Times Taught: 1
Average Enrollment: 10

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VIRGINIA MAIN CAMPUS, U OF (6968)
CHARLOTTESVILLE, Virginia 22903
(804) 924-0311

SOLAR RELATED COURSES

Solar Energy - The Ultimate Resource
Instructor: Lilleleht, L.U.
(804) 924-7778
Course Number: ENGR 120
Department: Chem. Eng., Eng. & Applied Science
Credits: 2
Student Level: Freshman or Sophomore
Duration: 7 Weeks, 6.0 hrs per week
Contact Hours: 42
Classroom: 7
Laboratory: 35
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 35

Solar Energy Conversion and Appl.
Instructor: Jachetta, F. A.
(804) 924-7421
Course Number: ME 520
Department: Mech. and Aerospace Engr.
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 2
Average Enrollment: 23

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VIRGINIA MILITARY INST (3753)
LEXINGTON, Virginia 24450
(703) 463-6311

SOLAR RELATED COURSES

Advanced Thermodynamics
Instructor: Trandel, R.S.
(703) 463-6308
Course Number: ME 408
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 28
Laboratory: 28
Number of Times Taught: 1
Average Enrollment: 13

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Community/Junior Colleges

BLUE RIDGE CMTY COLLEGE (6819)
WEYERS CAVE, Virginia 24486
(703) 234-2461

SOLAR RELATED COURSES

Introduction to Solar Technology
Instructor: Chandler, Rupert P.
(703) 234-2461
Course Number: ENVR 154
Department: Engineering & Technologies
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 25

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DANVILLE CMTY COLLEGE (3758)
DANVILLE, Virginia 24541
(804) 797-3553

SOLAR RELATED COURSES

A Survey of Alternate Energy
Instructor: Solomon, Michael
(703) 797-3553
Course Number: PH103
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 25
Laboratory: 11
Topics Covered Extensively: Alternate Energy Sources; Passive Solar Technology; Photovoltaics

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LORD FAIRFAX CMTY COLLEGE (8659)
MIDDLETOWN, Virginia 22645
(703) 869-1120

SOLAR RELATED COURSES

Alternative Home Systems
Instructor: Nesbitt, Patti
Course Number: ENV 156
Credits: 3
Student Level: Freshman or Sophomore
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33

Buying Solar
Instructor: Lillis, J. W.
(703) 869-1120
Department: Continuing Education
Student Level: High School Graduate
Duration: 1 Weeks, 6.0 hrs per week
Contact Hours: 6
Classroom: 6
Number of Times Taught: 1
Average Enrollment: 20

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NORTHERN VA CMTY COLLEGE (3727)
ANNANDALE, Virginia 22003
(703) 323-3000

SOLAR RELATED COURSES

Solar Seminar & Project
Instructor: Nasseri, Kurosh H.
(202) 692-7591
Course Number: 198
Department: Environmental & Natural Science
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; Plumbing Techniques; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Space Cooling
Number of Times Taught: 2
Average Enrollment: 17

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SOUTHSIDE VA CMTY COLLEGE (8661)
ALBERTA, Virginia 23821
(804) 949-7111

PROGRAMS AND CURRICULA

Air Cond. Heat. & Refrig.
Degree: A, C Heat. & Refrig.
Contact: Varyhan, C.G.
(804) 949-7111
Students Taking or Completing Offering:
Contractor, Installer-Residential (Solar System), Installer-Commercial (Solar System)

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THOMAS NELSN CMTY COLLEGE (6871)
HAMPTON, Virginia 23670
(804) 826-4800

SOLAR RELATED COURSES

Solar Energy
Instructor: Pegg, Robert
(804) 827-3691
Department: Continuing Education
Student Level: All levels
Duration: 3 Weeks, 10.0 hrs per week
Contact Hours: 30
Classroom: 30
Topics Covered Extensively: Appropriate Technology; Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance
Number of Times Taught: 4
Average Enrollment: 15

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VA WESTERN CMTY COLLEGE (3760)
ROANOKE, Virginia 24015
(703) 344-2031

SOLAR RELATED COURSES

Solar Energy Systems Design
Instructor: Arminio, Robert
(703) 982-7395
Course Number: ARCG167
Department: Arch. Technology
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Topics Covered Extensively: Solar Systems Design

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Colleges/Universities

WASHINGTON ST UNIVERSITY (3800)
PULLMAN, Washington 99163
(509) 335-3564

SOLAR RELATED COURSES

Thermal Systems
Instructor: Plumb, O. A./ Englund, J. S.
(509) 335-3226
Course Number: ME 435
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 1
Average Enrollment: 35

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WASHINGTON, UNIVERSITY OF (3798)
SEATTLE, Washington 98195
(206) 543-2100

PROGRAMS AND CURRICULA

Energy Engineering
Degree: PHD, MS, Science in Engineering
Contact: Decher, R.
(206) 543-6067
Students Taking or Completing Offering: Researcher, Solar Engineer

SOLAR RELATED COURSES

Architectural Studies Options
Instructor: Heerwagen/ Varey
(205) 543-4180
Course Number: 502/3/4/5
Department: Architecture
Credits: 6
Student Level: College Graduate
Duration: 9 Weeks, 12.0 hrs per week
Contact Hours: 108
Laboratory: 108
Number of Times Taught: 1
Average Enrollment: 11

Des. and Use of Mech. Systems in Bldgs.
Instructor: Heerwagen, Dean R.
(206) 543-2132
Course Number: 432
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Number of Times Taught: 3
Average Enrollment: 30

Ener. Cons. Opp. for Bldg. Design and Use
Instructor: Heerwagen, Dean R.
(206) 543-2132
Course Number: 530
Department: Architecture
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30
Classroom: 30
Number of Times Taught: 3
Average Enrollment: 9

Ener. Cons.-Sol. Ener. Appls. in Bldgs.
Instructor: LaVigne, A. B.
(206) 543-6005
Course Number: 498
Department: Architecture and Urban Planning
Credits: 3
Student Level: Junior or Senior
Duration: 9 Weeks, 4.4 hrs per week
Contact Hours: 40
Classroom: 40
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Passive Solar Technology; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 20

Energy-Conscious Design Studio
Instructor: Millet, Marietta
(206) 543-4736
Course Number: 502/498
Department: Architecture
Credits: 6
Student Level: Junior or Senior
Duration: 11 Weeks, 12.0 hrs per week
Contact Hours: 132
Laboratory: 132
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage

Studies in the Science of the Built Environment
Instructor: Millet, Marietta S.
(206) 543-4736
Course Number: 531/498
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 40
Topics Covered Extensively: Energy Conservation

The Promise of Solar Energy
Instructor: Hyman, Barry
(206) 543-9038
Course Number: SMT583
Department: Prog. in Social Management of Tech.
Credits: 3
Student Level: College Graduate
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30

Topics Covered Extensively: Energy Storage; Intro. to Solar Energy; Marketing/Market Analysis; Passive Solar Technology; Solar Energy Policy Development; Solar Economics; Solar Law/Legislation
Number of Times Taught: 5
Average Enrollment: 20

Thermal Performance of Buildings
Instructor: Heerwagen, Dean R.
(206) 543-2132
Course Number: 431
Department: Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 10 Weeks, 4.0 hrs per week
Contact Hours: 40
Classroom: 40
Number of Times Taught: 1
Average Enrollment: 45

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Community/Junior Colleges

FORT STEILACOOM CC (5000)
TACOMA, Washington 98498
(206) 552-3948

SOLAR RELATED COURSES

Environmental Science
Instructor: Harding, Karen
(206) 964-6674
Course Number: 120
Department: Physical Science
Credits: 5
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 5.0 hrs per week
Contact Hours: 50
Classroom: 50
Number of Times Taught: 1
Average Enrollment: 25

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NORTH SEATTLE CC (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
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

Solar Energy
Instructor: Stepnich, Ivan
(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
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 Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water; Elec'l Generation, Central; Process Heat, Industrial; Space Heating
Number of Times Taught: 1
Average Enrollment: 25

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PENINSULA COLLEGE (3786)
PORT ANGELES, Washington 98362
(206) 452-9277

SOLAR RELATED COURSES

Residential Solar Heating Systems
Instructor: VanDeusen, George
(206) 452-9277
Course Number: T.E.275
Department: Engineering Technology
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.0 hrs per week
Contact Hours: 30

Classroom: 30
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Home Construction; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 40

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SPOKANE FLS CMTY COLLEGE (9544)
SPOKANE, Washington 99204
(509) 456-2810

SOLAR RELATED COURSES

How To Bld. Your Own Sol. H/W Heater
Instructor: Roscher, Ted
(509) 456-2840
Department: Evening[Adult Continuing Edu.]
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 Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Materials Research; 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
Number of Times Taught: 1
Average Enrollment: 13

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TACOMA COMMUNITY COLLEGE (3796)
TACOMA, Washington 98465
(206) 756-5100

SOLAR RELATED COURSES

Energy: Past-Present-Future
Course Number: ENGR. 120
Department: Engineering
Credits: 2
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 2.0 hrs per week
Contact Hours: 20
Classroom: 20
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 2

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Vocational/Technical Colleges

OLYMPIA TECH CMTY COLLEGE (5372)
OLYMPIA, Washington 98502
(206) 753-3000

SOLAR RELATED COURSES

Solar Energy for Space Heating and Hot Water
Instructor: Oatman, Martin
(206) 753-3005
Course Number: CONS 198
Department: Continuing Education
Student Level: College Graduate
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Testing and Evaluation; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 20

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Colleges/Universities

WEST VIRGINIA UNIVERSITY (3827)
MORGANTOWN, West Virginia 26506
(304) 293-0111

SOLAR RELATED COURSES

Aerospace Problems
Instructor: Toth, John
(304) 293-5339
Course Number: AE280
Department: Engineering Aerospace
Credits: 3
Student Level: All levels
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 48
Laboratory: 16
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Testing and Evaluation
Number of Times Taught: 4
Average Enrollment: 15

Appropriate Technology Seminar
Instructor: Devore, Paul W.
(304) 293-3803
Course Number: 390
Department: Technology Education
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Intro. to Solar Energy; Passive Solar Technology
Number of Times Taught: 2
Average Enrollment: 15

Energy and Society
Instructor: Depue, David
(304) 293-3803
Course Number: 280
Department: Technology Education
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Biomass Conversion; Energy Conservation; Energy Conversion; Passive Solar Technology
Number of Times Taught: 1
Average Enrollment: 12

Production Systems - Technical
Instructor: Pytlik, Edward
(304) 293-3803
Course Number: 321
Department: Technology Education
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 4.0 hrs per week
Contact Hours: 60
Classroom: 60
Topics Covered Extensively: Energy Conversion; Energy Storage; Marketing/Market Analysis; Materials Research; Passive Solar Technology
Number of Times Taught: 10
Average Enrollment: 10

Technology - History and Development
Instructor: Pytlick, Edward
(304) 293-3803
Course Number: 400
Department: Technology Education
Credits: 3
Student Level: College Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Number of Times Taught: 12
Average Enrollment: 12

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Community/Junior Colleges

PARKERSBURG CMTY COLLEGE (3828)
PARKERSBURG, West Virginia 26101
(304) 424-8000

SOLAR RELATED COURSES

Spec. Top. in Air Cond/Refrig: Solar Heat
Instructor: Schmidt, Larry
(304) 424-8256
Course Number: ACR 299
Department: Air Cond./Ref. Technology
Credits: 4
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; 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
Number of Times Taught: 1
Average Enrollment: 13

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POTOMAC STATE COLLEGE (3829)
KEYSER, West Virginia 26726
(304) 788-3011

SOLAR RELATED COURSES

Engineering Design II
Instructor: Mor, Gordon
Course Number: II
Department: Engineering
Credits: 3
Student Level: Freshman or Sophomore
Duration: 15 Weeks, 6.0 hrs per week
Contact Hours: 90
Classroom: 45
Laboratory: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Energy Storage; Intro. to Solar Energy; Solar Home Construction; Solar Collector Evaluation/Design
Number of Times Taught: 2
Average Enrollment: 45

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Colleges/Universities

LAWRENCE UNIVERSITY (3856)
APPLETON, Wisconsin 54911
(414) 739-3681

SOLAR RELATED COURSES

Energy and the Environment
Instructor: Joel, Peteranne
(414) 739-3681
Course Number: CHEM 9
Department: Chemistry
Credits: 3
Student Level: All levels
Duration: 10 Weeks, 3.5 hrs per week
Contact Hours: 35
Classroom: 35
Number of Times Taught: 6
Average Enrollment: 22

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MARQUETTE UNIVERSITY (3863)
1515 W. Wisconsin Ave.
MILWAUKEE, Wisconsin 53233
(414) 224-7700

PROGRAMS AND CURRICULA

Energy Engineering
Degree: AD, Engineering
Contact: Jaskovski, S.V.
(414) 224-6820
Students Taking or Completing Offering:
Solar Engineer

SOLAR RELATED COURSES

Solar Energy Engineering, I
Instructor: Jaskovski, S.V.
(414) 224-6820
Course Number: 128
Department: Elect. Eng.
Program or Curriculum: Energy Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; 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; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 22

Solar Energy Engineering, II
Instructor: Jaskovski, S.V.
(414) 224-6820
Course Number: 129
Department: Elect. Eng.
Program or Curriculum: Energy Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; 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; Domestic Hot Water; Elec'l Generation, Central; Elec'l Generation, Small Scale; Process Heat, Agricultural; Process Heat, Industrial; Space Heating; Space Cooling; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 22

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MILWAUKEE SCH ENGINEERING (3868)
MILWAUKEE, Wisconsin 53201
(414) 272-8720

SOLAR RELATED COURSES

Solar Energy
Instructor: Mallmann, A. James
(414) 272-8720
Course Number: PH-320
Department: Physics
Credits: 3
Student Level: Junior or Senior
Duration: 11 Weeks, 3.0 hrs per week
Contact Hours: 33
Classroom: 33
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating; Wind Power, Small Systems
Number of Times Taught: 4
Average Enrollment: 20

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NICOLET COLLEGE- TECH INST (8919)
RHINELANDER, Wisconsin 54501
(715) 369-4410

SOLAR RELATED COURSES

Consumer Awareness-Solar Energy
Instructor: Horstketter, John J. (715) 369-4424
Course Number: 421-2144
Department: Tech. Ed. Division
Student Level: All levels
Duration: 10 Weeks, 2.5 hrs per week
Contact Hours: 25
Classroom: 25
Topics Covered Extensively: Appropriate Technology; Energy Conversion; 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: 1
Average Enrollment: 35

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RIPON COLLEGE (3884)
RIPON, Wisconsin 54971
(414) 748-8118

SOLAR RELATED COURSES

Topics in Physics/Energy Resources
Instructor: Broshar, Wayne (414) 748-5377
Course Number: 100
Department: Physics
Credits: 4
Student Level: All levels
Duration: 14 Weeks, 4.0 hrs per week
Contact Hours: 56
Classroom: 56
Number of Times Taught: 2
Average Enrollment: 40

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WISCONSIN EAU CLAIRE, U OF (3917)
EAU CLAIRE, Wisconsin 54701
(715) 836-0123

SOLAR RELATED COURSES

Solar Energy
Instructor: Janke, Robert (715) 836-3718
Course Number: 336
Department: Geography
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 70

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WISCONSIN GREEN BAY, U OF (3899)
GREEN BAY, Wisconsin 54302
(414) 465-2121

SOLAR RELATED COURSES

Introduction to Solar Energy
Instructor: Norman, Jack (414) 465-2276
Course Number: 862/483X
Department: Science & Environmental Change
Credits: 3
Student Level: Freshman or Sophomore
Duration: 8 Weeks, 5.2 hrs per week
Contact Hours: 42
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 Energy Policy Development; Solar System Components; Solar Systems Design; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 5

Solar and Alternate Energy Systems
Instructor: Mehra, Anjani/ Lanz, Robert (414) 465-2371
Course Number: 862/415
Department: Interdis. - Sci. and Envirn. Change
Credits: 3
Student Level: Junior or Senior
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Topics Covered Extensively: Alternate Energy Sources; Photovoltaics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

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WISCONSIN LA CROSSE, U OF (3919)
LA CROSSE, Wisconsin 54601
(608) 785-8000

SOLAR RELATED COURSES

Energy Problems-Solar Options
Instructor: Egbert, G./ Gystrom, D. (608) 785-8431
Department: University Outreach and Physics

Student Level: All levels
Duration: 1 Weeks, 24.0 hrs per week
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 3
Average Enrollment: 40

Introduction to Solar Energy
Instructor: Egbert, G./ Fystrom, D. (608) 785-8431
Course Number: 105
Department: Arts, Letters & Science - Physics
Credits: 2
Student Level: All levels
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Classroom: 26
Laboratory: 6
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Intro. to Solar Energy
Number of Times Taught: 1
Average Enrollment: 17

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WISCONSIN MADISON, U OF (3895)
MADISON, Wisconsin 53706
(608) 262-1234

PROGRAMS AND CURRICULA

Solar Energy Research Program
Degree: PHD, MS, Mech. Eng., Chem. Eng.
Contact: Duffie, J.A. (608) 263-1587
Students Taking or Completing Offering: Researcher, Solar Engineer

SOLAR RELATED COURSES

Solar Energy Technology
Instructor: Duffie, J. A. (608) 263-1587
Course Number: ME/CHE 567
Department: Engineering
Program or Curriculum: Solar Energy Research Program
Student Level: Junior or Senior
Duration: 16 Weeks, 2.0 hrs per week
Contact Hours: 32
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design
Number of Times Taught: 10
Average Enrollment: 40

Solar Radiation and Wind Energy
Instructor: Stearns, Charles R. (608) 262-0780
Course Number: 330
Department: L and S Meteorology
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Alternate Energy Sources; Heat and Energy Transfer; Intro. to Solar Energy; Wind Power, Small Systems
Number of Times Taught: 2
Average Enrollment: 21

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WISCONSIN MILWAUKEE, U OF (3896)
MILWAUKEE, Wisconsin 53201
(414) 963-4444

PROGRAMS AND CURRICULA

Solar Architecture
Degree: Architecture
Contact: Catanese, Anthony James (414) 983-4016
Students Taking or Completing Offering: Architect

SOLAR RELATED COURSES

Energy Conscious Design
Instructor: Dent, S./ Ollwang, J./ Schade, J. (414) 963-5650
Course Number: 470/770
Department: Architecture and Urban Planning
Program or Curriculum: Solar Architecture
Credits: 9
Student Level: Junior or Senior
Duration: 16 Weeks, 16.0 hrs per week
Contact Hours: 256
Classroom: 52
Laboratory: 204
Topics Covered Extensively: Energy Conservation; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Systems Design; Space Heating; Space Cooling
Number of Times Taught: 6
Average Enrollment: 10

Energy Design Fundamentals
Instructor: Shada, John (414) 963-4014
Course Number: ARCH 497
Department: Architecture
Program or Curriculum: Solar Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating

Number of Times Taught: 3
Average Enrollment: 30

Energy Design Fundamentals II
Instructor: Dent, Stephen D.
(414) 963-5650
Course Number: 497
Department: Architecture and Urban Planning
Program or Curriculum: Solar Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 35

Opt. in Energy Conscious Design
Instructor: Schade, John
(414) 963-4014
Course Number: ARC470/770
Department: Architecture
Program or Curriculum: Solar Architecture
Credits: 9
Student Level: Junior or Senior
Duration: 15 Weeks, 9.0 hrs per week
Contact Hours: 135
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Solar Economics; Solar Home Construction; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 3
Average Enrollment: 30

Solar Dwelling Design
Instructor: Dent, Stephen D.
(414) 963-5650
Course Number: 497
Department: Architecture and Urban Planning
Program or Curriculum: Solar Architecture
Credits: 3
Student Level: Junior or Senior
Duration: 4 Weeks, 10.0 hrs per week
Contact Hours: 40
Topics Covered Extensively: Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Space Heating
Number of Times Taught: 1
Average Enrollment: 25

Solar Engineering
Instructor: Neusen, K.F.
(414) 963-5001
Course Number: 330-436
Department: Engr. & Appl. Sci./Energetics
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 40
Laboratory: 5
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Space Heating
Number of Times Taught: 2
Average Enrollment: 18

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WISCONSIN OSHKOSH, U OF (9630)
OSHKOSH, Wisconsin 54901
(414) 424-1234

SOLAR RELATED COURSES

Solar Energy
Instructor: Passow, M. W.
(414) 424-4430
Course Number: 82-755
Department: Physics
Credits: 3
Student Level: College Graduate
Duration: 3 Weeks, 20.0 hrs per week
Contact Hours: 60
Classroom: 30
Laboratory: 30
Topics Covered Extensively: Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 16

Solar Heating
Instructor: Passow, M. W.
(414) 424-4430
Course Number: 82-355
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 14 Weeks, 3.0 hrs per week
Contact Hours: 42
Classroom: 42
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 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: 18

Solar Home Heating
Instructor: Passow, M. W.
(414) 424-4430
Department: Physics-Continuing Ed.
Student Level: All levels
Duration: 4 Weeks, 3.0 hrs per week
Contact Hours: 12
Classroom: 12
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 2
Average Enrollment: 75

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WISCONSIN PARKSIDE, U OF (5015)
KENOSHA, Wisconsin 53141
(414) 553-2121

SOLAR RELATED COURSES

Energy Alternatives
Instructor: Firebaugh, Morris
(414) 553-2465
Course Number: 67-140
Department: Physics
Credits: 1
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Classroom: 15
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Intro. to Solar Energy
Number of Times Taught: 6
Average Enrollment: 25

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WISCONSIN PLATTEVL, U OF (3921)
PLATTEVILLE, Wisconsin 53818
(608) 342-1234

SOLAR RELATED COURSES

Solar Heating Applications
Instructor: Fiedler, Ross A.
(608) 342-1721
Course Number: ME 460
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 48
Topics Covered Extensively: Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating

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WISCONSIN STEVENS PNT, U OF (3924)
STEVENS POINT, Wisconsin 54481
(715) 346-0123

SOLAR RELATED COURSES

Energy in Today's World
Instructor: Taylor, Allen G.
(715) 346-2791
Course Number: 100
Department: Physics
Credits: 3
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 4.0 hrs per week
Contact Hours: 64
Classroom: 32
Laboratory: 32
Number of Times Taught: 1
Average Enrollment: 22

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WISCONSIN STOUT, U OF (3915)
MENOMONIE, Wisconsin 54751
(715) 232-0123

SOLAR RELATED COURSES

Alternative Energy
Instructor: Rhoads, Charles
(714) 232-1384
Course Number: 110-596
Department: Applied Science - Energy & Trans.
Credits: 2
Student Level: Junior or Senior
Duration: 2 Weeks, 18.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Alternate Energy Sources; Intro. to Solar Energy; Solar System Components; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 25

Energy in Industry
Instructor: Rhoads, Charles
(715) 232-1156
Course Number: 110-101
Department: Industry and Technology
Credits: 2
Student Level: Freshman or Sophomore
Duration: 9 Weeks, 6.0 hrs per week
Contact Hours: 54
Classroom: 27
Laboratory: 27
Number of Times Taught: 20
Average Enrollment: 50

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WISCONSIN WHITEWATER, U OF (3926)
WHITEWATER, Wisconsin 53190
(414) 472-1234

SOLAR RELATED COURSES

Residential Solar Heating
Instructor: Shinners, Carl. W.
(414) 473-2247
Course Number: 82/490-690
Department: Physics
Credits: 3
Student Level: College Graduate
Duration: 2 Weeks, 30.0 hrs per week
Contact Hours: 60
Classroom: 20
Laboratory: 40
Topics Covered Extensively: Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 25

Solar Energy Applications
Instructor: Shinners, Carl
(414) 472-1075
Course Number: 82460
Department: Physics
Credits: 3
Student Level: All levels
Duration: 17 Weeks, 3.0 hrs per week
Contact Hours: 51
Classroom: 51
Topics Covered Extensively: Biomass Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating; Wind Power, Small Systems
Number of Times Taught: 6
Average Enrollment: 40

Solar Home Heating
Instructor: Shinners, Carl W.
(414) 472-1075
Department: Physics
Student Level: High School Graduate
Duration: 6 Weeks, 3.0 hrs per week
Contact Hours: 18
Classroom: 15
Laboratory: 3
Topics Covered Extensively: Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 35

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DISTRICT ONE TECH INST (5304)
EAU CLAIRE, Wisconsin 54701
(715) 836-3975

SOLAR RELATED COURSES

Alternate Energy Systems
Instructor: Dougherty, Thomas A.
(705) 836-2828
Department: Air Conditioning Technology
Credits: 3
Student Level: High School Graduate
Duration: 18 Weeks, 4.0 hrs per week
Contact Hours: 72
Classroom: 36
Laboratory: 36
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Home Construction; Solar Law/Legislation; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Domestic Hot Water; Space Heating; Space Cooling

Solar Energy
Department: Evening College
Student Level: All levels
Duration: 6 Weeks, 2.0 hrs per week
Contact Hours: 12
Topics Covered Extensively: Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design

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MILWAUKEE AREA TECH C (3866)
MILWAUKEE, Wisconsin 53203
(414) 278-6600

SOLAR RELATED COURSES

**Ener. Cons. & Alt. Ener. Sources*

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MORAINE PARK TECH INST (9256)
FOND DU LAC, Wisconsin 54935
(414) 922-8611

PROGRAMS AND CURRICULA

Solar Energy
Contact: Pasch, Rodney
(414) 922-8611
Students Taking or Completing Offering: Contractor, Do-it-yourself Homeowner, Electrician, Plumber, Sheet Metal Worker

SOLAR RELATED COURSES

Solar App. for Construction Industry
Instructor: Pasch, Rodney
(414) 922-8611
Course Number: 401-479
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 2
Student Level: All levels
Duration: 1 Weeks, 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.
(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.
(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.
(414) 922-9611
Course Number: 401-482
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 1
Student Level: All levels
Duration: 1 Weeks, 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 & Wind
Instructor: Pasch, Rodney
(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 App.
Instructor: Pasch, R.
(414) 922-8611
Course Number: 401-484
Department: Trade and Technical
Program or Curriculum: Solar Energy
Credits: 2
Student Level: All levels
Duration: 1 Weeks, 6.0 hrs per week
Contact Hours: 6
Topics Covered Extensively: Elec'l Generation, Small Scale; Wind Power, Small Systems
Number of Times Taught: 1
Average Enrollment: 40

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NORTH CENTRAL TECH INST (5387)
WAUSAU, Wisconsin 54401
(715) 675-3331

SOLAR RELATED COURSES

Principles of Solar
Instructor: Beckman, Ronald
(715) 675-3331
Course Number: 614
Department: Technical Education
Credits: 3
Student Level: All levels
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Appropriate Technology; Energy Conservation; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Solar System Components; Solar Economics; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Domestic Hot Water; Space Heating; Space Cooling

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WAUKESHA COUNTY TECH INST (9258)
PEWAUKEE, Wisconsin 53072
(414) 691-3200

SOLAR RELATED COURSES

Solar Energy
Student Level: All levels
Contact Hours: 12
Classroom: 8
Laboratory: 4
Number of Times Taught: 2
Average Enrollment: 37

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WESTERN WIS TECH INST (3840)
LA CROSSE, Wisconsin 54601
(608) 782-6238

SOLAR RELATED COURSES

Solar Energy for Homes
Instructor: Witt, Don
(608) 785-9200
Course Number: 601/164
Department: Trade & Industry
Credits: 3
Student Level: Freshman or Sophomore
Duration: 12 Weeks, 3.0 hrs per week
Contact Hours: 36
Classroom: 36
Topics Covered Extensively: Energy Storage; Heat and Energy Transfer; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Space Heating
Number of Times Taught: 1
Average Enrollment: 25

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WISCONSIN INDIAN VOCATIONAL, TECH., AND ADULT EDUCATION (90140)
600 North 21 Street
Superior, Wisconsin 54880

PROGRAMS AND CURRICULA

Facility Engineering Technician
Degree: AD, Engineering
Contact: Bergstrom, Robert
(715) 394-6677
Students Taking or Completing Offering:
Solar Technician

SOLAR RELATED COURSES

Evaluating Alternate Energy Sources
Instructor: Ziesler, Anton
(715) 394-6677
Department: Technical Institute
Program or Curriculum: Facility Engineering Technician
Credits: 6
Student Level: High School Graduate
Duration: 18 Weeks, 6.0 hrs per week
Contact Hours: 108
Classroom: 54
Laboratory: 54
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Intro. to Solar Energy; Passive Solar Technology; Photovoltaics; Solar System Components; Solar Economics; Solar Systems Installation; Solar Systems Maintenance; Solar Systems Testing and Evaluation; Wind Power, Small Systems

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Colleges/Universities

WYOMING, UNIVERSITY OF (3932)
LARAMIE, Wyoming 82071
(307) 766-4121

SOLAR RELATED COURSES

Alternative Sources of Energy
Instructor: Hill, John
(307) 766-4224
Course Number: CE692M
Department: Civil Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 35
Laboratory: 10
Topics Covered Extensively: Appropriate Technology; Energy Conversion; Energy Storage; Intro. to Solar Energy; Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation; Elec'l Generation, Central; Elec'l Generation, Small Scale; Space Heating; Wind Power, Central Systems; Wind Power, Small Systems
Number of Times Taught: 3
Average Enrollment: 10

Atmos. Sci. Prob.: Atmospheric Radiation
Instructor: Veal, Donald L.
(307) 766-3245
Course Number: 890M
Department: Engineering/Atmospheric Science
Credits: 3
Student Level: College Graduate
Duration: 13 Weeks, 3.0 hrs per week
Contact Hours: 39
Classroom: 39
Number of Times Taught: 2
Average Enrollment: 3

Conservation of Natural Resources
Instructor: Beiswenger, Ron
(307) 766-4204
Course Number: 604D
Department: Geography
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 54
Topics Covered Extensively: Appropriate Technology
Number of Times Taught: 14
Average Enrollment: 80

Energy Activities for Teachers I
Instructor: Sindt, Vince
(307) 766-4384
Course Number: NS 413M
Department: Nat. Sci.
Credits: 1
Student Level: All levels
Duration: 5 Weeks, 3.0 hrs per week
Contact Hours: 15
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Wind Power, Small Systems
Number of Times Taught: 5
Average Enrollment: 20

Energy Activities for Teachers II
Instructor: Sindt, Vince
(307) 766-4384
Course Number: NS679M
Department: Nat Sci
Credits: 2
Student Level: Junior or Senior
Duration: 2 Weeks, 25.0 hrs per week
Contact Hours: 50
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Intro. to Solar Energy; Materials Research; Passive Solar Technology; Wind Power, Small Systems
Number of Times Taught: 5
Average Enrollment: 20

Energy Conversion
Instructor: Amr, Abdel-Fattah
(307) 766-6139
Course Number: 602
Department: Mechanical Engineering
Credits: 3
Student Level: Junior or Senior
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 45
Topics Covered Extensively: Alternate Energy Sources; Energy Conversion; Intro. to Solar Energy; Solar System Components
Number of Times Taught: 4
Average Enrollment: 20

Environmental Education for Teachers
Instructor: Beiswenger, Ron
(307) 766-4204
Course Number: 671D
Department: Ed. Curriculum and Instruct.
Credits: 3
Student Level: Junior or Senior
Duration: 18 Weeks, 4.0 hrs per week
Contact Hours: 72
Classroom: 36
Laboratory: 36
Number of Times Taught: 14
Average Enrollment: 15

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Community/Junior Colleges

CASPER COLLEGE (3928)
CASPER, Wyoming 82601
(307) 268-2110

SOLAR RELATED COURSES

Residential Energy Conservation
Instructor: Hartman, Paul
(307) 268-2604
Course Number: 73-070
Department: Construction Ed.
Credits: 1
Student Level: Freshman or Sophomore
Duration: 10 Weeks, 1.5 hrs per week
Contact Hours: 15
Classroom: 15
Number of Times Taught: 2
Average Enrollment: 6

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CENTRAL WYOMING COLLEGE (7289)
RIVERTON, Wyoming 82501
(307) 856-9291

SOLAR RELATED COURSES

Solar Energy
Instructor: Hansen, M. R.
(307) 856-9291
Course Number: ENGR 240
Department: Life & Physical Sciences
Credits: 1
Student Level: Freshman or Sophomore
Duration: 16 Weeks, 3.0 hrs per week
Contact Hours: 48
Classroom: 0
Laboratory: 48
Topics Covered Extensively: Intro. to Solar Energy; Solar Collector Evaluation/Design; Solar Systems Testing and Evaluation; Domestic Hot Water
Number of Times Taught: 1
Average Enrollment: 6

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LARAMIE CO CMTY COLLEGE (9259)
CHEYENNE, Wyoming 82001
(307) 634-5853

SOLAR RELATED COURSES

Energy and Man
Instructor: Edwards, William C.
Course Number: SCI103
Department: Science
Credits: 3
Student Level: Freshman or Sophomore
Duration: 18 Weeks, 3.0 hrs per week
Contact Hours: 54
Classroom: 40
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation
Number of Times Taught: 2
Average Enrollment: 12

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NORTHWEST CMTY COLLEGE (3931)
POWELL, Wyoming 82435
(307) 754-6111

SOLAR RELATED COURSES

Energy & the Future
Instructor: Eager, John
(307) 754-6957
Course Number: 31-170
Department: General Science
Credits: 2
Student Level: Freshman or Sophomore
Duration: 17 Weeks, 2.0 hrs per week
Contact Hours: 34
Classroom: 34
Topics Covered Extensively: Energy Conservation; Energy Conversion; Heat and Energy Transfer
Number of Times Taught: 6
Average Enrollment: 20

Energy from the Sun
Instructor: Eager, John
(307) 754-6457
Course Number: 34-280
Department: Physics
Credits: 2
Student Level: All levels
Duration: 17 Weeks, 2.0 hrs per week
Contact Hours: 34
Classroom: 24
Laboratory: 10
Topics Covered Extensively: Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Passive Solar Technology; Solar System Components; Solar Economics; Solar Collector Evaluation/Design; Solar Systems Design; Domestic Hot Water; Space Heating
Number of Times Taught: 1
Average Enrollment: 20

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SHERIDAN COLLEGE (3930)
SHERIDAN, Wyoming 82801
(307) 674-6446

PROGRAMS AND CURRICULA

Solar Energy Technology
Degree: AD, Engineering Technology - Solar Option
Contact: Ohm, Kenneth R.
(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
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 Heat. and Cool.
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; Elec'l Generation, Small Scale; Space Heating; Space Cooling

Solar Collectors
Course Number: 151
Program or Curriculum: Solar Energy Technology
Student Level: Freshman or Sophomore
Topics Covered Extensively: Solar System Components; Solar Collector Evaluation/Design; Solar Systems Design; Solar Systems Testing and Evaluation

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: 40
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, 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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WESTERN WYO CMTY COLLEGE (3933)
ROCK SPRINGS, Wyoming 82901
(307) 382-2121

SOLAR RELATED COURSES

Solar Home Planning
Instructor: Bowles, Marvin (307) 382-2121
Course Number: 52-299
Department: Building Trades
Credits: 3
Student Level: High School Graduate
Duration: 15 Weeks, 3.0 hrs per week
Contact Hours: 45
Classroom: 30
Laboratory: 15
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Biomass Conversion; Energy Conservation; Energy Conversion; Energy Storage; Heat and Energy Transfer; Intro. to Solar Energy; Photovoltaics; Plumbing Techniques; Sheet Metal Techniques; Solar System Components; Solar Home Construction; Solar Systems Design; Solar Systems Installation; Domestic Hot Water; Space Heating; Wind Power; Small Systems
Number of Times Taught: 4
Average Enrollment: 35

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Index to Institutions

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----- E -----

----- F -----

----- G -----

----- N -----

----- O -----

----- X -----

----- Y -----

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Index to Programs and Curricula

----- T -----

----- U -----

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