

## US State Level – College/Community College/Institute/University Education

### ARIZONA STATE UNIVERSITY

- Energy-related coursework includes:
  - Environmental Rating Systems for Buildings
  - Photovoltaic System Design
  - Building Energy Analysis
  - Energy Analysis and Techniques
  - Environmental Control Systems
  - Experimental Evaluation
- MS Degree - M.S. in Technology degree, with a concentration in Environmental Technology Management
  - Available through a web based distance learning format. Three areas of study are available: Environmental Management, International Environmental Management, or Emergency Management.
- Ph.D. program that focuses exclusively on the sustainability.

### CENTER FOR ENERGY RESEARCH/EDUCATION/SERVICE

Ball State University  
Muncie, IN

- Offers a special Interdepartmental Education Program of Clustered Academic Minors in Environmentally Sustainable Practices. The minors offered include; Environmental Policy, Sustainable Land Systems, and Environmental Context for Business.

### BOSTON ARCHITECTURAL CENTER

Boston, MA

- Offers a Certificate in Sustainable Design, which may be earned at either the undergraduate or graduate level. Students seeking a graduate certificate must have a prior bachelor's degree and take a minimum of five of the six required courses at the graduate level.

### THE CENTER FOR ENERGY AND ENVIRONMENTAL STUDIES

Boston University  
Boston, MA

<http://www.bu.edu/cees/>

- Joint BA/MA in Energy and Environmental Analysis.

### CEDAR VALLEY COLLEGE IN LANCASTER, TEXAS

- Started an Energy Efficient Green Building Institute that trains students to create energy-efficient homes in both new and existing housing.
- Since 85 percent of the program is offered online, it has attracted students from across Texas
- Course listings attached

## US State Level – College/Community College/Institute/University Education

### FLORIDA'S ALTERNATIVE ENERGY BANNER CENTER

[http://www.irecusa.org/fileadmin/user\\_upload/WorkforceDevelopmentDocs/Ventre\\_Florida\\_Banner\\_Center.pdf](http://www.irecusa.org/fileadmin/user_upload/WorkforceDevelopmentDocs/Ventre_Florida_Banner_Center.pdf)

- Twelve Banner Center funded at \$6.2million
  1. Alternative Energy (FSEC)
  2. Aviation/Aerospace
  3. Biotechnology
  4. Career Academies
  5. Construction
  6. Energy (utility lineman)
  7. Financial Services
  8. Health Sciences
  9. Homeland Security
  10. Information Systems
  11. Logistics & Distribution
  12. Manufacturing
- Funding Agency: Workforce Florida, Inc.
- Concept: Center must be industry driven.
- Amount: \$500,000
- Time Period: One year
- Key Components
  - Advisory Council – meets 3 times/year
  - Focus Group – meets 3 times/year
  - Train-the-trainer – curriculum development
  - Partner training – curriculum development
  - Job placement
  - Outreach – website and newsletter
  - Sustainability planning

### LANE COMMUNITY COLLEGE

Eugene, Oregon

- Trains renewable-energy technicians in a two-year program that teaches students how to improve the energy efficiency of homes and businesses and install solar-power and wind-power systems.
- Certificates include:
  - Diesel Technology (AAS, 2-yr cert),
  - Electrician Apprenticeship Technologies (AAS, 2-yr cert, 1-yr cert)
  - Electronic Technology (AAS),
  - Energy Management Technician (AAS),
  - Renewable Energy Technician Option (AAS)

### LANSING COMMUNITY COLLEGE

Lansing, Michigan

- Offers an Associate degree in Alternative Energy Technologies to prepare technicians for building, operating, or repairing alternative energy applications in geothermal, wind, solar, biomass or fuel cells. The school's two state-of-the-art classrooms provide hands-on training in commercial alternative energy equipment, including hydrogen fuel cell systems with computer aided diagnostics.

## US State Level – College/Community College/Institute/University Education

### MIDDLESEX COMMUNITY COLLEGE – BEDFORD AND LOWELL, MA (MA)

[http://www.irecusa.org/fileadmin/user\\_upload/WorkforceDevelopmentDocs/Klein\\_MA\\_Community\\_Colleges\\_Collaborate.pdf](http://www.irecusa.org/fileadmin/user_upload/WorkforceDevelopmentDocs/Klein_MA_Community_Colleges_Collaborate.pdf)

- Expanding Environment Program
  - Environmental Studies
  - Environmental Science with Lab
  - Effects of the Environment on Health (online)
  - Renewable Energy (online)
- Invited to join Cape Cod and Greenfield CC's on NSF grant proposal
  - Develop installer certificate and associate degree programs
  - Greater Lowell Vo-Tech
  - Minuteman Regional High School
  - Business and industry training
- Future
  - State-wide collaboration
  - Curriculum
  - Expand Certificate/degree Offerings
  - Energy Policy
  - Funding opportunities
  - Raise campus awareness
  - Sustainability Advisory Committee

### MIDWESTERN INSTITUTE OF ENERGY

Tarkio, MO

- Provides a renewable energy certificate program at the Masters Level as well as an Associate and Bachelor of Science degrees in energy sciences and energy engineering. Students gain instruction in Bio-Mass energy, Geothermal and Wind Energy Technologies, Energy efficient vehicles, hydrogen and fuel cells, as well as solar design and energy building designs and retrofitting.

### MOUNT WACHUSETT COMMUNITY COLLEGE

Gardner, MA

- Courses include; Renewable Energy Sources, Introduction to Energy Management Principles, and Energy Efficiency and Conservation. The college even utilizes, biomass, wind and, PV power.

### NORTH CAROLINA SOLAR CENTER

Raleigh, NC

[http://www.irecusa.org/fileadmin/user\\_upload/WorkforceDevelopmentDocs/Carpenter\\_NCSU\\_S MARTT\\_Challenge.pdf](http://www.irecusa.org/fileadmin/user_upload/WorkforceDevelopmentDocs/Carpenter_NCSU_S MARTT_Challenge.pdf)

- NC Solar Center-Outreach, Engagement, Extension, and Service
  - Junior Solar Sprint-middle school program
  - SMARTT Challenge-high school program
    - Teacher training
    - School support
    - Communication with schools wikis, e-mail, phone, visits...
    - Collaboration with schools, DPI, colleges at university, community colleges
  - 24' Mobile Classroom
  - Solar House tours

## US State Level – College/Community College/Institute/University Education

- NEW Green Research for Incorporating Data in the Classroom- **GRIDc (funded by NSF)**
- 3D virtual worlds, games, and simulations
- Teacher workshops (wind energy and turbines, renewable energy technologies)
- NC Solar Center - K-12 Outreach
  - Work with community colleges in area of green workforce and early college programs
  - Middle-to-high school mentoring and transition
  - Develop additional teacher and student programs in K-12-particularly to reach females and minorities
  - Work with underrepresented populations in economically disadvantaged areas
  - Create more open source and online opportunities available globally
  - Seek additional funding

### **OREGON RENEWABLE ENERGY CENTER (OREC)**

Oregon Institute of Technology

Wilsonville, Oregon

- Offers a B.S. in Renewable Energy Systems (RES)

### **SAN JUAN COLLEGE**

Farmington, NM

- Has a Renewable Energy Program based on design/installation of renewable technologies, 2-year degree. Concentration in Photovoltaic Systems is offered as an AAS degree and/or a one year certificate. Includes hands-on electrical training.
  - Focuses on; PV, passive and active solar thermal, wind, microhydro, and hydrogen fuel cells.

### **UNIVERSITY OF CALIFORNIA, DAVIS – ENERGY EFFICIENCY CENTER**

- Course offerings in energy efficiency, resource management certification, and degree programs featuring energy efficiency in design, engineering, and business innovation.
  - Classes include; Innovation in Energy Efficiency, The Economics of Energy Efficiency and Climate Change Mitigation and, Energy Efficiency: Understanding the Other Side of the Meter.

### **UNIVERSITY OF ILLINOIS, ENERGY RESOURCES CENTER**

Energy Resources Center, Science and Engineering Offices

Chicago, Illinois

- The Energy Resources Center has resources available to develop curriculum materials for a variety of topics. Additionally, ERC provides energy auditor/energy efficiency training to a selected team of high school students each year, as well as an "energy camp," which offers a week of more intense training to these same students.