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Overview

The goal of this ATE Regional Center is to address the demonstrated high demand for renewable energy technicians in southern and central California as a multi-county consortium. This four year grant is allowing the Center to complete objectives in five areas:

1. Development and refinement of modular in-class, on-line, and hybrid renewable energy curricula integrated into degree pathways.
2. Implementation of a technical teacher professional development program in renewable energy which will allow current and future teachers for community colleges and high schools to acquire the technical knowledge and pedagogical skills to teach renewable energy in their classrooms.
3. Develop and implement a 2+2+2 pathway through partnership with high schools and universities to allow students interested in renewable energy careers to have a defined career ladder with multiple exit points integrated with industry certifications and college certificate and degree attainment.
4. Conduct continuous assessment and evaluation with imbedded targeted research of curricular and professional development strategies to ensure that student, faculty, and industry goals are attained.
5. Disseminate both the products and the partnership process to maximize the impact both regionally and nationally.

Partnerships

CREATE is a joint effort between nine community colleges, high schools, California State Universities and more than 50 large high-tech engineering and technology employers.

CREATE is a regional approach to educating renewable energy technicians with a goal to educate the future workforce in a wide range of emerging and high-demand fields. CREATE colleges work together, and in conjunction with regional employers, to provide students with high-quality, industry relevant educational options. Students who are exploring renewable energy employment opportunities, upgrading industry relevant skills or planning to continue their education at a four-year university can all benefit from a renewable energy education at one of the CREATE partner institutions.

CREATE Partner Colleges:

Cerro Coso Community College, Ridgecrest
College of the Canyons, Santa Clarita
College of the Desert , Palm Desert
Cuesta College, San Luis Obispo
Oxnard College, Oxnard
Porterville College, Porterville
Merced College, Merced
Lompoc High School, Lompoc
Santa Barbara City College, Santa Barbara

To learn more, please visit our website at: www.create-california.org

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CREATE works closely with industry to develop programs that closely match the skills needed for successful employees. In December 2009, CREATE hosted the Southwestern U.S. Energy Employer Summit, which brought utilities such as PG&E, LADWP, Sempra Energy together with solar, wind, and education representatives to discuss future employee needs in the Southwestern U.S. in the area of energy. This meeting was one of eight sponsored by NSF across the U.S. In November 2010, CREATE sponsored a DACUM of wind technician jobs across California. This DACUM was led by Dennis Faber of the NSF ATE TIME Center. Representatives of wind companies across California met and provided an in-depth analysis of skills and these will be used to validate the national AWEA skills set and to conduct a gap analysis of existing curricula. Collaboration with the NSF-funded Laramie Community College (WY) wind program is leading to the development of a new multi-college wind curriculum in California.

Since then CREATE faculty have met with solar industry employers in meetings and focus groups to refine several pathways for solar PV and solar thermal technical education in the multi-county region served by CREATE educational institutions. These pathways are being pilot tested and all energy curricula developed and adapted by CREATE will be made available for free download on the create website.

Professional Development

The CREATE consortium itself continues to be a long-running 15 year successful experiment in cross-educational institution collaboration and professional development. The technical faculty have learned to develop pedagogically sound, technically innovative curricula in emerging areas by working on a monthly basis with colleagues in the similar disciplines from other educational institutions and with industry employers. Over 28,000 students have completed at least one CREATE course. Examples of other current professional development activities include:

CREATE has worked in collaboration with the Department of Energy in 2011 to allow faculty to participate in California-based North American Board of Certified Energy Practitioners (NABCEP) solar PV and solar thermal Train-the-Trainer workshops. All of the CREATE faculty members educated in these workshops were able to sit for the NABCEP certification and all passed.

In addition to the professional development collaboration with the Department of Energy, CREATE hosts a Teaching Skills workshop annually to improve the quality of teaching skills for energy instructors. As the foundational core of an award-winning program, the TSW has been developed over decades to assist community college technical instructors make significant improvement in the planning and delivery of their instruction. The Teaching Skills Workshop is based on “microteaching,” a longstanding approach to practicing teaching. An upcoming innovation for CREATE’s pedagogical work in Spring 2012 will be a new on-line Getting Results teacher education and support system, based on materials developed by NSF-funded WGBH Boston project.

Career Pathways

Several of CREATE’s partner institutions are developing energy career pathways work for 2011 and 2012 including high school energy curricula led by Lompoc High School and career pathways for community colleges led by College of the Desert.



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*To learn more, please visit our website at
www.create-california.org*