



SEED CENTER
MENTOR CONNECT PROJECT:
Connecting Colleges for Sustainability Skill-Building

ACKNOWLEDGMENTS



The American Association of Community Colleges (AACC) is the primary advocacy organization for the nation's more than 1,100 community, junior, and technical colleges and their more than 13 million students. Community colleges are the largest and fastest growing sector of higher education. Headquartered in Washington, D.C., AACC has been in operation since 1920.



This publication is a product of the SEED (Sustainability Education and Economic Development) Center established by AACC. SEED aims to advance sustainability and green education and training practices at community colleges by sharing innovative practices to help college administrators, faculty, and staff build the green economy. More than 470 community colleges are members of SEED and more than 30 college presidents make up the Sustainability Task Force.

For more information about AACC and community colleges, see www.aacc.nche.edu.

For more information about the SEED Center, see www.theseedcenter.org.

**This work and publication were made possible through generous support from
THE KRESGE FOUNDATION**

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SPECIAL THANKS

AACC would like to thank the 2012 colleges participating in the Mentor Connect program. See Appendix A for the 2012 mentors.

INTRODUCTION

AACC's SEED Center Mentor Connect program pairs best-in-class green colleges with "mentee" colleges in an effort to build and expand programs that prepare students for careers in clean energy and sustainability-related fields. The benefits of college-to-college mentoring are well-documented, but this program marks the first time the concept has been applied on a national scale to green and sustainability programs at community colleges. With 470 community colleges pursuing sustainability in some form, and with many struggling to define the curricular opportunities, this kind of technical assistance can be an effective way to replicate the most innovative community college practices. As such, this model also aligns with the recommendations of AACC's 21st-Century Commission on the Future of Community Colleges to bolster support for college reform.

The challenges community colleges face in building comprehensive sustainability programming vary greatly across institutions. Some struggle to determine the local labor market demand for skill sets and occupations in

areas such as waste treatment and wind technology. Others are attempting to mobilize faculty across disciplines to integrate sustainability concepts into existing courses. And most colleges are confronting organizational resource issues working to find funding to pay for it all.

The Mentor Connect program is designed to help colleges identify the challenges they face and begin to address them using proven practices. The program connects colleges with peer mentors from the growing pool of community college experts at AACC's SEED Center. These experts are primarily community college faculty and administrators who have succeeded in building or overseeing this kind of programming. At the end of the engagement, mentee colleges are expected to demonstrate a strengthened program that will ultimately lead to increased college access and completion, and/or a stronger institutional commitment to sustainability. As important, it is expected that these sharing sessions lead to a mutually beneficial long-term college-to-college relationship.

SEE APPENDIX A FOR A LIST OF MENTORS FOR THE 2012 PROGRAM.

★ G-1 | 2012 MENTOR CONNECT COHORT

MENTOR COLLEGES	CHALLENGE AREA	MENTEE COLLEGES
LOS ANGELES TRADE TECHNICAL COLLEGE	DEFINING LOCAL GREEN LABOR MARKET DEMAND	MONROE COMMUNITY COLLEGE (NY)
DAVIDSON COUNTY COMMUNITY COLLEGE AND WAKE TECHNICAL COLLEGE (NC)	INTEGRATING SUSTAINABILITY ACROSS CURRICULUM	KENTUCKY COMMUNITY AND TECHNICAL COLLEGE SYSTEM
SANTA FE COMMUNITY COLLEGE (NM)	INSTITUTIONALIZING SUSTAINABILITY	CLOVER PARK TECHNICAL COLLEGE (WA)
GEORGIA PIEDMONT TECHNICAL COLLEGE	ENVIRONMENTAL ENGINEERING PROGRAM DESIGN	ATHENS TECHNICAL COLLEGE (GA)
LANE COMMUNITY COLLEGE (OR)	CAMPUS SUSTAINABILITY PLANNING	ROSE STATE COLLEGE (OK)

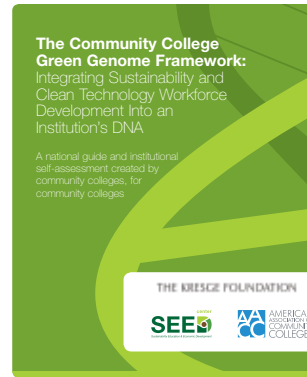
MENTOR CONNECT PROCESS

As a first step, selected mentee colleges complete AACC's SEED Center Green Genome Online Self-Assessment, a diagnostic tool designed to help colleges prioritize where they need assistance building comprehensive, institutional-wide sustainability education and training programs. ★ SEE G-2 <http://theseedcenter.org/Special-Pages/ACC-151-Green-Genome-Report%28sm%291-17.pdf>

Mentee colleges use information from the assessment to draft project plans and secure senior administrative

support for their participation in the program. Mentees are then matched with SEED's expert mentors based on need and fit. Over a period of nine months, the pairs engage in a series of working conference calls and site visits. ★ SEE G-3

2012 was the pilot year and already some exciting outcomes have occurred.



★ G-2 | MENTOR CONNECT PROCESS



★ G-3 | 9-MONTH PROJECT OUTCOMES

INSTITUTION	OUTCOMES
Kentucky Community and Technical College System	Beginning of system-wide sustainability curriculum integration; automotive faculty, across the system, certified in hybrid and electric vehicle technology
Athens Technical College	Revamped program design, advisory board, and equipment list aligning environmental engineering program with local labor market
Monroe Community College	Clean technology niche validated and path set for re-engineered HVAC career pathway to include renewable energy certification
Rose State College	Organizational sustainability policies and procedures in place, including formalized campus sustainability committee
Clover Park Technical College	Revamped campus-wide sustainability plan and beginning of full campus effort to integrate sustainability into curriculum

MENTOR CONNECT STORIES

SUSTAINABILITY ACROSS CURRICULA:

Kentucky Community and Technical College System/
Wake Technical Community College and Davidson County
Community College



16 colleges, 70 campuses
Enrollment: 97,000

The Challenge: For the past couple of years, the Kentucky Community and Technical College System (KCTCS) has been working to integrate sustainability skills across the curriculum, including general education and program areas of transportation, agriculture, building and construction, energy, and workforce development. The “KCTCS Green+ Sustainability Initiative,” as the effort is called, has active support from the KCTCS Board of Regents, president, and chancellor, and will ultimately be a powerful framework for the system’s 16 colleges as they move toward making more uniform program improvements. Implementing the framework, however, will be challenging especially concerning abstract concepts like sustainability, for which numerous definitions and standards exist nationally.

The Solution: Within the Mentor Connect program, KCTCS administered two professional development opportunities. The first was a weeklong training for 17 automotive instructors from 11 different colleges getting certified in electric and hybrid vehicle technology. The cohort will be developing standardized curriculum, including course revision and new course development. As the electric and hybrid vehicle industry grows in the

NORTH CAROLINA CODE GREEN SUPER CURRICULUM IMPROVEMENT PROJECT

What: A two-year project with the goal of developing, refining, and modifying energy, building, environment, transportation, and engineering technology

Who: More than 200 faculty members representing multiple program areas from 58 North Carolina community colleges

Outcomes:

- Revitalized applied science programs and courses with specialized credentials in both curriculum and continuing education programs
- Continuing-education-to-curriculum articulations
- Students skilled in the sustainability technologies

“[This is] the most sweeping curriculum improvement project in the history of the NC Community College System.”

—System President Dr. Scott Ralls

Commonwealth, these training programs will be crucial to creating a talent pipeline for these technology shifts. KCTCS aimed its second professional development opportunity at helping a broader legion of faculty and staff to gain a better understanding about incorporating sustainability principles across curricula. It was designed by KCTCS’ Green+ Sustainability Team and its paired mentors, Holly Weir of Davidson County Community College and Butch Grove of Wake Technical Community College. Weir and Grove were members of a team that led a similar effort in North Carolina: the Code Green Super Curriculum Improvement Project. Goals of the North Carolina project included revamping entire sectors of the system’s technical education programs, consolidating more than 80 curricula into 32, and impacting

thousands of students in what the state deemed to be critical sustainability-focused areas.

The daylong professional development opportunity in Kentucky was offered to 32 faculty and staff leaders¹ from 15 KCTCS colleges. The training provided participants the opportunity to:

- Devise common definitions of sustainability;
- Learn to inventory current courses that might be considered sustainability-focused;
- Review different types of sustainability lesson plans and modules; and
- Explore how sustainability might be integrated into the system's general education courses.

“For us, modifying curriculum was an important objective,” Weir said. “But our Code Green initiative also created an invaluable vehicle to bring colleges from across the state together to share sustainability-related practices. Like we did, Kentucky will realize how many innovative things are occurring.”

This particular session laid an important foundation for KCTCS and its newly trained sustainability champions. Additional professional development opportunities are being planned to help colleges implement their sustainability education efforts, share practices across the Commonwealth, and meet the objectives of the KCTCS Green+ Sustainability Initiative.



Automotive instructors from Kentucky technical colleges in the hybrid vehicle technology professional development program.

Front Row L-R: Todd Nickens, KY-Tech; Jerry Clemons, ECTC; Tony Wallace, Maysville CTC, Rowan Campus; Mark Quarto, Instructor, Automotive Research and Design; Clevern Chadwell, Somerset CC Back Row L-R: Doug Poteet, ECTC; Tim Jervis, Jefferson CTC; Tom Selzer, Gateway CTC; Leslie Pike, ECTC; Steve Johnson, Bluegrass CTC; Ricky Harris, Somerset CC; John Chism, ECTC; Jeremy Stephens, Bowling Green CTC; Ralph Kidd, Hazard CTC; Ronnie Daniels, Southeast CTC; Lewis Nall, Owensboro CTC; John Bradley, Ashland CTC; Simeon Gammage, Somerset CC

ENVIRONMENTAL PROGRAM DESIGN:

Athens Technical College/Georgia Piedmont Technical College



Athens, GA
Enrollment: 5,111

The Challenge: As part of a \$13 million grant from the U.S. Department of Labor for Trade Adjustment Assistance Community College and Career Training, Athens Technical College (ATC) is developing an environmental engineering technology degree program. The goal is to prepare students for entry-level opportunities in area environmental consulting firms, energy service companies, regulatory bodies, and graduate-level studies. ATC is targeting two populations: students seeking longer-term degrees and a growing number of displaced workers seeking rapid retraining and employment. To develop this new program area for the college, ATC needed strong partners and robust input on program design from a variety of academic and industry stakeholders.

The Solution: ATC paired with Georgia Piedmont Technical College (GPTC) and Brian Lovell, director of Green Technologies Academy/Building Automation Systems. GPTC and ATC are 70 miles apart but had little history of collaboration. Lovell is a former small business owner in the heating, ventilation, and air conditioning (HVAC) and building controls industry. He had just created the country's first associate degree program in building automation, which was a recent participant in a multimillion-dollar grant from the National Science Foundation. GPTC's program has a 98 percent placement rate.

Lovell assisted ATC in the conceptualization of the environmental engineering technology program (as well as related electrical and mechanical technology degree programs), including recommendations for laboratory training equipment and key industry partners.

Together, they are also exploring the possibility of the incorporation of building automation courses into their existing HVAC programs, all tied to regionally based industry-recognized credentials. Within these courses, students would learn to install and repair increasingly energy-efficient building controls technology.

Lovell has agreed to join the environmental engineering technology program's advisory board.

Lovell will also continue to work with ATC on a related and innovative program component—the creation of campus living laboratory projects.² As part of the GPTC building automation curriculum, students perform regular maintenance on and monitor new energy-efficient heating and cooling equipment on campus.

“This model provides students access to cutting-edge energy technologies and brings relevancy to our curriculum,” Lovell said. “It also enhances students’ systems thinking, where they learn how an entire building consumes energy and how even simple behavior changes can drastically lower utility costs.”

GPTC will help ATC adapt these types of projects by sharing course learning outcomes and practices for how to unite campus facilities staff and faculty in building safe learning environments for students.

“The opportunity to talk with Brian as well as the other mentors in the program was a tremendous benefit,” said Dan Smith, vice president for institutional effectiveness at ATC. “The relationship going forward for us will be very important.”

¹ Faculty areas represented: liberal arts, sciences, allied health, humanities, and technical and career education. Staff areas represented: business services, facilities, career assessment, workforce solutions, academic affairs, and institutional effectiveness.

² Sustainability-related campus facility projects (e.g., new classroom energy-efficiency improvements, new building solar panels) where students install, repair, monitor, and/or study the technology to gain valuable real-world skills.

VALIDATING YOUR CLEAN TECHNOLOGY NICHE AND PATHWAY:

Monroe Community College/Los Angeles Trade Technical College



Rochester, NY
Enrollment: 17,699

The Challenge: After state support for several renewable energy courses waned, Monroe Community College (MCC), like many colleges in the post-federal stimulus era, had to reassess which clean technology workforce offerings merited future investment. MCC's longer-term objective was to create seamless pathways from its workforce curriculum (e.g., solar thermal training) into existing credit programming by pairing industry-recognized training and credentials with credit courses and degree programs. MCC's challenge was that there is little clear labor market data to show which clean technology industries and occupations may grow or emerge in the Finger Lakes region.

The Solution: Los Angeles Trade Technical College (LATTC) mentors Marcy Drummond and Marcia Wilson worked with MCC staff to use LATTC's forthcoming environmental analysis tool, "Defining Your College's Competitive Advantage in the Emerging Green Economy: A Blueprint for Building High Quality, Green Programs of Study." The tool helps colleges identify the environmental factors that would likely determine which clean technology occupations will be in high demand and around which training programs should be built. For example, colleges can use the tool to begin to understand their regional capacity for clean technology innovation (e.g., is more local investment capital going to wind or energy storage industries?) And, colleges can learn to examine the attitudes of their local residents toward concepts like sustainable development (e.g., would my community push for local policies that might incent certain clean technology growth?) <http://college.lattc.edu/green/green-competitive-advantage-guide/>

MCC completed the exercises to help validate the importance of renewable energies (solar, in particular) and energy efficiency as training targets. Most critical, MCC subsequently used the tool to bridge noncredit programming to credit-based degrees in these occupational areas. Through a new career pathway approach, MCC will be integrating its once stand-alone solar thermal technology certificate program into its existing Associate in Applied Science in heating, ventilation, and air conditioning and refrigeration. With the help of LATTC, MCC will be using a "stackable" certificates model. This model, which has proven to be successful in helping student achievement, provides students a clear set of foundational, industry-recognized competencies as they work toward shorter-term certifications. These certifications are stacked as the student completes credit courses progressing toward an associate degree and beyond. The model has only just begun to be adapted to clean-technology-related industry sectors.

"Through this mentoring program, we are making strides to leverage our existing sustainability courses into a broader and stronger program that will likely attract more students and put them on a path toward real careers in our community," said Todd Oldham, vice president of workforce development at MCC.



Mentoring session at AACC's Workforce Development Institute conference, San Diego, January 2013.

Left-right: Dr. Marcia Wilson, Director of Institutional Effectiveness and Innovation, LATTC; Dr. Marcy Drummond, Vice President of Institutional Effectiveness and Innovation, LATTC; Dr. Todd Oldham, Vice President, Economic Development and Innovative Workforce Services, Monroe CC

BUILDING THE ORGANIZATIONAL INFRASTRUCTURE FOR COLLEGEWIDE SUSTAINABILITY:

Rose State College/Lane Community College



Midwest City, OK
Enrollment: 8,150

The Challenge: Rose State College (RSC) faced the challenge of leveraging the passion of a small number of campus sustainability champions into a larger institutional green movement. In doing so, it would give credibility and structure to an emergence of scattered green activities.

NEW INSTITUTIONAL SUSTAINABILITY PRINCIPLES AT ROSE STATE COLLEGE

(sample from college's policy and procedures manual)

- Nurture environmental stewardship and literacy across the curriculum.
- Commit to the design and construction of campus facilities using green building materials and methods.
- Expect all members of the college community (administration, faculty, staff, and students) to consider environmental stewardship in day-to-day decisions.
- Engage the community in open dialogue about sustainability and sharing insights and models of responsible practice.



Lane Community College faculty member Roger Ebbage mentors energy management students.

The Solution: RSC paired with Lane Community College (LCC) and Roger Ebbage, head of the Northwest Energy Education Institute and a faculty member at LCC. Ebbage built one of the first community college energy management programs in the U.S. and was instrumental in leveraging that program into a broader, college-wide sustainability movement. LCC was one of the first community colleges to sign the American College and University Presidents' Climate Commitment.

Over the course of the Mentor Connect program, Ebbage helped RSC build a structure for the college's sustainability efforts, advising in the creation of a college-wide sustainability task force and providing guidance for a master sustainability plan. Ebbage also helped RSC identify regional opportunities for large-scale energy efficiency project partnerships.

One example is Tinker Air Force Base, located in RSC's service area. The base recently announced the Air Force's largest retrofit project (\$80.6 million) to meet an energy reduction goal of 30 percent. The project could be a training and learning opportunity for students across sustainability program disciplines.

Ebbage's site visit to RSC coincided with the college president's announcement of the inclusion of sustainability in the college policy and procedures manual. This act provided the formal commitment needed to crystallize the college's activities related to sustainability, including a campus recycling program and free training for certified nursing assistants in reducing hospital waste and conserving water.

The relationship with LCC during the Mentor Connect program has produced several short-term outcomes for RSC that will help expand the college's sustainability expertise:

- An RSC facilities staff member attended LCC's two-week energy management certification institute, an advanced certification program.
- Two faculty members attended LCC's one-week Summer Energy Educator Series, a five-day training to help community college faculty develop energy management degree programs.
- RSC has been brought in as a partner on a national renewable energy curriculum development grant spearheaded by LCC.

Stan Greil, Rose State's vice president of workforce development, describes his college's sustainability efforts as "life before Roger and life after Roger. ... We would not have been able to accomplish what we have as in institution without this help."

INFUSING SUSTAINABILITY THROUGHOUT:

Clover Park Technical College/Santa Fe Community College



Lakewood, WA

Enrollment: 4,738

The Challenge: Clover Park Technical College (CPTC) had already achieved a number of sustainability-related successes on campus, from a cross-program vermicomposting program to a campus "green day" to popular training programs in automotive hybrid vehicles and sustainable building science. The challenge for the college was to better integrate these activities as part of a broader institutional commitment to sustainability.

"We wanted to improve our college's organizational alignment to the point that sustainability becomes part of our DNA," remarked Mabel Edmonds, CPTC's vice president of workforce development. One of Edmonds' near-term objectives is to infuse sustainability across disciplines within its career and technical programs.

The Solution: CPTC partnered with Santa Fe Community College (SFCC) and Randy Grissom, dean of economic and workforce development and director of the Sustainable Technologies Center. SFCC was one of the first community colleges in the country to develop an institutional "green" vision and mission. Sustainability and ecological awareness have become guiding principles for all institutional practices, from facilities planning to workforce development to academic programming.

SFCC shared program design, curriculum examples, and its documented process for embedding sustainability in the general education curriculum. It shared templates for faculty to determine which courses qualify as "sustainability-focused," where there were gaps in the overall curriculum, and how to revamp student learning outcomes.

SANTA FE COMMUNITY COLLEGE: CAMPUS TRANSFORMED AROUND SUSTAINABILITY

- Biomass heating system that meets 85 percent of the college's peak heating demand
- Campuswide composting
- Solar photovoltaics for electric power generation
- Sustainable Technologies Center with programs in biomass, green building, small wind, smart grid, solar, and water conservation
- Course requirements in sustainable living and health and wellness

CPTC sent both the vice president of workforce development and the college's chief financial officer to SFCC for a site visit. Their joint visit was designed to integrate the college's resource planning with the green and clean technology-related education and training on campus.

Since the site visit, CPTC President John Walstrum has encouraged the strategic planning committee to incorporate sustainability into the institution's long-term plan. The college's vice president for operations and college relations will be using SFCC's sustainability governance model as a guide in that process. SFCC's model lays out the institution's sustainability-related policies and the roles and responsibilities of administrators, faculty, and staff in overseeing and executing an integrated set of sustainability activities. These planning documents will set the path for CPTC's next step of building sustainability modules to integrate across the curriculum.

CONCLUSION

The SEED Center's Mentor Connect program demonstrates the power of peer-to-peer networking. Programs like this will be critical as more institutions seek to transform their campus around a commitment to sustainability yet lack the resources to launch new programs. The first Mentor Connect cohort includes stories of real change with promising outcomes on college campuses. Most important is the potential for these colleges to continue to share curricula, best practices, and green innovation as part of a long-term relationship.

MENTOR BIO PAGE



MARCY DRUMMOND, *Vice President of Institutional Effectiveness and Innovation, Los Angeles Trade Technical College (LATTC)*

Drummond spearheaded LATTC's Green College Initiative and has served as a member of the National Commission on Energy Policy's Task Force on America's Future Energy Jobs and Green For All's national Green Pathways Out of Poverty Community of Practice. In 2008, she was awarded the Green Achievement Award for Workforce Development by an Individual by Green Technology Magazine. Drummond and her team recently released the report, "Defining Your College's Competitive Advantage in the Emerging Green Economy: A How-to Guide to Building High Quality, Strategic Green Programs of Study," which includes a tool to help colleges assess their niche in the clean technology industry workforce.



ROGER EBBAGE, *Energy Management Program Coordinator, Lane Community College (LCC)*

Ebbage has been the energy management program coordinator at LCC in Eugene, Ore., since 1992 and has made the program an international model for energy education. He holds an interdisciplinary Master of Arts in environmental studies and industrial arts with a passive solar design emphasis. He is also an Association of Energy Engineers-certified energy manager, a California certified energy auditor, and a Bonneville Power Administration-certified energy auditor and inspector. He recently received his second Energy Manager of the Year award from the Oregon Chapter of the Association of Professional Energy Managers and Innovator of the Year award from the League for Innovation in the Community College. Ebbage serves as the director of the Northwest Energy Education Institute.



RANDY GRISSOM, *Dean, Economic and Workforce Development; Director, Sustainable Technologies Center, Santa Fe Community College (SFCC)*

Grissom serves as the dean of economic and workforce development and director of the Sustainable Technologies Center (STC) housed in the Trades and Advanced Technology Center. The new 45,000-square-foot facility includes a learning laboratory with interactive design features that include rainwater catchment; solar systems for hot water, electricity, heating, and air conditioning; small wind for electricity; and a presentation space for demonstrations and training sessions. The STC's academic programs are an integral part of SFCC's strategy to infuse sustainability across its curriculum.



ROBERT "BUTCH" GROVE, *Associate Vice President for Creativity, Sustainability, and College Improvement, Wake Technical Community College (WTCC)*

Grove served as the project manager for the North Carolina Community College System initiative called the Code Green Super Curriculum Improvement Project (CIP). The CIP revitalized more than 80 Associate in Applied Science programs. Before managing the Code Green Super CIP, Grove served in various roles at WTCC, including an instructor in engineering technology, department head for several programs, and dean of the Computer and Engineering Technologies Division.



BRIAN LOVELL, *Director of the Green Technologies Academy, Georgia Piedmont Technical College (GPTC)*

Lovell has spent his career in the building automation industry and started Synergy Automation in 1998. In the summer of 2007, Lovell joined GPTC and initiated a commercial refrigeration program that has gained national attention. Following the successful launch of the commercial refrigeration program, GPTC began a Building Automation Systems program, the first Associate in Applied Science in the United States for building automation. GPTC and its partners recently were awarded a prestigious \$3.5 million, four-year Advanced Technological Education grant from the National Science Foundation.



HOLLY M. WIER, *Faculty, Biology, Davidson County Community College (DCCC)*

Weir organized and led DCCC's Green Team, a cross-functional committee comprising faculty and staff whose objectives include imbuing sustainability into the college culture—from student life to curriculum. As the college's environment sector project director, she also provided statewide leadership for North Carolina's landmark Super Curriculum Improvement Project process. Her course load at the college includes: introduction to renewable energy technology; principles of biology; General Biology I and II; environmental biology; basic anatomy and physiology; and Anatomy and Physiology I and II.



MARCIA WILSON, *Director of Institutional Effectiveness and Innovation, Los Angeles Trade Technical College (LATTC)*

Wilson has worked at LATTC for more than 12 years as a program director and grant writer focusing on workforce development and secondary/postsecondary partnerships. Wilson was formerly the director of green workforce development programs at LATTC and worked closely with administrators and faculty to garner funding for and develop numerous green programs of study at the college. Wilson is a co-author of the LATTC report, "Defining Your College's Competitive Advantage in the Emerging Green Economy: A How-to Guide to Building High Quality, Strategic Green Programs of Study."