

## Ready for College in Colorado: Evaluation of the Colorado SUN and the College Connection Program

Adult education programs serve a wide range of students, including out-of-school youth who seek pathways back to the educational system. In the fall of 2007, the state of Colorado received one of four federal grants from the Ready for College (RFC) grant program of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE). Ready for College grantees were required to identify and document educational practices of state and local agencies and were tasked with enhancing curricula; providing professional development for instructional staff; and identifying effective student support strategies (see <http://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/factsh/ready-for-college-adult.pdf>). State agencies or local entities in four states, Kansas, New Jersey, North Carolina, and Colorado, were the recipients of the grants.

The Colorado Success UNlimited Initiative (CO SUN) was designed to identify and enhance innovative practices from Colorado's Adult Education and Family Literacy program and extend them to other adult education centers across the state. The project was commissioned by the Colorado Community College System (CCCS) Foundation, and it aligned with other initiatives of the Governor's P-20 Education Coordinating Council, the Colorado Adult Education and Family Literacy Act, Title II of the Workforce Investment Act, and other state agencies.

The overarching goal of CO SUN was to create innovative transition programs and practices to promote the successful transition of out-of-school youth to com-



munity colleges. As conceptualized in the proposal to OVAE, the CO SUN Initiative emphasized implementation of College Connection, an 8-week accelerated bridge program designed to transition out-of-school youth into college and to assess student outcomes associated with their transition-to-college experience. The College Connection program was modeled after the FastStart program developed by the Community College of Denver, and it integrated instructional strategies and student supports used by the Community College of Denver with approaches used by Colorado's adult education programs. In particular, the College Connection program integrated the core academic subjects of math, English, and reading with critical thinking, career exploration, academic advising, and college success. College Connection also included professional "navigators" or case managers who were committed to assisting students in overcoming barriers to their successful transition to college. Many of the CO SUN Initiative components are aligned with the goals of Adult Career Pathway (ACP) programs (see resources available on the ACP Training and Support Center website: <http://www.acp-sc.org>).

Colorado SUN was initially implemented by five community colleges in the first year and expanded to seven community colleges in the second year. During the third year when a no cost extension was secured, three sites continued to

▶ *Ready for College, continued on page 2*

## PROJECT MAKES TRAINING OPPORTUNITIES AVAILABLE TO THE FIELD

The *Designing Instruction for Career Pathways* project is providing professional development and training to adult education practitioners through several mediums – breakout sessions at national and state conferences, online self-paced courses, webinars, and regional workshops. The workshops are tailored to meet the specific requests of practitioner groups from across the country that have the opportunity to request a workshop to address the professional development needs of a region. Experts in Adult Career Pathways will deliver hands-on training that deepens participants' understanding of tools and strategies available for programmatic and instructional improvement, with the goal of strengthening the quality of Adult Career Pathways programs in the region.

To initiate a workshop request, visit the Adult Career Pathways Support Center [website](#) and click on the "ACP Training" box in the left-hand menu navigation, then select "Training Request." A comprehensive online form will appear asking for detailed information about the type of workshop envisioned.

The *Designing Instruction for Career Pathways* project will cover all expenses associated with the trainer, and the workshop host will be expected to provide the training facility, A/V equipment, and workshop meals (if applicable) in addition to promoting the workshop locally.

▶ *Project Makes..., continued on page 2*

► *Ready for College, continued fr. page 1*

offer one or two cohorts. Overall, the seven sites offered one to four cohorts of College Connection beginning summer 2008 through September 2010, totaling 15 cohorts. Six of the seven sites enrolled RFC-qualified students in their cohorts.

This evaluation utilized qualitative and quantitative methods to examine Colorado's RFC initiative, including documenting implementation of key components of the College Connection program and assessing student performance on required OVAE performance measures and related outcomes identified by the CCCS leadership as important to the Colorado context. The primary objectives of the evaluation of CO SUN were a) to determine the extent to which the CO SUN Initiative resulted in positive outcomes for out-of-school youth, including learning gains, college readiness, and transition to the community college, b) to assess student perceptions of CO SUN components and strategies, particularly college validation, navigator support, college readiness, and student supports and services, and c) to describe how key CO SUN strategies encourage retention and transition of out-of-school youth and contribute to student success.

The core components of the CO SUN model include the College Connection program

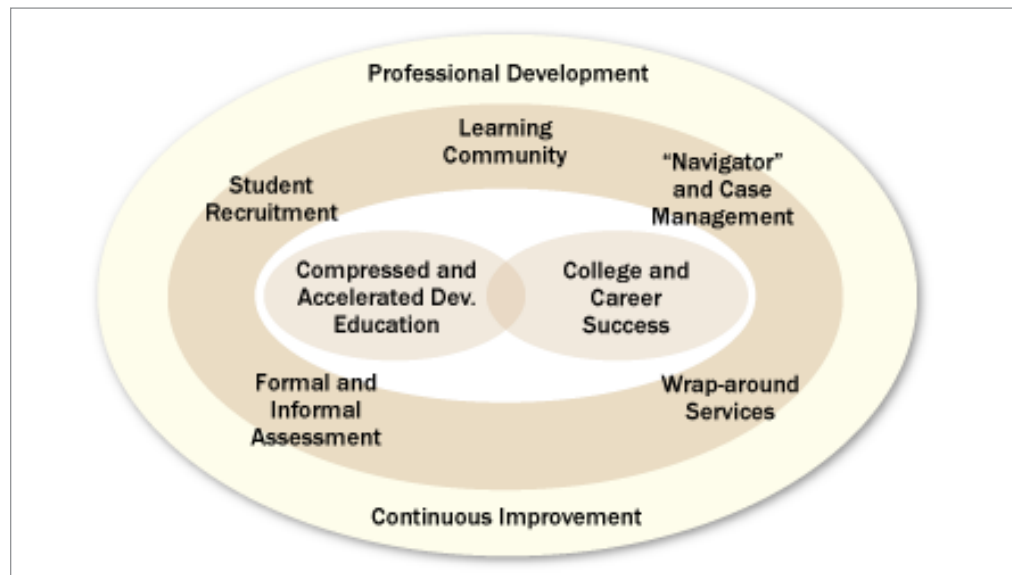
that offers accelerated and compressed curriculum in math, English, and reading. Learner-centered instructional strategies and support services are offered to enhance the success of the learners. Student recruitment, learning communities, navigators or case managers, wrap-around services, and formal and informal assessments are also implemented to encourage student success. This student-focused teaching and learning process is bolstered by professional development and continuous improvement that brings staff together to examine their practices and use data to make improvements. Together, these core components coalesce to promote successful student outcomes (see Figure 1).

### Promising Results

Results of the evaluation reveal promising outcomes for the overall learner group, referred to as the CO SUN participants, and for the sub-group of students who met the RFC criteria: a) was 18 to 24 years of age prior to or during the CO SUN program, b) had taken the TABE reading or math pretest, or both, and c) had 60 percent or better attendance in the CO SUN program. The following results provide insights into the impact of the

► *Ready for College, continued on page 3*

Figure 1: Core Components of the College Connection Program Model



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Within the workshop request form, submitters will be asked to provide complete contact information, the location and proposed date(s) of training, proposed length of training (ranging from a conference session of 60-90 minutes, to half-day, full-day, and multi-day workshops), and the estimated number of participants. A description of the potential audience by both position and level of understanding of the workshop topics will also be asked. Requesting workshops that coincide with regional or state conferences may allow the local host to leverage available meeting space as well as maximize attendees' time away from their institution. In addition to describing specific desired outcomes for attendees, submitters will be asked to identify how the requested training aligns with other professional development activities in the region and can be sustained. A wide range of workshops topics are available, including the following.

### Potential Workshop Topics

- Conducting a Gap Analysis to Determine Local Workforce Needs
- Building Support among Leaders and Stakeholders
- Establishing Key Partnerships
- Aligning Education and Training Systems
- Developing Contextualized Instruction
- Offering Critical Support Services
- Securing Adequate Funding
- Delivering Ongoing Professional Development
- Evaluating for Continuous Improvement
- Other Adult Career Pathways topics aligned to regional needs

► *Project Makes..., continued on page 3*

► *Ready for College, continued fr. page 2*

College Connection program on student outcomes:

- The majority of RFC learners showed gains on the TABE reading and math tests. Of the 56 RFC learners who had the pre- and posttest scores required to compute gain scores, 38 (67.8 percent) showed a gain of one level or more on the TABE reading test, math test, or both.
- A total of 16 (26.2 percent) RFC learners tested college ready in at least one subject. For these 16 RFC learners, seven placed into college-level English, seven placed into college-level reading, and five placed into college-level math. Six RFC learners were college-ready in more than one subject.
- The majority of RFC learners in five of six pilot sites showed one or more level gains in developmental math, with 64.6 percent of the RFC learners in Site 1, 73.9 percent in Site 2, 100 percent in Site 3, and 50 percent in Sites 4 and 5 showing one or more level gains. A sizeable percentage of RFC learners showed two or more level gains in math in three sites, specifically 35.2 percent of RFC learners in Site 1, 30.4 percent in Site 2, and 100 percent in Site 3.
- RFC learners in five sites showed gains of one or more levels in developmental reading, with 59.9 percent of RFC learners in Site 1 showing a gain of one or two levels and 55.5 percent of RFC learners in Site 2 showing a similar level of achievement. Half to two-thirds of RFC learners in two other sites demonstrated a gain of one level.
- RFC learners in two pilot sites showed gains of one or more levels in developmental English, specifically 59.5 percent of RFC learners in Site 1 and 50 percent of RFC learners in Site 3. Between 22 percent and 37.5 percent of RFC learners in three other sites showed a one-level gain.

- A total of 49 (80.3 percent) of the 61 RFC learners enrolled in college-level community college courses, either while participating in the CO SUN program or after completing it. The average number of college credits earned was 10.2.

These quantitative results are supported by qualitative data gathered through one-on-one and small group interviews with students and instructors, and through the open-ended responses of students on a questionnaire about the College Connection program. To provide an understanding of students' appreciation for the program and how it contributed to their learning experience, selected comments follow:

*"I have experienced the best summer out of all of them. It's been a lot of help because I finally found what my true passion is. I have learned many time management skills and ways to work around my schedule. I have learned a lot and feel prepared for college."*

*"Being in College Connection felt like it was a helping hand [and a] stepping [stone] into college. It helped me lose some [of my] fear of college as well as helped me gain more confidence with basics in literacy and math."*

*"The teachers and the navigator helped me with not only school but [with] issues that were preventing me from succeeding in college. I had no home to call my own, and with their help I received the encouragement to find a home and apply for a home."*

The state of Colorado was encouraged to consider the following recommendations to support future implementation of college transition programs that serve out-of-school youth.

- Adult education and developmental education instructors should work collaboratively to offer accelerated and compressed curriculum and help

► *Ready for College, continued on page 4*

► *Project Makes..., continued fr. page 2*

All training requests will be reviewed by the *Designing Instruction for Career Pathways* project team and, if selected, official notification will be sent. When planning a submission request, please allow at least six weeks from the date of request for the project team to plan and coordinate the workshop if selected. The team looks forward to hearing from the field about its professional development needs for Adult Career Pathways implementation. ■

## TECHNICAL WORK GROUP MEMBER SPOTLIGHT ON:



**Woody Oge**  
Director of Business Affairs, Huntington Ingalls Corporation (Formerly Northrup Grumman) Avondale Facility

(New Orleans Area)

**Q:** Tell us about Huntington Ingalls's corporate commitment to career pathways.

**A:** The Avondale facility with its 4,000 employees is the largest private employer in Louisiana. Therefore, workforce development has been one of our highest priorities for some time. We see the maturation of career pathways both in curriculum and instructional competency as a major challenge and opportunity, not only for our business and others in the region but the citizenry at large. Two major focus populations for us are the un- and underemployed adult population and career technical education (CTE) students in secondary schools. We are acutely aware of the need to prepare for the impact of

► *Spotlight on..., continued on page 4*

► *Ready for College, continued fr. page 3*

students make the “college connection”.

- Qualified professionals from across relevant sectors should engage in aligning pre-college instruction with college level content and instruction.
- College transition programs for out-of-school youth should include a student support professional or case manager who helps to “navigate” students through their initial college transition experiences and support their success.
- Educational leaders across the system should create bridges through policy and program mechanisms that enhance students’ opportunities to achieve successful outcomes.
- Diverse formats should be used to deliver professional development opportunities for instructors, including meetings where staff are physically present and engaged in active learning activities and formats such as video teleconferencing, online coursework and other technology-enhanced formats that engage educators in their own settings.
- Data should be collected and analyzed on an ongoing basis to assess program quality and student outcomes and sup-

port continuous program improvement that is dedicated to student success.

- Changes associated with CO SUN that show promising outcomes should be institutionalized and integrated into the larger state adult and postsecondary education systems.

### **Resource Connection:**

Resources developed by the CO SUN project directly applicable to ACP programs include: Colorado SUN Navigator Manual, Colorado SUN Implementation Guide, and supporting resources on assessment, pedagogy, and college and career readiness. To access project resources, visit <http://www.acp-sc.org/resources/digital-colorado-success-unlimited-toolbox.html>

A copy of the technical report on the Colorado SUN evaluation can be downloaded from the OCCRL website at: [http://occrllinois.edu/files/Projects/colorado\\_sun/Report/CO\\_SUN\\_Final\\_Eval.pdf](http://occrllinois.edu/files/Projects/colorado_sun/Report/CO_SUN_Final_Eval.pdf)

#### **Contributed by:**

*Debra Bragg, Professor of Higher Education and Director, Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign* ■

## **Building Bridges Program Offers Recipe for Student Success with Blend of ESL and Food Handler’s Curriculum**

Kingsborough Community College (KCC), one of the City University of New York’s (CUNY) six community colleges, is home to a unique curriculum for English language learners (ELLs) interested in careers in the Culinary Arts. The program, Building Bridges to Success, is an outgrowth of a New York State (NYS) Department of Labor grant designed to create a food handler’s curriculum for ESL students. Titled “No Limits,” the original pro-

gram engaged two student cohorts who piloted introductory Culinary Arts content tailored for the ESL population. Frank Milano, KCC’s Director of ESL Programs, said it took a couple of cohorts to “work out the kinks” while developing a program that could be accessible and replicable for use around the country by any institution with a Culinary Arts program. Much of the curriculum was actually developed

► *Building Bridges, continued on page 5*

► *Spotlight on..., continued fr. page 3*

“baby boomer” retirements in the next 5-10 years. The challenge in replenishing/replacing a skilled workforce is only amplified by the advancements in technology affecting businesses as they strive to stay competitive. Even entry level positions today require at least a certificate from a postsecondary institution.

**Q:** *How does your day-to-day job support career pathways efforts in your community/state and beyond?*

**A:** I am very fortunate that my company understands its workforce challenges and allows me the time to engage at all levels of education. While shipbuilding feeds my family, so to speak, education feeds my heart. I serve on the Board of Supervisors for the Louisiana Community and Technical College System. The system transitioned all of the adult education responsibilities in the state from the K-12 system to the Community and Technical College System two years ago. We are getting ready to launch an initiative called “WorkReady U” which more formally introduces career pathways and credentialing to our adult learners. I have also participated at the state level on high school redesign and CTE advisory committees. Certainly my involvement with the *Designing Instruction for Career Pathways* Technical Work Group only expands my knowledge while working with the many experts who are also serving. Locally, I am engaged in too many educational activities to mention them all, but I sit on nine boards in New Orleans, each that have an education component.

**Q:** *From a personal standpoint why do the goals of a career pathways program resonate with you?*

► *Spotlight on..., continued on page 5*

► *Building Bridges..., continued fr. page 4*



*Students during their lab time in the college's kitchen.*

while the first two cohort classes were in session. There had to be some give and take from both the content specialist and ESL instructor and the program had to compete for kitchen space at the college, but Milano says the growing pains were well worth the effort. The program now runs like a well-oiled machine and 153 students have successfully completed in the past three years.

The Building Bridges to Success program offers a holistic instructional model to 50 intermediate-level ELL students per year (two cohorts of 25 students per year) recruited from KCC classes and participating employers' worksites. The program is based on the Integrated Basic Education and Skills Training (I-BEST) model that has achieved success with low skilled workers in Washington State and combines a contextualized ESL, workforce training, and higher education approach that has proven effective in helping low-level students achieve entrance and advancement to higher skilled, higher-paying career pathways. The program is designed for anyone who is working in or aspiring to work in food service, including, but not limited to hotels, restaurants, catering halls, and institutional food services such as schools, hospitals, and assisted living facilities. The program currently receives financial support from the NYS Department of Education to carry out

Workforce Investment Act (WIA) ELL services. Pending satisfactory performance, availability of funding, and the continuation of the current federal WIA legislation, subsequent awards for twelve-month program periods will continue through June 30, 2013.

The Building Bridges program consists of 13 weeks of coursework, delivered through 15 hours of instruction per week. Five of those hours each week are with the ESL instructor and the remaining hours are jointly taught by the ESL instructor and chef in the kitchen. Total program length is 200 hours, 120 of which are spent in the kitchen. Students prepare for three industry certification exams including the ServSafe exam, the Food Production Manage First exam, and the NYS Department of Health Food Protection exam. As part of the program, students are required to cater at least one event on campus that demonstrates the skills they have acquired. Program participants must also create a virtual restaurant or catering business. Students develop the concept for a food establishment that can range from a family-owned restaurant to a large-scale banquet facility, to a catering company, or even a small-town bed and breakfast. Students must present their plan by delivering a cohesive PowerPoint presentation and preparing a personal signature dish (not virtual) specific to their business theme. The project requires students to conduct research to gain more knowledge about their chosen idea and to identify similar businesses that already exist. PowerPoint presentations must include the business mission, description of premises, hours of operation, special features, and the recipe for the signature dish. Milano points out that the classes are very interactive and students engage in authentic and meaningful discussions. "When I was an ESL instructor, I used to struggle to create authentic communication in an unnatural classroom environment, but with this type of program, it all

► *Building Bridges..., continued on page 6*

► *Spotlight on..., continued fr. page 4*

**A:** I truly believe that a robust, relevant, and evolvable career pathways program is critical to business retention and growth. If we can link the adult learner, who in Louisiana alone numbers over 300,000 individuals between the ages of 18 and 35, we elevate not only their quality of life but that of the communities they live in. Economic developers will tell you that education and workforce development is either number one or two on any site selector's list of priorities. As I give presentations around our state I use two bumper stickers in every one: "Failure is not an Option" and "Education is Economic Development." Career pathways is one of the tools that will get us where we need to go. ■

## ONLINE COMMUNITIES OFFER VALUABLE NETWORKING EXPERIENCES FOR PRACTITIONERS

Coming soon to the ACP-SC website is the addition of online communities, an interactive space where adult education practitioners from across the country can network with one another around specific Adult Career Pathways topics. A total of eight communities will be formed on topics that complement the project's online professional development courses. The launch of each community will occur when the online course on the related topic is nearing completion, allowing practitioners to extend their learning experiences from the self-paced online courses to the communities. The online communities will allow registered users to create conversations, reply to questions and messages, and share

► *Online communities..., continued on page 6*

► *Building Bridges..., continued from page 5*

happens easily, naturally, and authentically,” Milano says. Students who pass all three certification exams and receive a satisfactory grade can also bank up to six credits for their experience if they decide to major in Culinary Arts at KCC.

The most recent student cohort, which completed the program in April 2011, reported very strong end-of-program results, similar to those of previous cohorts. Pass rates of students taking the industry certified exams were: 96 percent on the NYS Department of Health Food Protection exam, 100 percent on the nationally recognized ServSafe exam, and 100 percent on the nationally recognized Food Production ManageFirst examination. To date, more than half of past program

completers have transitioned to continued education at institutions within the CUNY system.

KCC’s Food Handler’s Curriculum is available online for use by other institutions. The program website features a teacher’s guide, weekly lesson plans, and worksheets to support the certificate exams. It can be accessed at: <http://www.acp-sc.org/resources/no-limits-food-management-curriculum.html>

To learn more about the program, contact Frank Milano at [Frank.Milano@kbcc.cuny.edu](mailto:Frank.Milano@kbcc.cuny.edu) ■

## Ivy Tech Leverages Career Pathways Model to Support Educational Needs of Re-Entry Prisoners

In 2010, Ivy Tech Community College, the community college system of Indiana, was asked to partner with the Indiana Department of Corrections to provide adult education services (GED, literacy, and career technical programs) to incarcerated individuals in facilities across the state. Initially, the Ivy Tech team was concerned about how they could best deliver the training provided in career technical courses in such a way that employers would value the training once an offender was released. After just a few meetings between the two state entities, it became clear that college credit and/or third-party certifications would not only verify attainment of industry recognized skills but provide the opportunity for re-entry prisoners to further their educational goals upon release.

The Ivy Tech team considered various models for connecting incarcerated students with career opportunities that would simultaneously give students a

head start and a bridge to further education, particularly in sectors most likely to provide employment prospects for those previously incarcerated. It became obvious to the Ivy Tech team that the career pathways model recently implemented in partnership with the Indiana Department of Workforce Development would best serve the target population. To ensure the curriculum delivered in the correctional facilities would meet the identified goals, the Ivy Tech team reviewed the foundational credit courses already part of approved career pathways programs and linked these courses to programs appropriate for delivery in the correctional facilities. To accommodate credit, training, and assessment concerns, three major factors had to be addressed:

- The classes listed in Table 1 became a part of their “non-credit” counterpart that would be taught at the correctional facilities. All non-credit Curriculum

► *Ivy Tech..., continued on page 7*

► *Online communities..., continued fr. page 5*

information and resources with other ACP-SC community members. The communities will offer a professional yet informal networking environment that is available to practitioners 24/7. Three communities will be launched in early 2012, including: Getting Started in Adult Career Pathways, Building Partnerships, and Designing Contextualized Instruction. Brief descriptions of all eight communities are provided below.

1. **Getting Started with Career Pathways** – designed for state and local practitioners in the early stages of ACP program conceptualization and development.
2. **Building Partnerships** – designed for practitioners interested in building new and strengthening existing partnerships (both formal and informal) that are strategic. Target audiences include employers, adult education practitioners, career guidance staff, social service agency staff, and workforce development professionals.
3. **Designing Contextualized/Integrated Instruction** – designed for faculty and program coordinators engaged in developing and delivering contextualized and integrated instruction to adult learners.
4. **Career Planning and Counseling** – designed for practitioners engaged in career development, guidance, and counseling services for adult learners.
5. **Developing Bridge Programs** – designed for program administrators and other stakeholders developing and implementing bridge programs created to help adult

► *Online communities..., continued on page 7*

► *Ivy Tech..., continued from page 6*

Outlines of Record for these non-credit courses were designed containing all objectives outlined within their credit counterpart and in some cases, objectives were added to the non-credit program.

- One common book or pair of textbooks from the college’s approved book list for credit courses was chosen for each program.
- Training and assessments toward third-party certifications that cross-walked to specific credit courses were built into the non-credit program as a standard part of the curriculum.

The plan was presented to each curriculum committee within Ivy Tech to ensure their approval of credit for incarcerated individuals who will connect with an Ivy Tech Campus upon release. Although all students completing the non-credit course will have to show college-level readiness to receive credit, they will have the opportunity to do so through free assessments and/or providing standardized test scores. It is estimated that nearly 90 percent of all Department of Corrections offenders are released within 30 miles

of an Ivy Tech campus. Through the new educational partnership, offenders completing Ivy Tech courses, prerelease, will have a much more seamless transition to credit attainment and certificate or degree completion. With Ivy Tech providing the basic educational services at all adult correctional facilities, the standardization of services will be optimized throughout the state.

To date, Ivy Tech has facilitated 310 certifications awarded to students in areas ranging from Culinary Arts to Microsoft Office Specialist. Indiana University’s Public Policy Institute recently began a study that will assess a former offender’s recidivism, employability, and educational persistence, comparing those who participate in the Ivy Tech Community College programs and those who do not. The Ivy Tech team looks forward to using the results to inform program improvement decisions.

Through progressive curriculum design and continued innovation in programs, Ivy Tech will continue to leverage the career pathways model to change lives

► *Ivy Tech..., continued on page 8*

► *Online communities..., continued fr. page 6*

learners successfully transition to postsecondary education and/or sustainable employment.

6. **Engaging Employers** – designed for employers, stakeholders in education and training, workforce and economic development professionals, and community/social service agency staff engaged in developing and sustaining career pathways programs.
7. **Sustaining Career Pathways** – designed for stakeholders committed to sustaining career pathways programs through supportive leadership, policy, ongoing professional development, strategic stakeholder communication, and diversified funding.
8. **Using Data for Continuous Improvement** – designed for career pathways stakeholders interested in data gathering and analysis for the purpose of continuous program improvement. ■

Table 1: Comparison of non-credit/credit course titles and industry certifications available for each

Ivy Tech Non-Credit Program within Indiana Department of Correction	Ivy Tech Credit Course Correlating to Career Pathways [http://www.doe.in.gov/pathways/#Huma]		Certifications
Auto-Tech	AUTC 101 AUTC 113	AUTC 109	NATEF ASE
Auto Body	AUTC 101 AUBR 101	AUBR 103	NATEF ASE
*Business Technology			MOS - Word 2007      - Excel 2007 - Outlook 2007      - PowerPoint 2007
Building Maintenance	CONT 101 BCOT 114	BCOT 105	OSHA – 30 Hour
Culinary Arts	HOSP101 HOSP 102	HOSP 104 HOSP 105	ServSafe CPR/First Aid

\*Business Technology does not align with career pathways but does carry a third-party, industry recognized certification that is valued by employers.

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in Indiana by helping previous offenders build on educational foundations received while incarcerated that enable them to lead more productive, responsible lives.

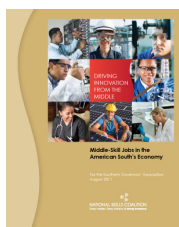
**Contributed by:**

*Dave Garrison, Corporate Executive for Government Services - Ivy Tech Corporate College, and Lea Anne Crooks, Executive Director of Corporate College, Ivy Tech - Terre Haute* ■

## Recent Publications of Interest

Three recently released reports contain workforce projections of interest to ACP practitioners.

### *Driving Innovation from the Middle*



*Southern Governor's Association and the National Skills Coalition, August 2011*

*"The United States and the American South face a skills gap,"* according to a joint report by the Southern Governor's Association and the National Skills Coalition.

More than ever before, American employers are struggling to find qualified workers, especially for "middle-skill" positions that require more than a high school diploma but not a four-year degree.

To be at the forefront of innovation, states and regions must create an innovation economy that fosters "a transition from traditional manufacturing as the foundation of their economy to new high-tech fields such as biotechnology, clean energy, information technology, nanotechnology, and advanced manufacturing."

For educators, this means focusing not only on the preparation of scientists and engineers but on the significantly more numerous middle-skill workers such as technicians who require education beyond high school but credentials less

than baccalaureate degrees. Middle-skill jobs, many of which have strong earning potential, are the engine that drives virtually every industry. Closing the gap between the availability of and need for qualified middle-skill workers will require strategies that "target adult workers long past the traditional K-12 to postsecondary pipeline."

The report suggests three workforce development strategies:

1. Develop sector partnerships capable of devising customized solutions for targeted industries at the regional level.
2. Develop career pathways that align adult basic education, job training, and higher education systems, thereby increasing access to postsecondary education for nontraditional students.
3. Count middle-skill credentials when collecting the performance data that influences decisions about how public resources are allocated in workforce education and training.

The complete report which also includes state-level data can be found at:

[http://southerngovernors.org/Portals/3/documents/SGA-MiddleSkillsReport\\_LoRes.pdf](http://southerngovernors.org/Portals/3/documents/SGA-MiddleSkillsReport_LoRes.pdf)

## CALENDAR

### 2012 Connecticut Association for Adult and Continuing Education Conference

Groton, CT  
March 29-30, 2012

<http://www.acp-sc.org/news-events/events/connecticut-association-for-adult-and-continuing-education-caace-conference.html> ■

### STEM



*Anthony P. Carnevale, Nicole Smith, and Michelle Melton, November 2011*

To maintain its global leadership in innovation, economic growth, and productivity, the U.S. must produce more workers with competencies in science, technology, engineering, and mathematics—STEM. That is the conclusion of a recent report on STEM jobs by Carnevale et al. published by Georgetown University's Center for Education and the Workforce. The demand for workers in advanced technology-driven industries such as manufacturing, utilities and transportation, and mining is rising, but perhaps more significantly, so is the demand for STEM skills in a wide range of occupations in non-STEM fields.

The demand for STEM competencies is especially strong in professional and business services and healthcare. Even in industries that are forecasted to reduce their overall employment numbers, the demand for STEM skills among workers is increasing.

► *Recent publications..., continued on page 9*

► Recent publications..., continued from page 8

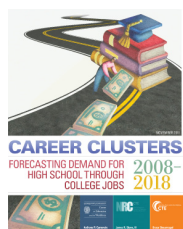
The authors describe a process called diversion, through which both students and workers “steer away from STEM degrees and STEM careers,” a process that is likely to continue in the future. Among the causes for diversion is the strong demand for STEM skills—content, processing, and problem-solving skills—across the entire employment spectrum.

Almost all STEM-related jobs require at least some postsecondary education and training. By 2018, according to the report, 35 percent of the STEM workforce will consist of people with associate degrees and industry certificates. STEM workers at every level will enjoy earning advantages, relative to the U.S. workforce as a whole, as will women and minorities with STEM skills (compared to those groups in the general population).

The message to ACP practitioners is that they should stay the course in seeking ways to help unemployed and underemployed adults shore up skill deficiencies and transition to postsecondary programs, particularly those with a focus on STEM skills attainment. They should share with job seekers the growing opportunities available at the sub-baccalaureate level in both STEM fields and sectors that require strong STEM skills.

The complete report as well as an executive summary and state-level data can be found at: <http://cew.georgetown.edu/stem>

## Career Clusters: Forecasting Demands for High School through College Jobs, 2008–2018



*Georgetown University Center for Education and the Workforce, National Research Center for Career and Technical Education, National Association of State Directors of Career Technical Education Consortium, November 2011*

“The best path to middle class employment and wages in America today runs through the nation’s college campuses,” according to the authors of a November 2011 report published by Georgetown University’s Center for Education and the Workforce. This does not mean that workers with only high school diplomas or less are doomed to dead-end, low-paying jobs. Good jobs for people who lack postsecondary credentials still exist, but they are steadily declining. By 2018, only about a third of all jobs will be for workers who have either a high school diploma or less, and only about a third of those will meet the “minimum earnings threshold” (MET) of \$35,000 per year. Prospects for workers with associate degrees will be far better: more than half will earn above the MET.

The report forecasts job opportunities and skill requirements through 2018,

aligned with the 16 career clusters identified in the Perkins Act of 2006. For workers without postsecondary credentials, opportunities will be found in a relatively small number of clusters, while opportunities for those with associate degrees and beyond will cover a relatively broad range of clusters.

The report’s conclusions are both hopeful and sobering; “On the hopeful side of the ledger: once the economy has recovered from the recession, towards the end of the decade, there will be good employment opportunities for the entire range of educational attainment. On the sobering side of the ledger: the window is closing on such opportunity. Economic trends show that more and more jobs are requiring postsecondary credentials—especially those that pay a living wage.”

In addition to the full national report, Career Clusters contains an executive summary and a state-level analysis of jobs by career cluster. All three documents are available at: <http://cew.georgetown.edu/Clusters> ■



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