NCATC National Coalition of Advanced Technology Centers
A Network of Advanced Technology Expertise

An affiliated council of AMERICAN ASSOCIATION OF COMMUNITY COLLEGES

From the Director ...

NCATC Friends and Colleagues,

As an Affiliated Council of the American Association of Community Colleges (AACC) and active member of its Economic and Workforce Development Commission for over 27 years, NCATC continues to advance ATC contributions for America's technical workforce through a number of strategic initiatives.

We are extremely proud of our 26 Strategic Partners Alliance members who offer a host of value-added benefits to Coalition members and helped to make our 2015 Summer Workshop at Westmoreland Community College in Pennsylvania a huge success. Our 2015 Fall Conference, "Accelerating the Pipeline: Putting Technology to Work," hosted by St. Louis Community College, will continue to raise the bar on industry, government, and education partnerships, collaboration, and best practice sharing.

We have some exciting, cutting-edge partnerships, events, and activities on the horizon that we can't wait to share with our membership over the next few months, many of which will be announced at the Fall Conference.

The NCATC Board of Directors and staff look forward to seeing you in St. Louis at the **2015 NCATC Fall Conference, October 7–9**. Until then, we encourage you to stay connected, regularly, via the NCATC website, social media, and quarterly e-newsletters like this one.

As the leader in advanced technology workforce and economic development, you will find NCATC's resources a go-to source for timely information about workforce activities across the country as well as member benefits, resources, Board of Directors news, events, and benefits from our Strategic Partners.

J. Craig McAtee, NCATC Executive Director ◆

Johnston Community College Immerses Counselors in Advanced Technology Careers

Deborah Porto, Johnston Community College

Johnston Community College (JCC), located in eastern North Carolina, is working to increase the number of high school students enrolled in its Advanced Technology programs. The Britt Advanced Technology Center at JCC offers computer-integrated machining, industrial systems technology, and welding technology degrees for students on state-of-the-art equipment.

High school students can prepare for careers by taking community college classes free of charge through North Carolina's Career and College Promise (CCP), but enrollment in advanced technology pathways at JCC to date has been relatively low.

JCC recently received an Advanced Technological Education (ATE) grant from the National Science Foundation (DUE 1532907) to increase the number of high school males and females enrolling in computer-integrated machining, industrial systems technology, and welding technology training.

One goal of the grant is to increase the awareness among high school counselors about advanced technology careers. High school students are often influenced by peers, social and public media, teachers, parents, and counselors when making decisions about their class schedules. Because counselors are often the first stop for advice for students, JCC wanted to learn how much counselors knew about careers in advanced technology and whether those counselors were recommending the advanced technology CCP classes to their advisees.

In June 2015, Johnston County's high school counselors participated in a two-day professional development at the Britt Advanced Technology Center to learn through firsthand experience about advanced technology careers. The counselors earned professional development credit and a stipend for attending.

The professional development agenda included:

- Explanation of career descriptions and examples in welding, machining, and industrial systems;
- Participating in hands-on experience in welding, machining, and robotics'
- Learning CAD drawing, how to weld, and how to program a CNC machine and an industrial robot;
- Fabrication of an engraved hitch cover, a metal picnic drink holder, and a North Carolina desk medallion;
- Touring the Caterpillar, Building Construction Products Division, manufacturing facility and learning about the pre-apprenticeship program; and
- Learning more about the need to increase the number of women in manufacturing careers, and how to make that increase a reality.

The counselors brainstormed with college staff about student and counselor barriers to students signing up for the advanced technology classes. The counselors identified the needs for more specific career focused materials to provide students. The counselors suggested several ideas, including a series of three minute fast action videos

See "Britt ATC," page 3

Credit for Prior Learning: Helping Learners Earn Postsecondary Certificates and Degrees in Minnesota

Marsha Danielson, South Central College

In our global economy, where knowledge and skills are highly prized and rewarded, many colleges and universities award credit to students for learning acquired outside the traditional classroom. They may have acquired their knowledge from corporate training, military service, independent study, or through college-level non-credit courses.

I am proud to share the efforts and lessons learned by the statewide Competency Certification and Credit for Prior Learning (CC/CPL) Implementation Workgroup as we responded to the challenge of Minnesota's Charting the Future recommendation to "certify student competencies and capabilities, expand pathways to accelerate degree completion through credit for prior learning, and foster the award of competency-based credit and degrees." The work of this team was motivated by five goals: (1) enhance affordability and accessibility; (2) increase recruitment, retention, and graduation rates; (3) reduce time to graduation; (4) better alignment to workforce needs and career preparation; and (5) increase mobility of students and integrate their experience across institutions.

Identifying best practices was the first step in framing recommendations for the Minnesota State Colleges and Universities System (MnSCU) to develop and implement statewide Credit for Prior Learning policies and practices. After several months of research, meetings, and conversations about how to achieve consistency across the system, we reached agreement on the following framework elements: (1) maintaining academic integrity; (2) transparency with clear criteria; (3) faculty/staff engagement and faculty-driven; (4) assessment of learning by faculty and subject matter experts; (5) consistency of transcription, transfer, and application; (6) training and professional development for all departments; and (7) broad system and institutional commitment.

In its final report, the CC/CPL workgroup recommended five initiatives, each supported by actions for effective implementation. The five core recommendations focus on the following:

1. **CC/CPL Workgroup Formation:** Implement three rounds of college- and university-level workgroups to advance strategies and capacity for CC/CPL until all campuses have developed and implemented CC/CPL and Competency-Based Education (CBE) processes, opportunities, and resources;
2. **Toolkit for Scale-up:** Apply and refine the CC/CPL toolkit to scale-up CC/CPL at individual MnSCU campuses and build statewide capacity;
3. **Professional Development:** Invest sufficient resources for faculty and staff so that participating universities and colleges have the means to advance these initiatives, beginning with an inquiry process that is faculty-driven and includes subject matter experts (SME) drawn from local and system institutions;
4. **Capacity Building Resources:** Commit statewide (system and institutional) capacity-building resources and leverage internal and external SMEs to support campuses as they progress in this work; and
5. **Policy and Procedure Development:** Develop system-wide policy recommendations regarding coding, transfer, price, and compensation structure.

Several states are working to deploy Credit for Prior Learning policies and practices to help students earn postsecondary credentials and degrees. Minnesota is positioned to join this group of leaders through a clear vision of our higher education system and by recognizing the college-level knowledge and skills that have been acquired outside the collegiate experience. We believe this strategy will make Minnesota more competitive in the global economy. ◆

PROGRAM SPOTLIGHT: Aviation Maintenance—A St. Louis Community College and St. Louis Public Schools Partnership

History and Facility

The Aviation Maintenance program at St. Louis Public Schools' (SLPS) Gateway STEM High School is one of only four FAA-approved Part 147 high school aviation maintenance schools in the country. It is the only program that is offered in partnership with a postsecondary institution. St. Louis Community College (STLCC) and SLPS began talks of a partnership in 2011. Contracts and agreements were finalized in 2013 and a full General, Airframe, and PowerPlant training program partnership began with the 2014-2015 school year.

Gateway HS has nearly 40,000 sq. ft. of space in its aviation facility, which includes classrooms, a computer lab, hanger space, airframe- and powerplant-specific labs, welding booths, and three paint booths.

Program and Classes

The aviation maintenance program is divided into three categories: General (for aviation), Airframe, and Powerplant. The FAA dictates and regulates the curriculum, including the number of contact hours required to complete the training.

The STLCC/SLPS program includes a total of 1,936 contact hours:

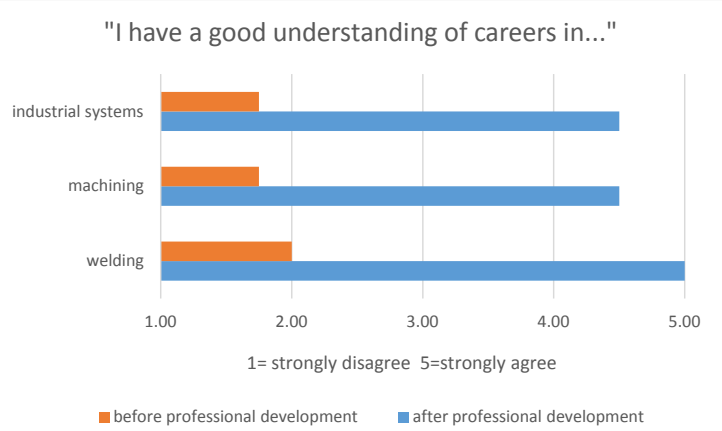
General – 394 hours
Airframe – 750 hours
Powerplant – 792 hours

See "StL Aviation," page 3

• *Britt ATC (continued from page 1)* •

focusing on the careers and the college education needed to prepare for those careers.

The counselors took a pre and post survey on their understanding of advanced technology careers. The two-day professional development increased their understanding of careers in advanced technologies.



At the conclusion of the professional development the counselors discussed their experience and the impact it had on them. Their comments included statements such as:

> "I would never have recommended CCP classes, but I will now."
>
> "I am going to focus on getting more girls into the advanced technology classes."
>
> "I had no clue what machining was before today!"
>
> "Getting the students into the lab to see the equipment is really important."

The college plans to take the information learned from the counselor training, and in the fall visit each high school to talk with other counselors. In January, students can register for fall 2016 classes, and we hope this effort will increase the number of high school students taking advanced technology courses at JCC. ◆

Johnston County high school counselors learn about advanced technology classes by practicing what their students will do in college classes.

• *StL Aviation (continued from page 2)* •

Any minutes missed must be made up in that same topic with an FAA-approved instructor.

Program credit hours total 54:

General – 12
Airframe – 21
Powerplant – 21

Entrance Requirements

A minimum score of 46 on the Compass Algebra domain or successful completion of MTH 030, Elementary Algebra (or higher) with a C or better and WorkKeys scores of 4 on Applied Math, 4 on Locating Information, and 5 on Reading for Information.

Upon successful completion of the General and Airframe components, students may earn a Certificate of Proficiency in Aviation Maintenance – Airframe. Upon successful completion of the Power Plant component, students may earn a Certificate of Proficiency in Aviation Maintenance – Powerplant.

Once students have completed a portion of the training, including 70% or better on all hands-on projects, they are given a pre-test by the instructor. Once they receive an 80% or better on the pre-test they are approved to take the FAA certification exams. Each exam is proctored by an FAA examiner. Students must receive a 70% or better on each portion of the exams to obtain their FAA certifications.

Schedule

The A&P program operates on the SLPS calendar. Classes start every August and continue through May. High school and college students train together in the general and airframe classroom.

PowerPlant is only taught to college students. The entire program takes two years for a college student and three years for a high school student to complete.

High School Track:

1st Year	Junior Year (every other day)	General
2nd Year	Senior Year (every other day)	Airframe
3rd Year	Return as College Student	PowerPlant

College Track:

1st Year	General & Airframe (every day)
2nd year	PowerPlant

Because college students are in class with minors, all STLCC students are required to complete a criminal background check.

SLPS and STLCC have a dual credit agreement in place for high school students who meet the requirements.

Grant Support

The aviation maintenance program is currently funded by a federal grant from the Mississippi River Transportation, Distribution, and Logistics (MRTDL). The MRTDL grant began Oct 1, 2013, and will continue through Sept 30, 2017. However, participant training costs are only covered through December 31, 2016. Students enrolled within this timeframe can save up to $5,400 in tuition costs. The grant does not cover the cost of the FAA exams. However, two local partners, the Greater St. Louis Business Aviation Association Foundation and the Experimental Aircraft Association, can assist students with these fees.

For further information, contact Becky Epps, Aerospace Program Director, 314-513-4271, bepps@stlcc.edu. ◆

Register online at ncatc.org

NCATC National Coalition of Advanced Technology Centers

A Network of Advanced Technology Expertise

NCATC Fall Conference • October 7–9, 2015

ACCELERATING THE PIPELINE: *Putting Technology to Work*

Keynote Speakers from . . .

The Boeing Company
The Henkel Company • LaunchCode
Bissinger's Chocolatier

Industry Tours

Hydromat • Cortex Innovation Community & Technology Incubator
Bissinger's Chocolatier

Hosted by

St. Louis Community College

STLCC , the largest community college district in Missouri and one of the largest in the U.S., is home to the **Center for Workforce Innovation** (aerospace and other technical training), the **Emerson Center for Engineering and Manufacturing**, and the **Corporate College** (the first facility dedicated solely to corporate education and professional development).