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The American Association of Community Colleges (AACC) is the primary advocacy organization for the nation’s community colleges. The association represents 1,200 two-year, associate degree-granting institutions and more than 13 million students. AACC promotes community colleges through five strategic action areas: recognition and advocacy for community colleges; student access, learning, and success; community college leadership; economic and workforce development; and global and intercultural education. Information about AACC and community colleges can be found at www.aacc.nche.edu.
**Wednesday, October 22, 2014**

10:00 am – 8:00 pm
Conference Registration
West Conference Foyer

10:00 am – 7:30 pm
Internet Café and Hot Spot
Executive

1:00 – 5:00 pm
Workshop A: Getting Started
Ticket required
Diplomat

1:00 – 4:00 pm
Workshop D: Targeted Research on Student Outcomes – How to Partner with Education Researchers
Ticket required
Congressional

1:00 – 4:00 pm
Workshop E: ATE Evaluation Practice – Lessons from the Field
Ticket required
Empire

3:30 – 6:00 pm
Showcase I Set-up
Exhibit Hall

6:00 – 7:30 pm
OPENING PLENARY SESSION
The Power of Place and The Wonders of Where
Keynote Speaker: Keith J. Masback, CEO, U.S. Geospatial Intelligence Foundation
Regency

7:30 – 9:45 am
Showcase I and Welcome Reception
Exhibit Hall

9:45 – 10:30 pm
Showcase I Breakdown
Exhibit Hall

**Thursday, October 23, 2014**

7:00 am – 5:30 pm
Conference Registration
West Conference Foyer

7:00 am – 5:30 pm
Internet Café and Hot Spot
Executive

7:30 – 8:45 am
Showcase II Set-up
Exhibit Hall

7:30 – 8:45 am
ATE Student/Alumni Recognition Breakfast
(By Invitation Only)
Hampton

7:45 – 8:45 am
Breakfast Roundtables
Ambassador

9:00 – 10:15 am
Industry “Speed Networking” Session for ATE Students
(Session open to ATE student participants only)
Congressional
Thursday, October 23, 2014

9:00 – 10:15 am

PLENARY SESSION

Telling Your Story: Combating College Clichés and Cutting through the Confusion

Keynote Speaker: Esther J. Cepeda, National Syndicated Columnist, Washington Post Writers Group

Regency

10:15 – 10:30 am

Refreshment Break

10:30 – 11:45 am

CONCURRENT SESSIONS

Session 1: Leadership in Motion – Show and Tell

Diplomat

Session 2: ATE Research and Evaluation – Responsibilities and Opportunities

Empire

Session 3: Leveraging NSF’s ATE Program – Additional Opportunities for Federal Funding, Collaboration, and Resources

Palladian

Session 4: After ATE – Learn the Secrets to Long-Term Sustainability

Ambassador

12:00 – 2:15 pm

Showcase II and Lunch

Exhibit Hall

2:15 – 3:00 pm

Showcase II Breakdown

Exhibit Hall

2:30 – 3:45 pm

WORKSHOP AND DISCUSSION SESSIONS

Workshop: Leveraging NSF ATE with the U.S. Department of Labor’s TAACCCT Program

Track 1

Diplomat

Workshop: Archiving with ATE Central

Track 1

Ambassador

Workshop: Core Competencies and Collaboration among ATE Centers

Track 1

Palladian

Workshop: Personal Leadership Branding – Me, Inc.

Track 2

Governors

Discussion: Recruiting Military Veterans into Technology Programs

Track 3

Cabinet

Workshop: Recruiting the Next Generation Technician Using 21st Century Learning Tools

Track 3

Capitol

Discussion: Training Renewable Energy Technicians – An International Perspective

Track 4

Forum

Workshop: Evolution of Hands-On Training

Track 4

Calvert

Workshop: Using “Writing to Learn” in the STEM Classroom – Strategies and Benefits

Track 4

Congressional B

Workshop: Research Medley – A Look at Research Studies in Technology Education

Track 5

Congressional A

Discussion: Meeting the Needs of Water Programs at Community Colleges

Track 6

Senate

Workshop: Strategies to Align Program Offerings with Local Labor Market Needs

Track 6

Empire

Discussion: The Changing Face of Career and Technical Education (CTE) – MOOCs and Noncredit to Credit Conversion

Track 6

Embassy
Thursday, October 23, 2014

Workshop: Comparing STEM Business Integration Implementations
Track 6
Hampton
4:00 – 5:15 pm

WORKSHOP AND DISCUSSION SESSIONS

Workshop: Outreach and Strategies for Broadening Impact of Geospatial Technologies – Spatial Awareness, Model Courses, and Big Data
Track 1
Hampton
Discussion: Unpacking Competencies
Track 1
Forum

Workshop: Increasing Female Enrollment in STEM – Hear from ATE Educators Who Have Had Success
Track 3
Capitol

Workshop: Indigenous Pedagogy – Integrating Methodologies for all Learning Styles into the Curriculum to Increase Student Success
Track 4
Congressional B

Workshop: Advancing a New Model to Achieve Equity in Technician Education
Track 4
Governors

Workshop: Skating to Where the Puck Will Be – A Framework for E-Books, Interactivity, and Student Engagement
Track 4
Ambassador

Workshop: Seek, Find, Strategize – Developing the Future of Educational Games
Track 4
Calvert

Discussion: The Value of Contextualized Learning Communities
Track 4
Cabinet

Discussion: How “Grow Your Own Internship” Models Benefits Industry
Track 4
Senate

Workshop: Expanding Research Collaboration in ATE Projects – Two Case Studies Anchored in Improving Manufacturing Student Success
Track 5
Congressional A

Discussion: The Education Continuum for Engineering and Engineering Technology and the Role of Making, Doing, and Application
Track 5
Embassy

Workshop: Developing Industry Driven Curricula through Problem Based Learning
Track 6
Empire

Workshop: Leveraging NSF ATE with the U.S. Department of Labor’s Registered Apprenticeship Program
Track 6
Diplomat

Lightning Round: Emerging Trends, Technologies, and Strategies for Student Success
Palladian
Friday, October 24, 2014

7:30 am – 12:00 pm
Conference Registration
West Conference Foyer

7:30 – 10:00 am
Internet Café and Hot Spot
Executive

7:30 – 8:45 am
Continental Breakfast
Regency

7:30 – 8:45 am
Showcase III Set-up
Exhibit Hall

7:45 – 8:45 am
Breakfast Roundtables
Ambassador

9:00 – 10:15 am
PLENARY SESSION
Regency

Update from the U.S. Department of Education
Keynote Speaker: Mark Mitsui, Deputy Assistant Secretary for Community Colleges, Office of Career, Adult, and Technical Education, U.S. Department of Education

Ensuring Our Nation’s Competitiveness – Developing STEM Leaders for Education, Training, and Workforce Development
Keynote Speaker: Chandra Brown, Deputy Assistant Secretary for Manufacturing, International Trade Administration, U.S. Department of Commerce

10:15 am – 12:30 pm
Showcase III and Lunch
Exhibit Hall

12:30 – 1:15 pm
Showcase III Breakdown
Exhibit Hall

12:45 – 3:00 pm
ATE Center Directors Meeting
ATE Center Staff Only
Palladian
Please refer to the conference schedule for specific session times and room locations.

**BREAKFAST ROUNDTABLES:** Breakfast roundtables are a forum for interactive discussion of a topic among a small group of 5-10 people. They are designed as informal sessions and attendance is first-come, first-served, and limited to a maximum of 10 people seated around one table, including the moderator.

**CONCURRENT SESSIONS:** Concurrent sessions include formal presentations and/or panel discussions that address topics pertaining to the conference theme and the needs of the ATE community.

**DISCUSSION SESSIONS:** The discussion session format offers an interactive venue for ATE grantees to share promising practices and lessons learned with other members of the ATE community, to network, share insights, and explore ways to collaborate. Discussion moderators serve as facilitators of interactive, substantive discussions and small group activities. Please note that the capacity for discussion sessions is 30 – 40 people.

**WORKSHOP SESSIONS:** Panel sessions provide additional venues for formal presentation. Presenters may facilitate an exchange of ideas or conduct a demonstration or application of techniques and/or promising practices to provide greater insight into the issues outlined in the conference tracks (listed below). Please note that the session capacity for panel sessions range from 50 – 60 people.

**SESSION TRACKS:** The workshop and discussion sessions scheduled on Thursday, October 23 feature topics pertaining to the conference theme of “Navigating the Future of Advanced Technological Education: Developing Leaders, Broadening Impact” and are organized by the following tracks:

- **Track 1: Broadening the Impact and Reach of ATE**
  Examples of content in this category may include: strategies for sustaining and scaling programs; creating and leveraging partnerships; determining regional and national impact; outreach and marketing to external constituents such as students, secondary schools, guidance counselors, parents, funders, and/or the community.

- **Track 2: Developing STEM Leaders in Innovation**
  Examples of content in this category may include: faculty development for community college faculty; methods and models for professional development; faculty externships; leadership development; new PI succession planning; and mentoring programs.

- **Track 3: Recruiting Students in STEM**
  Examples of content in this category may include: interactions with secondary school CTE programs; dual enrollment; professional development for secondary school teachers; career pathways; career coaches; and strategies for recruiting underrepresented students.

- **Track 4: Educating Technicians – Teaching, Learning, and Assessment**
  Examples of content in this category may include: competency-based learning; work-based learning; stackable credentials; credit for prior work experience; registered apprenticeships; problem or case-based learning; internships; bridge programs; online learning; and assessment strategies and resources.

- **Track 5: Advancing Innovation through STEM Research and Evaluation**
  Examples of content in this category may include: strategies for conducting institutional and educational research; partnering with four-year colleges on student learning outcomes; integrating undergraduate research into the classroom; and evaluation.
• **Track 6: Engaging Business and Industry – Workforce and Economic Development**  
Examples of content in this category may include: developing and supporting industry partnerships; responding to industry trends; addressing emerging career fields, emerging technologies, and workforce development needs; and implementing entrepreneurship and innovation strategies.

**SHOWCASE SESSIONS:** The showcase sessions provide grantees an opportunity to exhibit their projects and share information with other programs, with NSF program directors, and with guests at the conference. ATE projects and centers present displays that capture the purposes and products of their programs. The displays are divided into three sessions; one center showcase and two project showcases. The conference’s main meal events are coordinated as part of the showcase sessions.

**NOTE:** ATE students will highlight their program of study and/or career path as part of the project showcase sessions. Please take the time to visit the student booths during the project showcases and show your support of their efforts.
PRECONFERENCE ACTIVITIES

10:00 am – 8:00 pm
Conference Registration
West Conference Foyer

10:00 am – 7:30 pm
Internet Café and Hot Spot
Executive

1:00 – 5:00 pm
Workshop A: Getting Started
Advance Registration and Ticket Required
Diplomat

David Campbell, Program Director, National Science Foundation, VA
Elaine Craft, Director, SC ATE Center of Excellence, SC
Dennis Faber, Co-Principal Investigator, Mentor-Connect, MD
LeVar Rashawn Farrior, Grants and Agreement Specialist, Division of Grants and Agreements, National Science Foundation, VA
Catherine Dixon, Outreach Coordinator, ATE Central, WI
Arlen Gullickson, Emeritus Researcher, The Evaluation Center, Western Michigan University, MI
Jason Burkhardt, Project Manager, The Evaluation Center, Western Michigan University, MI
Emma Perk, Project Manager, The Evaluation Center, Western Michigan University, MI

This workshop is recommended for all principal investigators, co-principal investigators, and other team members involved in newly awarded projects and centers in FY14. Others who may find the workshop useful include new awardees in FY13 and other project personnel from prior years who have recently become involved in ATE projects and centers. The workshop will be divided into three parts: (1) ATE Program Issues. Topics to be covered include reporting requirements such as annual and final reports, working with NSF program officers, changes in project personnel or scope, data collection, FastLane and other reporting systems, use of Advisory Boards and National Visiting Committees, preparing project highlights for NSF and others, Institutional Review Boards (IRBs), and many other relevant topics. (2) Financial Management and Grant Management Issues. This section will focus on financial accounting issues and discuss in detail problems often seen in monitoring visits such as participant support, time and effort accounting, subawardees, record keeping, changes in scope, overload, and use of consultants. (3) Evaluation. This segment will address building in evaluation from the start of your project or center. The ATE program conducts an annual survey of all projects and centers that have been active for more than one year. Additional evaluation topics to be addressed include, but are not limited to, evaluation design, methods and instrumentation, resources for learning about productive evaluation, the roles of internal and external evaluators, and evaluation challenges.

1:00 – 4:00 pm
Workshop B: What Really Works? Views on Successful Hiring from Employers and New Employees
Advance Registration and Ticket Required
Paladian

Normand Forest, Chief Executive Officer, Dymotek, CT
Chris LaBranche, Tooling Apprentice, Dymotek, CT
Matt Glover, Senior Director, Global IT, AMX by Harman, TX
Chelsea Fitzgerald, IT Project Coordinator, AMX by Harman, TX
Ross Leach, Apprentice Program Manager, AMSEC, VA
Marcus Maximin, Apprentice, AMSEC, VA
Ann Beheler, PI, National Convergence Technology Center, TX
Barbara Murray, PI, SMART Center, Tidewater Community College, VA
Karen Wosczyyna-Birch, Executive Director, Regional Center for Next Generation Manufacturing, CT

This session will feature employer/new employee (student) pairings who will discuss the entire hiring process from their respective viewpoints. Topics will include what really matters in an effective resume, effective interviewing strategies, important technical competencies and certifications, and other job-specific requirements. In this interactive workshop, attendees will also have the opportunity to critique, review, and discuss sample resumes and interview scenarios in small groups with input from the employer/new employee presenters.
1:00 – 4:00 pm
**Workshop C: Where Do We Go from Here? A Practical Approach to Sustainability**
*Advance Registration and Ticket Required*

**Ambassador**
Nancy Maron, Program Director, Sustainability and Scholarly Communications, Ithaka, NY

Rachael Bower, PI, ATE Central, University of Wisconsin-Madison, WI

While most ATE proposals include some level of discussion around sustainability, carrying out those sustainability plans can prove an overwhelming challenge. In this interactive workshop, participants will get a chance to explore solutions to their sustainability challenges through case studies, targeted exercises, and group discussion. Facilitated brainstorming and conversation will take place in a roundtable format, as participants work together to define what sustainability means for their project or center, examine strategies for securing support from their home institutions, and share strategies that have proven valuable for those in the ATE community and beyond. There is no one way to sustain a project or center; and in this hands-on workshop, PIs and staff will get an opportunity to incorporate fresh thinking and new ideas designed to develop customized plans to sustain the valuable efforts and deliverables of their ATE projects and centers throughout, and beyond, the life cycle of their grant.

1:00 – 4:00 pm
**Workshop D: Targeted Research on Student Outcomes – How to Partner with Education Researchers**
*Advance Registration and Ticket Required*

**Congressional**
Connie Della-Piana, Program Director, National Science Foundation, VA

Will Tyson, Associate Professor, Department of Sociology, University of South Florida, FL

Louise Yarnall, Senior Research Social Scientist, Center for Technology in Learning, SRI International, CA

This workshop will provide an overview of targeted research funded projects, discuss the benefits and challenges of integrating research into your ATE program, and provide tools and resources to build partnerships with education researchers through university and private partnerships. Interactive activities include focusing on case studies such as examining how research can inform high school student recruitment practices. Come and learn about research models that can be adapted to promote research partnerships among ATE grantees—and the benefits they can bring to your program.

1:00 – 4:00 pm
**Workshop E: ATE Evaluation Practice – Lessons from the Field**
*Advance Registration and Ticket Required*

**Empire**
Lori Wingate, Assistant Director, The Evaluation Center, Western Michigan University, MI

Candiya Mann, Senior Research Manager, Social and Economic Sciences Research Center, Washington State University, WA

Bruce Nash, Assistant Director, DNA Learning Center, Cold Spring Harbor Laboratory, NY

Amy Nisselle, Multimedia and Evaluation Manager, DNA Learning Center, Cold Spring Harbor Laboratory, NY

In this workshop, experienced ATE evaluators and project/center leaders will describe their evaluations, share lessons learned, and discuss how they use their evaluation results to improve their work. Workshop participants will have the opportunity to apply the concepts and strategies presented to their own work and take away practical tools and guidance.

3:30 – 6:00 pm
**Showcase I Set-up**
*Exhibit Hall*
CONFERENCE OPENING

6:00 – 7:30 pm
Opening Plenary Session
Regency

V. Celeste Carter, Lead ATE Program Director, National Science Foundation, VA

David Campbell, Co-Lead ATE Program Director, National Science Foundation, VA

Mary Heiss, Interim Senior Vice President for Academic and Student Affairs, American Association of Community Colleges, DC

Joan Ferrini-Mundy, Assistant Director, Directorate for Education and Human Resources, National Science Foundation, VA

The Power of Place and The Wonders of Where

Keynote Speaker: Keith J. Masback, CEO, U.S. Geospatial Intelligence Foundation

We are living in the midst of a geospatial revolution. Every aspect of our personal and professional lives is being impacted by location based services and technologies.

From Uber to Yelp, from marketing to medicine, nothing will be the same as a result of our new ability to see and understand our world in a way which has never before been possible. Are you ready?

7:30 – 9:45 pm
Showcase I and Welcome Reception
Exhibit Hall

9:45 – 10:30 pm
Showcase I Breakdown
Exhibit Hall

Retirement Tribute to Duncan McBride and Gerhard Salinger
National Science Foundation

Duncan McBride

Gerhard Salinger
7:00 am – 5:30 pm  
Conference Registration  
West Conference Foyer

7:00 am – 5:30 pm  
Internet Café and Hot Spot  
Executive

7:30 – 8:45 am  
Showcase II Set-up  
Exhibit Hall

7:30 – 8:45 am  
Continental Breakfast  
Regency

7:30 – 8:45 am  
ATE Student/Alumni Recognition Breakfast  
(By invitation only)  
Hampton

7:45 – 8:45 am  
Breakfast Roundtables  
Ambassador

9:00 – 10:15 am  
Industry “Speed Networking” Session for ATE Students  
(Session open to ATE student participants only)  
Congressional

Facilitators: Deborah Boisvert, PI and Executive Director, BATEC, University of Massachusetts-Boston, MA  
Lou Piazza, Operations Director, BATEC, MA

Speed networking is a process designed to facilitate introductions between business/industry representatives and student participants. This session will afford student participants the opportunity to meet accomplished business professionals from a variety of backgrounds and companies. It promises to be an enjoyable, fast-paced, and informative experience as students are given an opportunity to learn and practice interview and communication skills.

9:00 – 10:15 am  
Plenary Session  
Regency

V. Celeste Carter, Lead ATE Program Director, National Science Foundation, VA  
Susan Singer, Director, Division of Undergraduate Education, National Science Foundation, VA

Telling Your Story: Combatting College Clichés and Cutting through the Confusion

Keynote Speaker: Esther J. Cepeda, Nationally Syndicated Columnist, Washington Post Writers Group

In a world dominated by four-year institutions, students, parents, teachers, guidance counselors, and many others are getting mixed messages about the return on investment of a college education. Concurrently, many employers are expressing concerns about a skills gap and not being able to hire enough STEM workers. These same employers realize the value of the right community college based associate’s degree, postsecondary certificate, or industry-based certification; and people with these degrees and certificates are highly sought after. How do you, as a community college educator, clarify the confusion? This keynote address will reboot how you position and talk about your programs for the very people you want to reach the most.

10:15 – 10:30 am  
Refreshment Break  
Diplomat, Ambassador, and Empire Foyers
Session 1: Leadership in Motion – Show and Tell

**Diplomat**

Michael Lesiecki, Executive Director, MATEC, Maricopa Community College, AZ

Elaine Craft, Director, SC ATE Center of Excellence, Florence-Darlington Technical College, SC

Elaine Johnson, Executive Director and PI, Bio-Link, City College of San Francisco, CA

**Moderator:** Sheila Forte-Trammel, Human Resources Consultant, Total HR Services, LLC, NC

Find out how to become a leader, cultivate leaders, and define what leadership means in your organization. Attend this captivating, collaborative session to learn how to develop and identify leaders at all levels in your organization. Determine how leadership is defined in your organization, how to remain relevant as a leader in an increasingly competitive and changing workforce, and how to nurture future leaders. Three trailblazers and leaders of the ATE program community will join this session. Panelists will be charged with sharing solutions and strategies for broadening impact in ATE.

Session 2: ATE Research and Evaluation – Responsibilities and Opportunities

**Empire**

David Campbell, ATE Co-Lead Program Director, National Science Foundation, VA

Edith Gummer, Education Research Director, Kauffman Foundation, MO

John Sener, Founder, Sener Knowledge LLC, MD

**Moderator:** Lori Wingate, Assistant Director, The Evaluation Center, Western Michigan University, MI

The focus of the ATE program is on preparing technicians for industry. Accordingly, ATE projects and centers must demonstrate their impact in this area through evaluation and research and also assess how well students are served. Two questions will be addressed: (1) What are the research and evaluation responsibilities of ATE projects and centers? (2) How should projects and centers gather evidence that moves beyond numbers to support the claim of broader impact and added value of the project or center, and create the environment conducive for sharing insight and producing results?

Session 3: Leveraging NSF’s ATE Program – Additional Opportunities for Federal Funding, Collaboration, and Resources

**Palladian**

V. Celeste Carter, Co-Lead ATE Program, National Science Foundation, VA

Robin Fernkas, Director, Division of Strategic Investments, Office of Workforce Investment, Employment and Training Administration U.S. Department of Labor, DC

Laura Ginsburg, Team Leader, Office of Apprenticeship, U.S. Department of Labor, DC

**Facilitator:** Ann Beheler, PI, National Convergence Technology Center, TX

This panel discussion will focus on understanding and leveraging funding streams from two or more federal funding programs including NSF’s ATE program, the U.S. Department of Labor’s Trade Adjustment Assistance Community College and Career Training (TAACCCT) program, and the Department of Labor’s Registered Apprenticeship program. Join federal representatives as they discuss ways to facilitate collaboration, partnerships, and the sharing of resources across programs to benefit STEM technician education and workforce development.

Session 4: After ATE – Learn the Secrets to Long-Term Sustainability

**Ambassador**

Phil Davis, Program Director, Geographic Science, Del Mar College, TX

Lynn Mack, Dean, Instructional and Grant Development, Piedmont Technical College, SC

Gordon Snyder, Associate Director, National Center for Optics and Photonics Education, MA

Rachael Bower, PI, ATE Central, University of Wisconsin-Madison, WI

**Moderator:** Linnea Fletcher, Co-PI, Bio-Link, Austin Community College, TX

The ATE program has been in existence for 20 years. A large number of resources have been developed including STEM leaders, materials, and contacts. Not all of these resources are still associated with the ATE program for a variety of reasons. Individuals have moved onto new projects, and projects or centers have developed
alternative funding sources or become embedded within an existing infrastructure. Some projects and centers are only partially funded by ATE and the rest of their organization is funded by other mechanisms. The ATE program needs to be able to access these individuals—and “bring them back” to better highlight how existing projects and centers are successfully sustaining parts of their activities. This session will feature panelists who have successfully transitioned their projects or centers into sustainability. In addition, the session will offer a discussion designed to determine how best to access former ATE project and center leaders—when they no longer need NSF funding to survive—so they can continue to share their expertise.

12:00 – 2:15 pm
Showcase II and Lunch
Exhibit Hall

2:15 – 3:00 pm
Showcase II Breakdown
Exhibit Hall

2:30 – 3:45 pm
WORKSHOP AND DISCUSSION SESSIONS

Workshop: Leveraging NSF ATE with the U.S. Department of Labor’s TAACCCT Program
Track 1
Diplomat
Ann Beheler, PI, National Convergence Technology Center, Collin College, TX
Robin Fernkas, Director, Division of Strategic Investments, Office of Workforce Investment, Employment and Training Administration, U.S. Department of Labor, DC
Sharon Leu, Workforce Analyst, Division of Strategic Investments, Employment and Training Administration, U.S. Department of Labor, DC
John Sands, Acting Director and Co-PI, CSSIA, Moraine Valley Community College, IL

This session continues the dialogue started in the Thursday morning concurrent session on leveraging NSF’s ATE program with the Department of Labor’s Trade Adjustment Assistance Community College and Career Training (TAACCCT) program. ATE PIs from Collin College in Frisco, TX, and Moraine Valley Community College, Palos Hills, IL, will discuss how they leveraged their ATE centers with being members of the Round 1 DOL TAACCCT National Information, Security, and Geospatial Technologies Consortium. Their work has provided innovative curricular and supportive programs for students, which has resulted in increased enrollments, completions, and job placements. Specific examples of innovative programs that would not have been possible without such leveraging will be shared.

Workshop: Archiving with ATE Central
Track 1
Ambassador
Kendra Bouda, Metadata and Information Specialist, ATE Central, University of Wisconsin – Madison, WI
Rachael Bower, PI, ATE Central, University of Wisconsin – Madison, WI

Many ATE projects and centers rely on the web to disseminate the resources they create, though not all have the infrastructure necessary to sustain online access to these resources over time. To preserve the resources created by ATE awardees—thereby broadening the impact and reach of the ATE community as a whole—ATE Central offers a digital archiving service that is designed to provide access to these valuable materials beyond the lives of those projects and centers that created them. Come learn about the new NSF archiving requirement, discuss strategies, and work through an archiving checklist!

Workshop: Core Competencies and Collaboration Among ATE Centers
Track 1
Palladian
James Capers, Program Manager, Regional Center for Nuclear Energy and Training, Indian River State College, FL
Barbara Murray, PI, SMART Center, Tidewater Community College, VA

SESSION TRACKS
Track 1: Broadening the Impact and Reach of ATE
Track 2: Developing STEM Leaders in Innovation
Track 3: Recruiting Students in STEM
Track 4: Educating Technicians – Teaching, Learning, and Assessment
Track 5: Advancing Innovation through STEM Research and Evaluation
Track 6: Engaging Business and Industry – Workforce and Economic Development

2014 ATE PRINCIPAL INVESTIGATORS CONFERENCE 15
ATE center collaborations should focus on common core competencies used to educate, train, and employ students across their variety of industries. Centers from advanced manufacturing, energy, engineering, and maritime technologies will show how students could be trained using entry-level, basic skill competencies applicable in each of these career fields. Continued education leads to embedded academic and industry certifications, allowing graduates to convey their skills from one industry to another; broadening career opportunities. Discussion focuses on delineating those fundamental skills and modeling a multi-center collaboration on how industry specialization is interrelated and can be shared.

**Discussion: Recruiting Military Veterans into Technology Programs**

Track 3

**Cabinet**

Steve Kane, PI and Managing Director, SpaceTEC, FL

Paula Hoffman, Chief Student Affairs Officer, Pine Technical and Community College, MN

There are a variety of ways to connect military veterans with a technology program that will leverage their skills and transition them into a civilian career. This discussion session will focus on the strategies developed by two centers and ask participants to share their best practices in this area. Questions to be addressed include (1) How do you identify veterans who might be interested in your program? (2) How can you work with the military education and career education offices to advertise your programs?

**Workshop: Recruiting the Next Generation Technician using 21st Century Learning Tools**

Track 3

**Capitol**

Marilyn Barger, PI and Executive Director, FLATE, Hillsborough Community College, FL

Kris Frady, Director of Operations, Center for Workforce Development, Clemson University, SC

Ginny Hall, Director of Digital Learning, Center for Workforce Development, Clemson University, SC

This session showcases recruitment techniques currently utilized by FLATE and CA2VES to increase interest and enrollment of next generation manufacturing technicians in key technical education programs. Discussions will include promising practices ranging from high school programs to professional development to career pathway development to utilization of web and digital learning resources. Participants will experience digital learning tools used for recruitment, open learning resources, and reflective activities encouraging them to discuss best practices in recruitment and how to best implement those practices in their own programs.
Discussion: Training Renewable Energy Technicians – An International Perspective
Track 4
Forum
Mary Slowinski, Faculty and Online Learning Coordinator, CREATE, College of the Canyons, CA

Preparing technicians for the renewable energy workforce is a multifaceted challenge that crosses national boundaries. To learn more about international models for this work, our team of faculty and administrators undertook two rigorous study tours to meet with technical educators, visit teaching labs, review industry partnerships, and talk with policy makers and government representatives in Australia/New Zealand (2013) and Germany/Denmark (2014). Join us for a group discussion with participants who will share observations and lessons learned, describe best practices, and provide insights into the similarities and differences in—and influences on—renewable energy technician training across these countries.

Workshop: Evolution of Hands-On Training
Track 4
Calvert
Michael Podobnik, President, Teletix, PA

In radiation safety training, enhancement of the practical experience for trainees and instructors is consequential in optimizing results-based training. Simulation has been present in various forms for decades. Given changing norms, progression of technology and heightened criteria in training practices, hardware, and situational simulation presents a means to elevate radiation detection preparedness and safety. The adoption of hands-on simulation by training programs raises preparedness and the yardstick by which performance and safety are measured. The next evolution in hands-on training and evaluation will be discussed with survey results of an industry survey on radiation protection training programs.

Workshop: Using “Writing to Learn” in the STEM Classroom – Strategies and Benefits
Track 4
Congressional B
Linda A. Rubel, Professor, NTID, Rochester Institute of Technology, NY
Rose Marie Toscano, Professor, NTID, Rochester Institute of Technology, NY
Tom Simpson, Professor, NTID, Rochester Institute of Technology, NY

Current research shows that student learning in all disciplines is enhanced through the practice of writing. This session will give STEM faculty hands-on practice in developing a variety of activities for in-class and out-of-class writing that assures more effective student learning. Participants will also learn how to manage the paper load through effective response techniques. Session leaders will use PowerPoint presentations, video clips, and small group activities to engage participants.

Workshop: Research Medley – A Look at Research Studies in Technology Education
Track 5
Congressional A
Kapil Chalil Madathil, Director of Technology Operations, Center for Workforce Development, Clemson University, SC
Jeffrey Bertrand, Visualizations Lead, Center for Workforce Development, Clemson University, SC
Melissa Zelaya, Program Manager, Center for Workforce Development, Clemson University, SC
Moderator: Rebecca Hartley, Director of Pathways, Center for Workforce Development, Clemson University, SC

Control research studies exploring the effectiveness of education materials, online platforms, and modes of delivery can be daunting to undertake. These studies not only provide researchers with interesting findings, but can also provide valuable information to content developers regarding student outcomes, transfer effects, user interaction, user friendliness, and workload. This workshop will present the development, execution, and findings of three research studies involving content for two-year technology programs. Researchers will describe the findings and illustrate how research studies inform
continuous improvement on platforms and content. Participants will also have the opportunity to draft an experiment based on a case study.

**Discussion: Meeting the Needs of Water Programs at Community Colleges**

*Track 6*

*Senate*

Ellen Kabat Lensch, Executive Director, ATEEC, Eastern Iowa Community Colleges, IA

Jeremy Pickard, Associate Director, ATEEC, Eastern Iowa Community College, IA

Job prospects for water operators are expected to grow by eight percent in the next 10 years and a large portion of the workforce plans to retire during this same timeframe. Community colleges will be expected to train the next generation of water operators and technicians. Join us as we identify strategies to address future needs in the water fields by: (1) identifying resources needed to enhance community college water programs; (2) addressing professional development needs to maximize teaching, learning, and training; (3) identifying existing and potential collaborations; and (4) identifying best practice resources.

**Workshop: Strategies to Align Program Offerings with Local Labor Market Needs**

*Track 6*

*Empire*

Levi Thiele, Research Director, Institutional Advancement Department, AIM Institute, NE

Helen Sullivan, Director, National Convergence Technology Center, Collin College, TX

Deborah Boisvert, PI, BATEC, University of Massachusetts-Boston, MA

*Moderator:* Tom Pensabene, PI, Midwest Center for IT, Metro Community College, NE

The technological job skill needs of business and industry are continually evolving, which presents a challenge to educators and students attempting to focus on the right skills to meet these changing needs. If colleges want to attract more students and place them in jobs, there must be better alignment between program offerings and local labor market needs. In this workshop, participants will learn new strategies to monitor current skill requirements in the workforce. What are the best practices for facilitating business and industry leadership boards? What are some innovative sources of employer-sourced data on in-demand skill needs?

**Discussion: The Changing Face of Career and Technical Education (CTE) – MOOCs and Noncredit to Credit Conversion**

*Track 6*

*Embassy*

Charles B. Swaim, Assistant Dean, School of Business, J. Sargeant Reynolds Community College, VA

Melissa P. Gay, Project Manager, School of Business, J. Sargeant Reynolds Community College, VA

Career and technical education (CTE) must constantly change to meet the needs of the industry it serves while operating under standard college practices and regional accreditation standards. This challenge has become a critical issue for CTE given the growth of proprietary and for-profit institutions that are not obligated to follow regional accreditation standards. The recently passed Workforce Innovation and Opportunity Act (WIOA) will increase the pressures on institutions to provide shorter duration CTE options to the workforce. Discussion focuses on some options to mitigate this challenge for community colleges such as through MOOCs, noncredit-to-credit conversion, and one-credit courses.

**Workshop: Comparing STEM Business Integration Implementations**

*Track 6*

*Hampton*

Christoph Winkler, Assistant Professor of Entrepreneurship, CUNY Baruch College, NY

Mary L. Nelson, Director, InnovaBio, Salt Lake Community College, UT

Deidre Sullivan, Director and PI, MATE Center, Monterey Peninsula College, CA

*Moderator:* Edgar Troudt, Instructor, CUNY Institute of Virtual Enterprise, Kingsborough Community College, NY

This workshop compares three modalities of innovation and entrepreneurship education in STEM programs. Invited project directors will present three different
strands: the Virtual Enterprise simulation at CUNY Baruch College, the InnovaBio and STUDENTfacturED contract research organizations at Salt Lake Community College, and the business team elements of the MATE ROV competition. Faculty participants will have the opportunity to discuss the various implementations with their peers and brainstorm potential uses for their own programs.

Workshop: Outreach and Strategies for Broadening Impact of Geospatial Technologies – Spatial Awareness, Model Courses, and Big Data
Track 1
Hampton
Ken Yanow, Professor, School of Mathematics, Science, and Engineering, Southwestern Community College, CA
Rich Schultz, Associate Director, National Geospatial Center of Excellence, IL
Vince DiNoto, Director, National Geospatial Center of Excellence, Jefferson Community and Technical College, KY

The session, ideal for networking/partnering, will share experiences and lessons learned in developing a model Geospatial Awareness course. The course is designed to be either a standalone general education (GE) course in the foundations of spatial thinking, or a gateway course into a geospatial program. The session will introduce attendees to our process of creating “gold standard” competency-based model course curricula that can be applied to any industry; and also share information on some novel opportunities using geospatial technology such as the new research frontier to combine geospatial technology and big data science (social media data, human dynamics, and citizen science). In addition, there is an opportunity for partnerships with the GeoTech Center; as the developed geospatial curriculum is applicable to many different disciplines.

Discussion Session: Unpacking Competencies
Track 1
Forum
Mel Cossette, Executive Director and PI, National Resource Center for Materials Technology Education, WA
Deb Newberry, Director and PI, Nano-Link, Dakota County Community College, MN

Core competencies provide a set of performance indicators for technicians in today’s advanced manufacturing environment. Unpacking competencies assists the instructor in determining the knowledge, skills, and abilities that must be taught to meet industry needs. It can also shed light on the big questions that ignite the learner’s interest and enable deeper, more relevant competency-based learning. Using a hands-on cross-linked polymers exercise to demonstrate the unpacking competencies process, MatEdU and Nano-Link will demonstrate: what unpack means; a step-by-step process for unpacking; and how to develop essential questions for competency focus, inquiry, and analysis.

Workshop: Increasing Female Enrollment in STEM – Hear from ATE Educators Who Have Had Success
Track 3
Capitol
Donna L. Milgram, Executive Director, National Institute for Women in Trades, Technology, and Science, CA
Pamela J. Silvers, Chairperson, Computer Information Technologies, Asheville-Buncombe Technical College, NC
Barbara DuFrain, Assistant Professor, Computer Science, Engineering and Advanced Technology, Del Mar College, TX

Learn how two educators created a big jump in female enrollment in STEM classes in only one year after attending WomenTech Educators Training. Female enrollment increased by 95 percent, from 39 to 76 female students, in engineering and technology programs targeted by Pamela Silvers, ATE PI and Computer Information Technologies Chair at Asheville-Buncombe Technical Community College. At Del Mar College, female enrollment increased by 62 percent in Professor Barbara DuFrain’s required
introductory programming classes. Donna Milgram, moderator and PI of two current NSF projects offering free WomenTech Educators Training to ATE grantees, will share top strategies for recruiting females to STEM.

**Workshop: Indigenous Pedagogy – Integrating Methodologies for all Learning Styles into the Curriculum to Increase Student Success**

*Track 4*

*Congressional B*

Sharyl Majorski, Faculty, Chemistry, Saginaw Chippewa Tribal College, MI

Sarah Gross, Environmental Analyst and Program Coordinator, National Partnership for Environmental Technology Education, ME

Most educators are chronological, systematic presenters, but...the majority of students do not learn that way! In fact, many higher education instructors have the content expertise to teach in their discipline, but very few have formal instruction in teaching. Examine models of learning styles, discover your own preferred learning style, and learn different teaching strategies and methods that will better engage students and increase student success in the STEM disciplines. Indigenous pedagogy is applicable to most community college populations, including diverse learners. Examples of how one ATE project has addressed the need for inclusive pedagogy will be addressed.

**Workshop: Advancing a New Model to Achieve Equity in Technician Education**

*Track 4*

*Governors*

Sonja Schmitz, Associate Professor, Biology, Community College of Baltimore County, MD

Meagan Pollock, Director of Professional Development, National Alliance for Partnerships in Equity (NAPE), PA

To improve student outcomes in technician education, particularly for females and minorities, NAPE’s research suggests that we must reframe the priorities for faculty development. The Educator’s Equity in STEM program has identified four key elements for high quality professional development: (1) significant learning content (24-30 hours), (2) faculty learning communities, (3) accessible tools and resources for continued learning, and (4) an opportunity to conduct action research. Moving the education equation from a focus on content knowledge to creating classroom equity requires a shift in teaching that takes time to learn and process, but is worth the effort.

**Workshop: Skating to Where the Puck Will Be – A Framework for E-Books, Interactivity, and Student Engagement**

*Track 4*

*Ambassador*

Michael Qaissaunee, Professor, Engineering and Technology, Brookdale Community College, NJ

Kelly J. Parr, Project Manager, E-MATE, Brookdale Community College, NJ

Gordan Snyder, Associate Director, National Center for Optics and Photonics Education, MA

This workshop is designed for attendees interested in developing interactive e-books or learning objects with their own content, but are unsure about how to get started. E-MATE, E-books, and Mobile Apps for Technician Education is a three-year project to develop interactive e-books. The team is documenting best practices and lessons learned with the ultimate goal of creating a framework that any educator can reference to develop interactive e-books. The E-MATE team, in collaboration with the National Center for Optics and Photonics Education, will share a glimpse of the project work to date and lead the workshop using live and video demonstrations.

**Workshop: Seek, Find, Strategize – Developing the Future of Educational Games**

*Track 4*

*Calvert*

Catherine Cannon, Assistant Professor, Digital Design, Hostos Community College, NY

Mary Rasley, Professor, Computer Information Systems, Lehigh Carbon Community College, PA

Rees Shad, Chair, Humanities Department, Hostos Community College, NY

Steven Weitz, Assistant Professor of Media Arts, Lehigh Carbon Community College, PA
This session will involve a discussion between and with two teams promoting the use of games in education. Professors from Lehigh Carbon Community College will present their work with the “Edugaming Framework,” which they have developed to provide a simple model for educators to use in creating engaging educational games where practice and exploration encourage learning. Professors from Hostos Community College will present on the “Game-Framed Math and Science Initiative” exhibiting a number of games that they have developed to augment remedial math and science courses, as well as their technique for developing games with students that serve as study aids. The session will culminate in a workshop examining common quiz-based games and improving them. This will help attendees to recognize valuable tools and strategies for the use of games and game design in education.

Discussion: The Value of Contextualized Learning Communities
Track 4
Cabinet

Elaine Johnson, Executive Director and PI, Bio-Link, City College of San Francisco, CA
John Carrese, Project Coordinator, Bio-Link, City College of San Francisco, CA
Edie Kaeuper, Biotechnology Project Coordinator, City College of San Francisco, CA

This session uses an example of the Bridge to Biosciences project to explore the value of contextualized learning communities. Session participants will learn how the Bridge to Biotech model has been expanded across the nation because of the Synergy project. The engagement of a learning community to understand scalability and the adaptation of a model will invite session participants to vision how this model might work at their college and for their program.

Discussion: How “Grow Your Own Internship” Models Benefits Industry
Track 4
Senate

Joshua Phiri, PI, SC ATE, Florence-Darlington Technical College, SC
Anna Kolliopoulos, Assistant Director, Co-PI, SC ATE, Florence-Darlington Technical College, SC
Ronnie Forrest, Jr., Senior Mechanical Engineering, Otis Elevator Company, SC

The need for skilled technicians in the American workforce can be addressed through collaborations between colleges and industries that include student internships. For more than a decade, Florence-Darlington Technical College’s internship program has benefited industries, students, and the college. Industries participate as a way to “grow their own” next generation technical workforce. The college’s engineering and industrial technology programs offer paid internships with flexible payment plans for industry. Course scheduling is modified to accommodate full-day, year-round internship work. This program is meeting industry’s need for workers, increasing student retention and success rates, and strengthening the economy.

Workshop: Expanding Research Collaboration in ATE Projects – Two Case Studies Anchored in Improving Manufacturing Student Success
Track 5
Congressional A

Xueli Wang, Assistant Professor, Educational Leadership and Policy Analysis, University of Wisconsin – Madison, WI
Laura Waurio, Research Data Analyst, Fox Valley Technical College, WI
Larry Gross, Instructor, School of Technology and Applied Sciences, Milwaukee Area Technical College, WI

Moderator: L. Allen Phelps, Senior Scientist, Wisconsin Center for Education Research, University of Wisconsin – Madison, WI

This session features two research initiatives that address factors influencing manufacturing student success, i.e., dual credit completion and contextualization in remedial math.
Building on a collaborative effort between researchers and stakeholders at technical colleges, the two case studies uncovered compelling and nuanced findings that shed light on (1) the influence of dual credit completion in high school and its impact on early college and career success, and (2) the impact of contextualized math offerings on aspiring manufacturing students' learning, motivation, and college readiness. Session participants will also be invited to share insights into similar topics anchored in improving student success.

**Discussion: The Education Continuum for Engineering and Engineering Technology and the Role of Making, Doing, and Application**

*Track 5, Embassy*

*Steven L. Dulmes, PI, Department Chair, Lasers, Photonics and Optics, College of Lake County, IL*

*Greg Pearson, Senior Program Officer, National Academy of Engineering, DC*

*Kenneth Burbank, Professor and Head, School of Engineering Technology, Purdue University, IN*

This session will highlight discussions from the NSF IUSE IDEAS Lab last March and provide an overview of work to date on an 18-month study of two- and four-year engineering technology education programs being conducted by the National Academy of Engineering. Many engineers come from backgrounds other than four-year engineering degrees, i.e., technology, experience, other sciences, etc. Based on this, why do we still insist on four semesters of calculus and calculus-based sciences, when most engineers will not use these skills? Do we need to re-engineer engineering education? Is there an alternative? Please join us.

**Workshop: Developing Industry Driven Curricula through Problem Based Learning (PBL)**

*Track 6, Empire*

*Fenna Hanes, Senior Director, Professional and Resource Development, New England Board of Higher Education, MA*

*Nicholas Massa, Professor, Laser Electro-Optics Technology, Springfield Technical Community College, MA*

*Bradley Harding, Instructor, Energy Services and Technology, Kennebec Valley Community College, ME*

Industry is increasingly looking to educators to graduate problem solvers—individuals who skillfully apply their knowledge of STEM to solving real-world problems. In this interactive session, instructors who transformed their classes by developing PBL instructional materials will discuss how they worked with industry partners to address local workforce development needs by identifying specific real-world problems appropriate for their classrooms. Instructors will share how their ATE projects collaborated to develop a new industry-driven PBL program at a community college. Participants will engage in roundtable discussions focused on resources, strategies, barriers, and solutions to implementing PBL in their classrooms.
Workshop: Leveraging NSF ATE with the U.S. Department of Labor’s Registered Apprenticeship Program

Track 6
Diplomat

Laura Ginsberg, Team Leader, Office of Apprenticeship, U.S. Department of Labor, DC
Brad Mason, Director of Operations, AMSEC, VA
Barbara Murray, PI, SMART Center, Tidewater Community College, VA
Holly Moore, Executive Dean, South Central Community College, WA
Moderator: Facilitator: Ann Beheler, PI, National Convergence Technology Center, TX

This session continues the dialogue from the Thursday morning concurrent session on leveraging NSF’s ATE program with DOL’s Registered Apprenticeship program. An ATE Center PI and her industry partner, and a project PI, will discuss how they implemented Registered Apprenticeship programs to accelerate learning and provide augmented programs for students. Specific examples of advances, innovations, and the advantage of leveraging programs and resources will be shared.

4:00 – 5:15 pm
Lightning Round: Emerging Trends, Technologies, and Strategies for Student Success
Palladian

Moderator: Rachael Bower, PI, ATE Central, University of Wisconsin-Madison, WI

Come join experts from the ATE community and learn about a range of emerging trends, technologies, and student success strategies in a fast-paced and informative lightning round session. Eight presenters will each spend six minutes (and a few slides) providing participants with an overview of recent innovations in their fields such as photonics, cybersecurity, advanced engineering, geospatial, and energy technology—as well as proven practices with student success models such as career success skills learning modules, peer mentors, leadership and entrepreneurship cultivation, service learning, and more! A brief question and answer period will allow attendees to interact with presenters; mention trends, technologies, and promising practices from their own field; and expand on the information provided during the more formal portion of the presentation.

Presenters
Gary Beasley, Lead Instructor, Laser and Photonics Technology, Central Carolina Community College, NC
Topic: “Lasers Enable Spectroscopy”

Kapil Chalil Madathil, Director of Technology Operations, Center for Workforce Development, Clemson University, SC – Topic: “Virtual Reality Supplementing Technician Engineering Education”

Kevin Cooper, Director, RCNET, Indian River State College, FL – Topic: “Nuclear Technology in Emerging Fields”

Dipankar Dasgupta, Professor of Computer Science, University of Memphis, TN – Topic: “Puzzle-Based Cybersecurity Education”

David Webb, Assistant Professor, Mechanical Engineering Technology, Virginia Western Community College, VA – Topic: “Geospatial Mobile Apps and Student Service Learning”

Edgar Troudt, Instructor, CUNY Institute of Virtual Enterprise, Kingsborough Community College, NY
Topic: “The Social Side of Science – Communicating with the Community”

Karen White, Executive Director, 360° Manufacturing and Applied Engineering ATE Regional Center, Bemidji State University, MN – Topic: “360° Career Success Skills Learning Modules”

Ingrid Dahl, Director of Next Gen Programs, Bay Area Video Coalition, CA – Topic: “Bridging Underrepresented Young Professionals with the Tech Sector”
7:30 am – 12:00 pm
Conference Registration
West Conference Foyer

7:30 – 10:00 am
Internet Café and Hot Spot
West Conference Foyer

7:30 – 8:45 am
Continental Breakfast
Regency Ballroom

7:30 – 8:45 am
Showcase III Set-up
Exhibit Hall

7:45 – 8:45 am
Breakfast Roundtables
Ambassador

9:00 – 10:15 am
Plenary Session
Regency Ballroom
V. Celeste Carter, Lead ATE Program Director, National Science Foundation, VA
Susan Singer, Director, Division of Undergraduate Education, National Science Foundation, VA
Sarah Kay McDonald, Division Director, Division of Research on Learning in Formal and Informal Settings, National Science Foundation, VA

10:15 am – 12:30 pm
Showcase III and Lunch
Exhibit Hall

12:30 – 1:15 pm
Showcase III Breakdown
Exhibit Hall

12:45 – 3:00 pm
ATE Center Directors Meeting
ATE Center Staff Only
Palladian

Ensuring Our Nation’s Competitiveness – Developing STEM Leaders for Education, Training, and Workforce Development

Keynote Speaker: Chandra Brown, Deputy Assistant Secretary for Manufacturing, International Trade Administration, U.S. Department of Commerce

The U.S. Department of Commerce, through its International Trade Administration, is working to strengthen our nation’s global competitiveness of U.S. manufacturers through supporting job growth and innovation. Deputy Assistant Secretary Brown will address the need to develop a robust and diverse STEM workforce—with strong STEM leaders to support educational and workforce development efforts—and the role that community colleges can play in meeting these needs. She will also discuss the Department of Commerce’s initiatives and directions in supporting the community college role in preparing STEM technicians and leaders to advance the U.S. economy.

Update from the U.S. Department of Education

Keynote Speaker: Mark Mitsui, Deputy Assistant Secretary for Community Colleges, Office of Career, Adult, and Technical Education, U.S. Department of Education
ATE Central can help you...

- Showcase your valuable resources and events
- Extend your outreach efforts and social media presence
- Track the impact of your center or project activities
- Connect with collaborators and mentoring opportunities
- Archive materials and other deliverables for longevity

Tools and services for you from ATE Central...

**ATE Outreach Kit:** An integrated guide and set of materials to help you disseminate your work and promote your project or center

**ATE PI Meeting App:** A mobile application to help plan your schedule, manage new contacts, and get the most out of the annual PI meeting

**ATE Archiving Service:** Supporting the archiving of your curriculum, professional development materials, and other deliverables to make sure that the valuable resources you’ve created continue to be available

*For more information please visit us during the showcase sessions or at [http://atecentral.net](http://atecentral.net)*

ATE Central is funded by the National Science Foundation under award 1261744
Table 1. ATE Mentoring Opportunities – Giving Back  
Dennis Faber, Co-PI, Mentor-Connect, MD  
Mentor-Connect has introduced more than 60 new technical and community colleges to the ATE community and improved their chances of being awarded an ATE grant. Be part of the excitement! Learn more about ways in which you can provide meaningful mentoring assistance to help grow the next generation of ATE leaders.

Table 2. Engaging STEM Students Outside of the Classroom: Camps, Clubs, and Competitions  
Emily Coppa, Coordinator, Advanced Cyberforensics Education Consortium, Daytona State College, FL  
This roundtable will explore different student activities and how they can be used to motivate students to pursue education and careers in STEM. Discussion will focus on the logistics behind creating STEM camps, clubs, and competitions—including the motivation for creating these activities—and lessons learned along the way.

Table 3. Using Outreach as an Effective Recruitment Strategy  
Maureen A. Devery, SHINE Outreach Manager, North Seattle College, WA  
Educational outreach is often used as a recruitment tool. How can this best be accomplished? This roundtable discussion will examine how organizations integrate recruitment and outreach activities, and where distinctions are made. How can outreach work be used to both increase knowledge and result in future student program enrollment?

Table 4. Adding a Supply Chain Technician Pathway to Your Current Industrial Maintenance, Mechatronics, or Automated Systems Curricula  
Ned David Young, Co-PI, National Center for Supply Chain Technology Education, Sinclair Community College, OH  
The Supply Chain Technician (SCT) is a growing career that shares foundational skills with other programs (industrial maintenance, mechatronics, automated systems, etc.) providing students the opportunity to create new career paths without reinventing all new coursework. Let’s discuss how easy it is to provide new career options to students.

Table 5. Developing an Industry Driven Curriculum through Problem Based Learning  
Nicholas Massa, Professor, Laser Electro-Optics Technology, Springfield Technical Community College, MA  
In this roundtable session, instructors who transformed their instructional strategies from lecture-based to student-centered will discuss how they developed Problem Based Learning (PBL) curricula for a new associate degree program. They worked with experienced PBL instructors to learn the methodology and how to address local workforce development needs through industry partnerships.

Table 6. Deliver! Showcase Your Work with an Effective Presentation  
Amanda Hatherly, Director, New Mexico Energy $mart Academy, Santa Fe Community College, NM  
Do you deliver training? Do you present at conferences, in front of boards, or other audiences? Have you experienced (or delivered!) death by PowerPoint and want to know how to avoid it in the future? This roundtable will introduce the tools you need to deliver effective, engaging presentations on any topic.
Table 7. How to Track, Evaluate, and Promulgate Center Online Educational Resources
Matthias Pleil, PI, Southwest Center for Microsystems Education (SCME), University of New Mexico, NM

Most ATE centers and programs have a web presence designed to support their stakeholders. SCME wishes to share its web presence strategies (documents, Moodle, YouTube, webinars, and Facebook). Successes, lessons learned, unique metrics and methods in evaluating immediate, potential and applied value including tracking our global web presence impact will be discussed.

Table 8. Lessons Learned from ATE about Community College Baccalaureates in Technician Education
Debra Bragg, Director, Office of Community College Research and Leadership, University of Illinois at Urbana – Champaign, IL

Participants will discuss targeted ATE research on the implementation of applied baccalaureate (AB) programs in community colleges. AB programs operating transfer agreements with four-year universities will also be discussed. The case study research will provide the basis for a lively discussion on the growing trend for community colleges to award baccalaureates.

Table 9. Preparing Technicians for Florida’s Emerging Biofuels Industry
Beth Burch, Lead Instructor, Bioenergy Program, South Florida State College, FL

Learn how curricula were developed in biofuels technology and biomass cultivation to prepare technicians for Florida’s emerging biofuels industry. Discuss how to handle challenges when corporations change their business development plans and the region is in need of higher paying jobs in a rural, agriculture-based economy.

Table 10. Industrial Control Systems/Supervisory Control and Data Acquisition (ICS/SCADA) Cybersecurity: Protecting the Critical Infrastructure
Robert Hamilton, Program Specialist, Cybersecurity, Oklahoma Department of Career Tech, OK

Discuss how Oklahoma’s CareerTech system and other Cyber Security Education Consortium members are partnering with the oil and gas industry and manufacturing companies to secure their industrial control systems. Technician training requirements in ICS/SCADA cybersecurity are identified; and customized training courses are developed to quickly meet those requirements.

Table 11. Implementing Undergraduate Research in a Course: The Issues Start to Finish
Jackie Crisman, Co-PI, Community College Undergraduate Research Initiative, Jamestown Community College, NY

Undergraduate research is effective in promoting student engagement and college readiness. Valuable information about how to implement undergraduate research in a course at a community college will be provided by the Community College Undergraduate Research Initiative (CCURI). CCURI is sponsored by NSF to promote nationwide implementation of research at community colleges.

Table 12. Creating New Pathways to Careers in Technology
Laura LeMire, Engineering Coordinator, Community College of Baltimore County (CCBC), MD

Create a pathway to a career in technology for high school students who may never have considered college an option. By introducing, customizing, and aligning high school technology classes with introductory college level courses, students realize they have the ability to perform college-level work and gain the confidence to succeed. Explore how you can replicate CCBC’s alignment of Engineering by Design advanced technology education classes with college-level introduction to engineering technology courses for other STEM fields. In addition, train school counselors to encourage more women and minorities to pursue a STEM career and learn about the new pathway.
Table 13. Flexibility is Key for Student/Industry Internship Programs
Beverly Hilderbrand, PI and Director, CARCAM, Gadsden State Community College, AL

CARCAM will facilitate a discussion regarding the program flexibility required to meet the career goals of technical students and the needs of industry partners. Discussion will focus on key factors to consider in establishing successful co-op and internship programs, and promoting industry buy-in to provide students with learning experiences while working onsite.

Table 14. Cybersecurity – Connecting STEM to Technology
Zoltan Szabo, Program Coordinator, Digital Forensics and Information Assurance, Richland College, TX

Participants will be introduced to the actual meaning of awareness, training, and education from the technical point of view without following the current trend of “Follow what I do!” based training. Participants will examine and evaluate current training models and be introduced to methodology-based education. Discussion questions include: What is the difference between training and education? What skills are important for long-term success in cybersecurity? How can we change current IT programs to truly incorporate them into STEM?

Table 15. U.S. Department of Labor Competency Models
Rodney D. Jackson, Associate Director, National Geospatial Technology Center (GeoTech Center), Davidson County Community College, NC

The GeoTech Center is collaborating with the U.S. Department of Labor to update the Geospatial Technology Competency Model (GTCM). GeoTech has contacted geospatial professionals and solicited them to complete a review of the GTCM. The GTCM functions as the foundation for a series of “model courses” and a program assessment.

Table 16. Manufacturing Technology Summer Camp
Karl W. Henry, Sr., Chair, Industrial Electronics Technology, J.F. Drake State Community and Technical College, AL

This showcase will offer discussion on technology summer camps as a way to increase STEM awareness, recruit students through experiential encounters, provide hands-on activities to engage students, and target underserved students. Students were challenged with established objectives and criteria to design and produce a simple “manufacturing” robot—and received a total of 72 hours to complete the project.

Table 17. Developing Occupational Competencies for the Grape and Wine Industry: A Model for NSF Centers
Michele Norgren, PI, Viticulture and Enology Science Technology Alliance (VESTA), MO

VESTA will share the process they utilized to identify grape and wine distinct occupations and occupational requirements for each. Breakfast discussion will focus on the tools and strategies available for occupational competency development and the identification of knowledge, skills, and abilities for an identified occupational sector.
Table 1. Teaching STEM Subjects Online: Lessons Learned

Philip Craiger, PI, Advanced Cyber Forensics Education, Daytona State College, FL

In this roundtable, we discuss lessons learned from eight years of experience teaching cybersecurity and cyberforensics online. Issues, concerns, and opportunities for moving from face-to-face instruction to online formats will be discussed. What technical impediments are faculty likely to encounter? How different is online teaching in comparison to traditional classroom teaching?

Table 2. Advanced Three-Dimensional (3D) Visualization and Virtual Reality Technology Improving Engineering Technology at Two-Year Colleges

Tianwei (Thomas) Wang, Mechanical Engineering Doctoral Student, Clemson University, SC

Three-dimensional visualization and virtual reality technology improve the engineering technology education process. These methods offer two-year colleges an opportunity to employ hybrid approaches for engineering education by supplementing classroom and laboratory work with online materials. Learning modules will be presented to illustrate the online educational materials for two-year college students.

Table 3. Is Your Internship Program LEAN?

John Floyd, Assistant Professor, Electronics, Eastern Shore Community College, VA

This roundtable will examine common elements of internship programs based on the application of lean manufacturing principles. Discussion will consider the perspectives of students, faculty, work site hosts, and mentors to determine what practices add value and what practices create waste.

Table 4. Research Experiences for Undergraduates: A Community College/University Partnership

Cathy Balas, Co-PI, Clark State Community College, OH

Clark State Community College and Indiana University are enhancing students’ skills in high performance computing systems used for scientific research. This roundtable will focus on how research experiences for undergraduates and virtual internships increase the career opportunities open to community college graduates to work as technicians supporting scientific research.

Table 5. Is There a Cloud in Your Program’s Future?

Ron Carswell, Associate Professor, Computer Information Science, San Antonio College, TX

This roundtable will discuss how to implement Microsoft, VMware, and OpenStack Private Cloud technology at a community college and share information on three courses that build on existing AAS degrees in Computer Network Administration. The roundtable will also address the following questions: What are vendor approaches to cloud computing? How do we scale hardware/software requirements to the classroom? How do we promote these courses to potential students?

Table 6. Professional Development in a Collaborative Format

Edie Schmidt, Associate Professor, Industrial Technology, Purdue University, IN

This roundtable will offer discussion of how to balance collaborating with stakeholders to leverage resources across multiple partners. Included are best practices from a collaborative grant between Ivy Tech Community College and Purdue University that illustrate summer workshop initiatives that enabled K-12 instructors to expand dual credit offerings and increase pathways between statewide institutions.
Table 7. Calling All Information Technology and Cybersecurity Centers and Projects  
Deborah Boisvert, PI, BATEC, University of Massachusetts – Boston, MA

If you are an information technology or cybersecurity center/project, come join us for a chance to share best practices and learn more about each other’s work. We want to build community and provide opportunities for collaboration across the discipline with a goal of deepening the impact of the ATE program.

Table 8. Laddered Transitions: Leveraging Employers to Enhance Opportunities  
Scott Govitz, Executive Director, Economic and Workforce Development, Mid Michigan College, MI

Leveraging industry and economic development partners generates long-term commitment to the development of new talent. Using the holistic approach to an industry sector strengthens a college’s capacity to recruit and sustain students, thus ensuring a current and future workforce for employers.

Table 9. Geospatial Technology Program Discussion  
David Webb, Assistant Professor, Mechanical Engineering Technology, Virginia Western Community College, VA

This roundtable will discuss geospatial technology instruction and student projects including internships and a service learning partnership with NASA. The use of unmanned aerial vehicles and other engaging projects will be shared with the group to facilitate discussion. Successful best practices in faculty professional development will also be discussed.

Table 10. Introducing Students to 3D Printing  
Karen Wosczyna-Birch, Executive Director, Regional Center for Next Generation Manufacturing (RCNGM), CT

The rapid development and growth of advanced manufacturing methods has led to technologies that can be used in the classroom and beyond to get students excited about manufacturing. This session will focus on how RCNGM has used additive manufacturing to take student projects from 3D modeling software to 3D printed prototypes that can be used immediately to show hands-on progress for projects in partner programs. Come and learn if 3D printing can be incorporated into your classrooms and outreach programs.

Table 11. Industry-Guided ATE Projects: Best Practices for Authentic Industry Engagement  
Kevin Fleming, PI, National Center for Supply Chain Technology Education, Norco College, CA

Everyone agrees that industry partnerships are vital to ATE program success. But how do you ensure authentic collaboration and genuine investment while simultaneously maintaining dozens of business partnerships? The National Center for Supply Chain Technology Education has successfully enlisted the support of a robust roster of global companies. Participants aren’t just merely attending meetings, but key executives are working with local colleges and assigning their staff to attend and support national center events and activities. Learn successful tips that you can immediately implement to grow and strengthen your network of industry partners and grow your industry advisory board.

Table 12. Putting Businesses to Work – In Manufacturing Education  
Deborah Kobes, Senior Project Manager, Jobs for the Future, MA

Businesses want colleges to prepare skilled workers, but without participating in program implementation, they aren’t best served. Come discuss how work-based learning directly involves employers in education, builds teaching into jobs, and links career training to education. Learn how Owensboro Community and Technical College adapts manufacturing courses to be work-based.
Table 13. Implementing a Hybrid Competency-based, Open-Entry/Open-Exit, Open-Lab, Faculty-Mentored Engineering Technology AS Degree

Eric Roe, Director of Applied Technologies, Polk State College, FL

This roundtable will discuss how hybrid, competency-based, open-entry/open-exit education is an innovation that is redefining how students earn an AS degree in Engineering Technology at Polk State College. What is the difference between traditional hybrid programs and an open-entry/open-exit, competency-based program? What is the justification behind these programs? What is the benefit to the student?

Table 14. Integrating Innovation into the STEM Curriculum

Christoph Winkler, Assistant Professor of Entrepreneurship, CUNY Baruch College, NY

ATE has made the integration of “entrepreneurship and innovation strategies” a focal point for funded programs. This session reviews the Entrepreneurship Education Spectrum framework and then asks participants to identify the practices on their campuses, the supports that are needed to start and scale up these practices, and what topics of faculty development are in demand. Participants have the ability to guide the development of a July 2015 conference on STEM Innovation and Entrepreneurship through the outcomes of their discussion.

Table 15. American Society of Mechanical Engineers (ASME)/Community College Collaboration in Engineering Education and Corporate Training

Thomas J. Perry, Director, Engineering Education, ASME, NY

ASME, with over 140,000 members, publishes some 600 industry codes and standards, and is the lead society in the ABET accreditation of 450+ AAS and BS degree programs. Our training and development program is recognized by the manufacturing, process, and energy industries for the continuing education of engineers and technicians with over 150 public, in-company, and online courses and certificate programs. Accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET), we feature training in design, inspection, and maintenance areas. Join us to explore possibilities of collaborative, industry training.

Table 16. Research and Evaluation by ATE Projects and Centers

Gerhard Salinger, Program Director (retired), National Science Foundation, VA

This roundtable will continue discussion started as part of the Thursday morning concurrent session on evaluation and research by ATE projects and centers.

Table 17. ATE Student Breakfast Networking

Mary Heiss, Interim Senior Vice President for Academic and Student Affairs, American Association of Community Colleges, DC

This student-only breakfast roundtable session will provide an informational setting for ATE students to network with one another. Student participants are welcome to come and share their educational and professional experiences and hear from other students about how they balance school, work, and life.
October 22 –
Opening Plenary Session

KEITH J. MASBACK is the Chief Executive Officer (CEO) of the 501(c)(3) not-for-profit United States Geospatial Intelligence Foundation (USGIF). As CEO, he represents over 230 member companies, organizations, and academic institutions and is responsible for carrying out the Foundation’s mission of promoting the geospatial intelligence (GEOINT) tradecraft and developing a GEOINT community among government, industry, academic, professional organizations, and individuals whose mission focus is the development and application of geospatial intelligence to address national security objectives. He has served as a member of the Intelligence Task Force of the Defense Science Board and is currently a member of the National Oceanic and Atmospheric Administration’s Advisory Committee on Commercial Remote Sensing.

Prior to joining USGIF, Mr. Masback spent a combined 21 years as an officer in the U.S. Army and in government civilian service, culminating as a member of the Defense Intelligence Senior Executive Service at the National Geospatial-Intelligence Agency (NGA). He held a variety of positions at NGA primarily focused on strategic planning and programming. Most recently, he served as the Director, Source Operations Group, where he was responsible for tasking the Nation’s overhead GEOINT collection assets. Prior to his NGA service, he was a senior executive civilian on the Army Staff, responsible for planning the future of Army Intelligence and serving as the Army’s first Director of Intelligence, Surveillance, and Reconnaissance Integration.

Mr. Masback began his professional career in the U.S. Army, serving as an Infantry officer in the Berlin Brigade and as a Military Intelligence officer at XVIII Airborne Corps, Fort Bragg, N.C., and on the Army Staff at the Pentagon.

He holds a Bachelor of Arts in Political Science from Gettysburg College. He completed the Post-Graduate Intelligence Program at the National Intelligence University. He has also completed executive education at the Kellogg School, Northwestern University, and the Elliott School of International Affairs, George Washington University.

October 23 –
Thursday Plenary Session

ESTHER J. CEPEDA is an opinion journalist and expert on the issues of U.S. Hispanics/Latinos. She writes two columns a week for the Washington Post Writers Group and is also a marketing/communications expert, social media strategist and coach, and public speaker.

Born and raised on the North Side of Chicago, Esther J. Cepeda started writing before her scribbles adequately conveyed her musings. She attended Lane Technical High School then went on to Southern Illinois University, earning a Bachelor’s degree in journalism with minors in music and psychology.

After being awarded a full scholarship to the Medill School of Journalism at Northwestern University, she studied Integrated Marketing Communications before going into direct marketing and public relations for a variety of Chicago companies.

In 2002, Ms. Cepeda began teaching as a bilingual teacher in low-income grammar and high schools in the suburbs of Chicago while working toward a Master’s degree in Special Education from Roosevelt University.

Before joining the Chicago Sun-Times in 2006, then becoming Chicago’s first Latino metro columnist, Ms. Cepeda wrote about national and local politics and social issues for Illinois newspapers and magazines across the country. She wrote a weekly column for the Sun-Times until February 2012.

Selected as a Columbia University ‘Next Generation Project’ American Assembly Fellow in 2007, Ms. Cepeda was recently named a National Fellow and in June 2008 convened with over 100 nationally selected young leaders at the Woodrow Wilson International Center for Scholars to strategize on U.S. Global Policy and the Future of International Institutions.

Ms. Cepeda’s columns are archived on www.estherjcepeda.com. She is a member of the National Association of Hispanic Journalists, The Chicago Headline Club, and The Society of Professional Journalists.
October 24 –  
Friday Plenary Session

CHANDRA BROWN is the Deputy Assistant Secretary for Manufacturing, U.S. Department of Commerce, International Trade Administration where she oversees a broad portfolio of programs aimed at increasing the international competitiveness of U.S. manufacturers. Managing a staff of over 70 international trade professionals, she is responsible for boosting U.S. exports of manufactured products, helping to create and support jobs for American workers.

Strengthening the global competitiveness of U.S. manufacturing is essential to the Obama Administration’s agenda for economic growth and prosperity. In 2012, exports of U.S. manufactured products supported 7.3 million American jobs, an increase of more than 20 percent from when President Obama took office. In addition to increasing overall domestic manufacturing and emphasizing innovation in manufacturing, Ms. Brown is committed to increasing the exports of small and medium-size businesses given their pivotal role in generating jobs for American workers.

Ms. Brown brings many years of private sector manufacturing experience to the Commerce Department. Prior to joining the Administration, she worked for Oregon Iron Works, where she most recently served as Vice President and Chief Executive Officer of its subsidiary, United Streetcar; the first U.S. manufacturer to create a modern streetcar in more than 60 years. She was appointed to the U.S. Manufacturing Council by former Secretary of Commerce Gary Locke in 2010 and served as its vice-chair.

Ms. Brown has received numerous awards, including White House Champion of Change in 2011 and the Right Stuff Award from the Apollo Alliance in 2010. She was named one of the 50 most influential Portlanders in 2012. She received her Master of Business Administration from Miami University in Oxford, OH.

MARK MITSUI is the Deputy Assistant Secretary for Community Colleges in the Office of Career, Technical, and Adult Education (OCTAE). He most recently served as the President of North Seattle Community College (NSCC). Prior to that, Mr. Mitsui served as Vice President of Student Services for South Seattle Community College (SSCC), Assistant Dean at Green River Community College, Director of Student Success and Retention Services at NSCC and as a tenured faculty at Renton Technical College. International student enrollment increased by over 50 percent during his tenure as president at NSCC, and he hosted several international delegations researching the American community college system.

He worked on the statewide task force to review and redesign the performance funding system in Washington’s Community and Technical Colleges, including the student success metrics. Mr. Mitsui oversaw the completion of a new Opportunity Center (a one-stop) that brought together three state agencies to provide integrated federal, state, and private funding streams and services to move low-income residents out of poverty through education. He has also worked with a variety of industry-higher education consortia to address skills gaps in high demand sectors.

He is very committed to serving underrepresented, underserved communities and led strategic student success efforts to serve these communities, including initiatives to help both South Seattle and North Seattle Community Colleges become minority-serving institutions.
EvaluATE promotes the goals of the ATE program by partnering with ATE projects and centers to strengthen the program's evaluation knowledge base, expand the use of exemplary evaluation practices, and support the continuous improvement of technician education throughout the nation.

EvaluATE is located at The Evaluation Center at Western Michigan University and supported by the National Science Foundation under Grant No. 1204683.

www.evalu-ate.org
## Showcase Session I

**Wednesday, October 22**

**ATE Centers**

7:30 – 9:45 pm • Exhibit Hall

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<td>ATE Central – Supporting the ATE Community</td>
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<td>CA2VES – Center for Aviation and Automotive Technology Education using Virtual E-School</td>
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<td>CARCAM – Consortium for Alabama Regional Center for Automotive Manufacturing</td>
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<td>CSSIA – National Center for Systems Security and Information Assurance</td>
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<td>DeafTEC – Technological Education Center for Deaf and Hard-of-Hearing Students</td>
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<td>EvaluATE – Evaluation Resource Center for Advanced Technological Education</td>
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<td>005</td>
<td>HI-TEC – High Impact Technology Exchange Conference</td>
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<td>MATE – Marine Advanced Technology Education Center</td>
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<td>Mentor-Connect – Leadership Development and Outreach Initiative for ATE</td>
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<td>006/007</td>
<td>MCIT – Midwest Center for Information Technology</td>
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<td>MIPCT – Mid-Pacific Information and Communication Technologies Regional Center</td>
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<td>NACK Network – Nanotechnology Applications and Career Knowledge Network</td>
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<td>MatEdU – National Resource Center for Materials Technology Education</td>
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<td>National Science Foundation</td>
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<td>Nano-Link – Center for Nanotechnology Education</td>
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<td>NBC2 – Northeast Biomanufacturing Center and Collaborative</td>
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<td>RCNET – Regional Center for Nuclear Education and Training</td>
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<td>RCNGM – Regional Center for Next Generation Manufacturing</td>
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<td>101/102</td>
<td>SC ATE – South Carolina ATE National Resource Center</td>
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<td>SCME – Southwest Center for Microsystems Education</td>
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<td>407/408</td>
<td>SpaceTEC – National Research Center for Aerospace</td>
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<td>008/009</td>
<td>Weld-Ed – National Center for Welding Education and Training</td>
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<td>207/208</td>
<td>VESTA – Viticulture and Enology Science Technology Alliance</td>
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Since 1995, the SC ATE Center has provided curriculum products that embed problem based learning, faculty development, promising and proven practices in program improvement, and mentoring to increase the quality, quantity, and diversity of skilled technicians to meet industry needs and support economic development. The SC ATE Center is the “go to, return to” place for innovation to expand excellence in technician education for technician and related STEM educators via www.scate.org, www.TeachingTechnicians.org, www.mentor-connect.org, and www.MakingLearningReal.org.

Booth # 105/106
Eastern Iowa Community College
ATEEC – Advanced Technology
Environmental and Energy Center
ATEEC’s purpose is to define technician knowledge, skills, and competencies needed for the workplace; collect, validate, and disseminate exemplary education materials; and support and mentor institutions with environmental science and sustainable energy technology programs by partnering with business, industry, governmental agencies, professional organizations, and academic institutions. This showcase will demonstrate how ATEEC can be a resource for you and your students.

Booth # 201/202
City College of San Francisco
MPICT – Mid-Pacific Information and Communication Technologies Regional Center
MPICT’s mission is to coordinate, promote, and improve the quality of Information and Communication Technologies (ICT) education in two-year colleges in California, Nevada, Hawaii, and the Pacific Territories. MPCIIt endeavors to champion the importance of ICT, build relationships with the ICT, industry of the San Francisco Bay Area and Silicon Valley to improve ICT education, coordinate efforts to improve educational and career pathways in ICT, and expand and diversify the ICT workforce.

Booth # 203/204
Kentucky Community and Technical College System
AMTEC – Automotive Manufacturing Technical Education Collaborative
AMTEC is a collaboration of community and technical colleges and industry partners who seek to better prepare highly skilled technicians and manufacturing engineers for work in automobile manufacturing and technology.

Booth # 205/206
Kentucky Community and Technical College System
GeoTech – National Geospatial Technology Center of Excellence
The GeoTech Center will highlight the new Geospatial Technology Competency Model (GTCM) 2014 and the model courses being developed for implementation in spring 2015.

Booth # 207/208
Missouri State University
VESTA – Viticulture and Enology Science Technology Alliance
VESTA provides access to nationally recognized expert instructors through online courses and participation in local field practicums. Through an expanding 19-state partnership, and by utilizing its ground-breaking distance education model, VESTA provides educational institutions and the grape and wine production industry access to knowledge and skill development programs. VESTA provides leadership, expertise, resources, academic programs, and technical assistance to students interested in entering and advancing careers within the grape and wine production industry.
**Booth # 209/210**

**Hudson Valley Community College**

**NEATEC – Northeast Advanced Technological Education Center**

NEATEC fulfills the needs of nanotechnology and semiconductor manufacturing industries in New York and Western New England through development, demonstration, and utilization of new materials, curricula, and delivery methods by utilizing the resources of academia, industry, and government.

**Booth # 211/212**

**Clemson University**

**CA2VES – Center for Aviation and Automotive Technology Education using Virtual E-School**

CA2VES focuses on a unique approach to workforce development through implementing digital learning techniques that enhance technician education through integrating virtual reality simulations with open educational resources and innovative instructional design. This showcase will feature live demonstrations of virtual reality simulations and Educateworkforce.com (a learning-solution portal created for two-year colleges blending digital curriculum into existing courses) and reports of research studies and recruitment initiatives.

**Booth # 301/302**

**Indian River Community College**

**RCNET – Regional Center for Nuclear Energy Education and Training**

RCNET’s primary focus is on two-year college training and involves partnerships between academic institutions and employers to promote improvement in the education of nuclear technicians at the undergraduate and secondary school levels. RCNET is also responsible for curriculum development, and professional development of college faculty and secondary school teachers while providing remote access and lesson plans to embed unique training systems.

**Booth # 303/304**

**University of Central Florida**

**OP-TEC – National Center for Optics and Photonics Education**

OP-TEC works with secondary, postsecondary, industry partners, and professional societies to increase and sustain our nation’s capacity to produce photonics, optics, and laser technicians. OP-TEC focuses on curriculum and faculty development, college enlistment, and technical support for infusing photonics into existing AAS programs where photonics is an enabling technology.

**Booth # 305/306**

**Edmonds Community College**

**MatEdU – National Resource Center for Materials Technology Education**

MatEdU focuses on materials science, provides web-based resources and easily accessible instructional materials, offers professional development, and promotes the use of core competencies for technicians that handle materials. Due to rapid changes and developments in materials, it is imperative for industry to have educated technicians keeping the U.S. globally competitive. A collection of cataloged, peer-reviewed modules, demonstrations, and laboratory exercises are available on the MatEdU web site at: www.materialseducation.org.

**Booth # 307/308**

**College of the Canyons**

**CREATE – California Regional Consortium for Engineering**

The goal of CREATE is to address the demonstrated high demand for renewable energy technicians in southern and central California as a multi-county consortium. The center is working to complete objectives in five areas: curriculum development, faculty development, articulation and 2+2+2 pathways, assessment, and dissemination.

**Booth # 309/310**

**Daytona State College**

**ACE – Advanced Cybersecurity Education Consortium**

Cyberforensics is a new science based on the application of scientific and engineering principles to the identification, verification, and examination of digital evidence. ACE is a partnership between states and community colleges whose mission is to grow cyberforensics programs throughout the southeast. Our multi-headed approach includes: faculty development, program development, workforce training, and K-12 outreach.

**Booth # 311/312**

**Peralta Community College**

**District Office**

**BEST – Building Efficiency for a Sustainable Tomorrow Center**

The BEST Center’s mission is to prepare technicians to optimize building performance for energy efficient and sustainable operations. It provides model curricula, professional development for instructors, STEM career pathway design, and dissemination of research. In this showcase, a number of second-year activities will be highlighted.

**Booth # 401/402**

**Collin County Community College**

**CTC – National Convergence Technology Center**

CTC mentors colleges through a “community of practice” that provides best practices, networking, and IT/convergence curriculum development. The center regularly engages industry leaders to help steer curriculum and validate job skills; supports virtual labs online to offer students 24/7 access; delivers free, in-depth professional training on convergence topics to faculty; and disseminates strategies to recruit underserved student populations. The center also developed a “virtual internship” model to connect students with industry leaders for hands-on projects.
Booth # 403/404
Seattle Community College
District Office
SHINE Center – Seattle’s Hub for Industry-Driven Nanotechnology Education
The SHINE Center serves students, educators, industry, and communities in the Pacific Northwest. SHINE promotes awareness of nanoscience, trains technicians to meet industry needs, and connects nanotechnology stakeholders throughout Washington, Oregon, and Idaho.

Booth # 405/406
University of Tulsa
CSEC – Cybersecurity Education Consortium
CSEC is a cohesive partnership of community colleges and career and technology centers in Oklahoma, Arkansas, Colorado, Kansas, Louisiana, Missouri, Tennessee, and Texas, and with the University of Tulsa. CSEC’s objectives are to develop and disseminate cybersecurity curricula; train instructors and build thriving cybersecurity programs; and create a cadre of skilled professionals who will stimulate job growth and economic development in an eight-state region.

Booth # 407/408
Brevard Community College
SpaceTEC® – National Research Center for Aerospace
SpaceTEC® created a rigorous performance-based certification process for STEM technicians which carries an FAA safety approval and is accredited to International Organization for Standardization (ISO) 17024 requirements for third-party certification by the International Certification Accreditation Council. SpaceTEC® used this same methodology to create CertTEC®, for individuals who desire jobs in related fields outside of aerospace. Together, SpaceTEC® and CertTEC® deliver certifications for economic sectors most in need of skilled workers, including aerospace, manufacturing, and electronics.

Booth # 409/410
University of Massachusetts – Boston
BATEC – Broadening Advanced Technological Education Connections
BATEC is a National Center for Computing and Information Technologies. The major goals of the Center are aimed at contributing to the creation of vibrant, highly enrolled academic pathways in the disciplines of computer science and information technologies. BATEC works across a broad scope of geography, in urban centers, and across the U.S. If you are an engaged administrator or committed faculty member, we can provide you with resources, subject matter expertise, and financial sponsorship.

Booth # 411/412
Monterey Peninsula College
MATE – Marine Advanced Technology Education Center
The MATE Center strives to improve STEM education and the workforce through offering regional and international underwater robotics competitions that simulate the high performance workplace; hosting an at-sea internship program for students; offering professional development that focuses on marine engineering and technology; operating SeaMATE, a student-run store selling educational products and textbooks; and conducting workforce research and developing occupational guidelines. MATE is currently aligning its robotics curriculum with U.S. Department of Labor mechatronics competencies.

Booth # 501/502
Gadsden State Community College
CARCAM – Consortium for Alabama Regional Center for Automotive Manufacturing
CARCAM is a regional ATE center for comprehensive, industry-recognized workforce development and STEM learning. The center assists its 11 partner community colleges in designing successful workforce initiatives to educate a highly skilled employee pipeline for the automotive and advanced manufacturing industries. Curriculum is updated for relevancy through an industry-supported curriculum gap analysis survey model. One of the projects that will be showcased is how to initiate successful cooperative, internship, and apprenticeship programs for students.

Booth # 503/504
Macomb Community College
CAAT – Center for Advanced Automotive Technology
CAAT partners with educators and industry to serve as a central resource for developing and disseminating advanced automotive technology education to meet the automotive industry’s requirements of technicians engaged in the research, design, development, service, and reuse/recycling of electrified, automated and connected, and lightweight vehicles.
**Booth # 505/506**

**Rochester Institute of Technology**
DeafTEC – Technological Education Center for Deaf and Hard-of-Hearing Students

DeafTEC’s goal is to increase the number of deaf and hard-of-hearing (d/hh) technicians entering STEM fields. To do this, DeafTEC is developing partnerships among high schools, community colleges, and industry to improve access to technological education and employment for d/hh students. On a broad, national level, we are also building a comprehensive collection of resources for high schools and community colleges that educate d/hh students in STEM-related programs and for employers hiring d/hh individuals.

**Booth # 509/510**

**Riverside Community College District, Norco College**

**SCTE – National Center for Supply Chain Technology Education**

Tomorrow’s distribution centers require highly trained supply chain technicians to operate and maintain complex robotics and conveyor systems. SCTE facilitates true alignment between community college programs and industry needs. Now in its fourth year, SCTE has co-produced a free interactive e-textbook for an introductory course in Automated Warehousing, expanded the number of educational collaborators across the nation, and continues to be the leading source of information in supply chain technology education.

**Booth # 507/508**

**Tunxis Community Technical College**

**RCNGM – Regional Center for Next Generation Manufacturing**

RCNGM provides Connecticut’s community colleges with a seamless career pathway in advanced manufacturing. The center offers professional development opportunities for teachers and faculty; articulation pathways that include stackable credentials; and addresses the need to market manufacturing as a clean, high tech industry. Stop by for RCNGM’s latest DVD that includes a focus on women in manufacturing and features profiles of females who have embraced manufacturing as a career path.

**Booth # 511/512**

**Moraine Valley Community College**

**CSSIA – National Center for Systems Security and Information Assurance**

Since 2003, CSSIA has been committed to serving the needs of the higher education academic community in the areas of curriculum, faculty development, cyber skills competitions, and underrepresented outreach. CSSIA has expanded and enhanced cybersecurity skills events and competitions and built a national infrastructure to deliver faculty workshops, mentoring programs, and national infrastructure models based on the creation of scalable and affordable remote virtual lab environments.

**Booth # 601/602**

**Indian River Community College**

**LASER-TEC – Laser and Fiber Optics Regional Center**

LASER-TEC provides the following services: professional development for STEM teachers; outreach to students, adults, and returning veterans; continuing education for incumbent workers; and surveys the need for industry technicians and their skill sets. The Center’s mission is to develop a sustainable pipeline of qualified laser and fiber optic technicians to meet the industry needs in the southeastern United States.

**Booth # 603/604**

**Prince George’s Community College**

**CyberWatch – National CyberWatch Center**

The National CyberWatch Center is a collaboration of 140 colleges and universities in 38 states, and government and industry partners. Its mission is to lead collaborative efforts to advance cybersecurity education and strengthen the national cybersecurity workforce. The National CyberWatch Center is focused on building its culture of collaboration, growing program and faculty capabilities based on models of excellence, promoting the cybersecurity profession nationally, expanding career pathways for students, and advancing research in cybersecurity education.
NBC2’s curriculum products will be showcased. They include: Introduction to Biomanufacturing textbook and laboratory manual; Escherichia coli – Taq Polymerase Core Production System laboratory manual with wet-lab kit; Introduction to Biofuels Production and Analysis textbook and laboratory manual; and NBC2’s Virtual Industrial Biopharmaceutical Manufacturing Upstream Processing module. Partner products will also be on-hand: NBC2’s Microalgae-Oil-Biodiesel Core Production System utilizing Rhykka Connelly’s GroFizz Photobioreactor and Thin Layer Chromatography QC kit plus Prolific Earth Science Corporation compost analysis kit.

Booth # 607/608
University of New Mexico
SCME – Southwest Center for Microsystem Education
Microsystems are an enabling technology that supports biomedical technology, transportation, homeland security, and consumer product applications with a $12 billion per year market. SCME continues to increase educational capacity to produce technologists skilled in research, design, and commercialization, while promoting the general public’s awareness of the microsystems industry.

Booth # 609/610
City College of San Francisco
Bio-Link – Next Generation ATE Center for Biotechnology
Bio-Link’s services build on 16 years of success and the original 1998 BioLink ATE Center to meet the rapidly changing needs of the biotechnology industry, related life sciences industries, and prospective technical work force. The Center continues to provide a wide range of services and products needed by the swiftly changing biotechnology industry.

Booth # 611/612
Pennsylvania State University, University Park
NACK Network – Nanotechnology Applications and Career Knowledge Network
NACK has a mission to provide assistance to existing or developing micro- and nanotechnology workforce education programs at postsecondary institutions across the U.S. The NACK Network has helped to establish 11 hands-on college partnerships with universities in nine states, as well as Puerto Rico, with more partnerships in the planning stages. NACK material as well as network linkages can be accessed via www.nano4me.org.

Booth # 613/614
Whatcom Community College
CWW – CyberWatch West
CWW is the only NSF ATE center in the western U.S. dedicated to cybersecurity education and outreach. The CWW consortium is focused on building educational and industry partnerships and delivering professional and student development programs. CWW continues in its mission to build a stronger cybersecurity infrastructure through innovative online curricula, a unique faculty mentoring program, and robust student competition initiatives.

Booth # 615/616
Bemidji State University
360° – Manufacturing and Applied Engineering ATE Regional Center of Excellence
360° is a consortium of 15 colleges led by Bemidji State University that serves advanced manufacturing by enhancing the pipeline of workers and offering flexible educational opportunities.

Booth # 617/618
Dakota County Technical College
Nano-Link – Center for Nanotechnology Education
Nano-Link focuses on providing nanoscience based educational content in a topicically specific, activity-based, technically sound modular format. These modules are used by high school educators to increase awareness of nanoscience and emerging technology career options. College faculty use the modules to enhance existing technician and traditional programs, as well as to enhance emerging technology education. The modular design and format are developed to support educator needs. Educational content is also correlated to industry needs, applications, and student competencies. Nano-Link has strong connections to industry partners and works to advocate for nanoscience education.
Booth # 001
National Science Foundation
The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. The foundation competitively awards grants for research and education in the science, technology, engineering, and mathematics fields.

Booth # 002
ATE Central – Supporting the ATE Community
ATE Central is an online portal that supports and highlights the work of the ATE community and that showcases an expansive collection of ATE-created curricula, learning objects, web sites, and media. It also includes a comprehensive database of project and center information, and an array of services and tools that leverage and tie together all this data in various ways to serve and promote the work of the ATE community.

Booth # 003
EvaluATE – Evaluation Resource Center for Advanced Technological Education
EvaluATE promotes the goals of the ATE program by partnering with ATE projects and centers to strengthen the program’s evaluation knowledge base, expand the use of exemplary evaluation practices, and support the continuous improvement of technician education throughout the nation. Resources include webinars, workshops, a quarterly newsletter, and web site with digital library and evaluator directory.

Booth # 004
Mentor-Connect – Leadership Development and Outreach Initiative for ATE
Mentor-Connect is designed to fill a void for the ATE program; address the fact that roughly two-thirds of the nation’s community colleges have never been awarded funding from the NSF ATE program; better manage a rapidly growing number of requests received by ATE center PIs and NSF program officers related to grant proposal development/project management; and develop grant-writing skills among STEM faculty who lack sufficient grant staff (or sponsored research officers) at their institutions.

Booth # 005
HI-TEC – High Impact Technology Exchange Conference
HI-TEC is a national conference on advanced technological education where technical educators, counselors, industry professionals, and technicians can update their knowledge and skills. Charged with educating America’s technical workforce, the event focuses on the preparation needed by the existing and future workforce for companies in the high tech sectors that drive our nation’s economy. HI-TEC uniquely explores the convergence of scientific disciplines and advanced technologies. Join us July 27-30 in Portland, Oregon for HI-TEC 2015.

Booth # 006/007
Applied Information Management (AIM) Institute
MCIT – Midwest Center for Information Technology
MCIT will demonstrate the collaborative work done around aligning the skills that employers need with the coursework offered by consortium schools in a dynamic online interface that offers value for each stakeholder in the technician talent pipeline. This is done in a dynamic interface that allows for ranking of skills, student skills alignment, and reporting by geography on most in-demand skills.

Booth # 008/009
Lorain County Community College
Weld-Ed – The National Center for Welding Education and Training
Weld-Ed is a national partnership between the welding and materials joining industry and the nation’s community and technical colleges and universities. As an ATE Resource Center, Weld-Ed continues to support the role and pipeline of welding technicians in industry. Weld-Ed offers a comprehensive welding professional development program for high school teachers and community college and university faculty members, and continues to advance welding technology programs nationally.
### Showcase Session II

**ATE Projects and Students**

**Thursday, October 23**

12:00 – 2:15 pm  
Exhibit Hall

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A Systematic Approach to Increase the Success Rates of Engineering and Technology Students at an Urban Community College |
| 502     | Central Connecticut State University, Gateway Community College, and Quinebaug Valley Community College  
Student Booth: Chad Whitney, Joseph Ancona, Claudia Dufour |
| 606     | Central Maine Community College  
Student Booth: Ian Munsell |
| 209     | Central Maine Technical College  
Regional Advanced Machining Partnership |
| 508     | Central New Mexico Community College  
Student Booth: Thaddeus Foster |
| 311     | City College of San Francisco  
Program in Plumbing Engineering Design |
| 506     | Clark State Community College  
Student Booth: Shaun Foor |
| 102     | College of Lake County  
The College of Lake County Regional Photonics Initiative Phase II |
| 210     | College of the Canyons  
Advanced Manufacturing and Processing Training Program |
| 301     | Community College of Baltimore County, Essex  
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CCBC Generating Excitement and Training for Engineering and Technology |
| 303     | CUNY Baruch College  
Conference on the STEM Intrapreneurship and Entrepreneurship Education Spectrum |
| 411     | CUNY Hostos Community College  
Designing Futures with Games: Game-Framed Mathematics and Science as a Pathway to Multimedia Technology Careers |
| 609     | CUNY Hostos Community College  
Student Booth: Rocio Rayo |
| 204     | CUNY Kingsborough Community College  
On-Campus Discoveries in Science: A Science Preparation Program in Biotechnology in Support of New York City Teachers and Students |
| 608     | Dakota County Technical College  
Student Booth: Preston Finger, Samantha Zahratka, Jared Kimball |

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Student Booth: Andrea Alfonso, Jamie L. Vulgamore |
| 307     | Denmark Technical College  
Creating a Pathway for High School Minorities to Community College STEM Programs |
| 511     | Diablo Valley College  
Student Booth: Bachir Benkirane, Sviatlana Zoryna |
| 412     | Edmonds Community College  
SAGE Collaborative: Sustainable Agriculture Education for the Puget Sound Bioregion |
| 402     | Education Connection  
Connecticut Pathways to Innovation and Design 21 |
| 003     | EvaluATE – Evaluation Resource Center for Advanced Technological Education |
| 005     | HI-TEC – High Impact Technology Exchange Conference |
| 206     | Hofstra University  
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| 406     | Inver Hills Community College  
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| 408     | Jamestown Community College  
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| 604     | Jamestown Community College  
Student Booth: Maria Sena |
| 610     | Jefferson Community and Technical College  
Student Booth: Christopher Wright |
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Community Colleges Confronting the Conundrum: A Job Market Transformation Model for Renewable Energy Technician Training |
| 304     | Kaskaskia College  
The Geospatial Technology Advantage: Preparing GST Technicians and GST-Enabled Graduates for Southern Illinois Business and Industry |
| 403     | Kennebec Valley Community College  
Energy Services and Technology Project |
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| 504     | Macomb Community College  
Student Booth: Mike McMillan |
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Career Education in Renewable Energy Technology |
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Student Booth: Keshena Koran, Luis Velazquez |
| 410     | Madisonville Community College  
Integrated Multi-Skill Manufacturing Regional Partnership Project |
| 507     | Massachusetts Bay Community College  
Student Booth: Veranika Hlushakova, Bruno Veiga, Talia Whyte |
| 404     | Massasoit Community College  
Pipelines and Pipets: Biotechnician Training and Undergraduate Research |
| 607     | Massasoit Community College  
Student Booth: Amanda Burke |
| 004     | Mentor-Connect – Leadership Development and Outreach Initiative for ATE |
| 505     | Middle Georgia State College  
Student Booth: Sarah Hollifield, Patrick Vilkinofsky |
| 309     | Mid-Michigan Community College  
Creating Plastics Technology Career Pathways in Rural Michigan |
| 312     | Minnesota State College – Southeast Technical Nanotechnology Partnership for Rural Education Pathways |
| 308     | National Alliance for Partnerships in Equity Education Foundation  
Educators’ Equity in STEM Academy |
| 305     | National Council for Geographic Education  
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| 001     | National Science Foundation |
| 409     | Northwest Vista College  
ION (Improving Opportunities in Nanotechnology) |
| 501     | Northwest Vista College  
Student Booth: Aaron John Hodson, Kyle Everett |
| 207     | Oakton Community College  
Using Remote Technology in Real-Time to Enhance Nanotechnology and Training |
| 611     | Ohio State University Agricultural Technical Institute  
Bioenergy: A Model Workforce Education Program |
| 104     | Old Dominion University Research Foundation  
GeoTED – Expanding Geospatial Technician Education through Virginia’s Community Colleges |
| 106     | Partnership for Environmental Technology Education  
Connecting Tribal and Pacific Rim Colleges to Improve Indigenous Environmental Technology Education |

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ATETV Presents SciTrends |
| 202     | Pellet Productions, Inc.  
ATETV – Bilingual Video Series |
| 203     | Pellet Productions, Inc.  
Interactive Movie: A Tool to Deepen Student Learning about Quality and Regulatory Affairs in Biotechnology |
| 105     | Purdue University  
Collaborative Project: Technology-Based Logistics – Leveraging Indiana’s Role as the Crossroads of America |
| 103     | Ranken Technical College  
Priming the Pipeline for the St. Louis Region – Creating a Future High Technology Workforce |
| 603     | River Valley Community College  
Student Booth: Jeffrey Blomquist, Andrew Duncklee, Travis Cunningham |
| 401     | San Bernardino Valley College  
Bridging the Water Divide: Training a New Generation of Water Technicians |
| 101     | Seminole State College of Florida  
Career Pathways in Construction, Architectural Engineering, and Design Technology |
| 512     | Sinclair Community College  
Student Booth: Ethan Kern, James Mitchem |
| 405     | Suffolk Community College  
Leading Innovation through Green High Tech Engineering and Sustainability |
| 212     | Texas Engineering Experiment Station  
South Texas Aviation Maintenance Technician Project |
| 306     | Texas Engineering Experiment Station  
Revising Science Education with Vision |
| 509     | Tidewater Community College  
Student Booth: Jeremy Hancock |
| 510     | Tidewater Community College  
Student Booth: Michael D. Treadwell III |
| 602     | University of Pittsburg  
Student Booth: James M. Joseph |
| 205     | University of Wisconsin – Madison  
Improving Educational Outcomes in Manufacturing Engineering Technologist and Technician Education Programs |
Seminole State College of Florida
Career Pathways in Construction, Architectural Engineering, and Design Technology

Seminole State is strengthening the academic pathways from high school to college with articulation to baccalaureate programs and beyond. This project aims to increase awareness of the many STEM career opportunities within the build environment by focusing on an intensive, project based learning summer program for high school students, which is an innovative co-taught dual enrollment model and an AS-to-BS online completion program. Together, these features have significantly impacted enrollment and retention rates.

College of Lake County
The College of Lake County Regional Photonics Initiative Phase II

The College of Lake County (CLC) in collaboration with the Midwest Photonics Education Center, NSF, and OP-TEC, has created an AAS in Lasers, Photonics, and Optics and implemented a 2+2 program with a local technical high school. The high school connection has led to increased enrollment and a pipeline from 22 area high schools. CLC provides the professor as well as all the lab equipment and continuation for the students at CLC, and offers dual enrollment.

Ranken Technical College
Priming the Pipeline for the St. Louis Region – Creating a Future High Technology Workforce

To complement Ranken’s respected standing as a technical college, with outstanding student retention and graduation rates, plus a 97 percent job placement rate, this project focuses on three goals: give middle and high school students fun, outside of the classroom experiences to inspire them to explore STEM careers; develop innovative professional development opportunities for educators to experience real-world technological know-how; and establish collaborative partnerships with local stakeholders.

Old Dominion University Research Foundation
GeoTED – Expanding Geospatial Technician Education through Virginia’s Community Colleges

GeoTED is a successful regional model for faculty professional development, workforce development, and academic programs in geospatial technology. This showcase will focus on workshop content, mobile app development, student-centered service learning programs and other GeoTED components.

Purdue University
Collaborative Project: Technology-Based Logistics – Leveraging Indiana’s Role as the Crossroads of America

Indiana offers convenient access to products for two-thirds of the U.S. population. Ivy Tech and the Purdue University College of Technology collaborate to develop a technology-based logistics program designed to meet the growing demands of Indiana’s employers.

Partnership for Environmental Technology Education (PETE)
Connecting Tribal and Pacific Rim Colleges to Improve Indigenous Environmental Technology Education

Through summer faculty development opportunities grounded in current, relevant environmental issues and college-specific technical assistance, PETE is assisting Tribal and Pacific Rim Colleges in improving their environmental technology programs. The project strives to improve, enhance, or create environmental science programs at the nations’ Tribal and Pacific Rim Colleges as a means to provide education to build an informed and up-to-date environmentally green workforce.
SciTrends, a web-based video series, is designed to motivate high school students to learn about and become interested in pursuing careers as science and engineering technicians. SciTrends will use a combination of innovative program design and social networking media to deliver high-quality STEM content that will include educationally stimulating and interpersonal investigations of the scientific process in real-world labs and research settings.

Pellet Productions is working to extend ATETV material to Hispanic and Latino audiences by creating a series of videos featuring and aimed at these groups to help them: discover how to research pathways to colleges offering technology programs; discover the educational requirements for technician careers; become familiar with employer expectations and earnings potential; and develop an understanding of the high school preparation required to succeed in STEM programs in college.

Booth # 201
Pellet Productions, Inc.
ATETV Presents SciTrends

Booth # 202
Pellet Productions, Inc.
ATETV – Bilingual Video Series

The On-Campus Discoveries project seeks to strengthen science teaching and broaden the pipeline of qualified science students through: (1) offering two Summer Institutes, Genomics and Proteomics, for high school teachers to extend their technological knowledge and ability to engage students; (2) assisting high school teachers with implementing biotechnology experiments into their courses using a lending laboratory and a biotechnology ambassador; and (3) virtual enterprise simulations for AS Biotechnology students to improve their workforce training.

Booth # 203
Pellet Productions, Inc.
Interactive Movie: A Tool to Deepen Student Learning about Quality and Regulatory Affairs in Biotechnology

Bio-Link, the Next Generation National ATE Center of Excellence for Biotechnology and Life Sciences, in partnership with Pellet Productions, Inc., the producers of ATETV.org, are producing a web-based interactive movie to teach students about quality and regulatory affairs impacting biotechnology companies.

Booth # 204
CUNY Kingsborough Community College
On-Campus Discoveries in Science: A Science Preparation Program in Biotechnology in Support of New York City Teachers and Students

The On-Campus Discoveries project seeks to strengthen science teaching and broaden the pipeline of qualified science students through: (1) offering two Summer Institutes, Genomics and Proteomics, for high school teachers to extend their technological knowledge and ability to engage students; (2) assisting high school teachers with implementing biotechnology experiments into their courses using a lending laboratory and a biotechnology ambassador; and (3) virtual enterprise simulations for AS Biotechnology students to improve their workforce training.

Booth # 205
University of Wisconsin – Madison
Improving Educational Outcomes in Manufacturing Engineering Technologist and Technician Education (METTE) Programs

In partnership with university researchers, four technical college innovation teams are exploring factors and practices that enhance manufacturing and engineering technology student success. To date, we have studies and innovations underway featuring contextualized math instruction, dual-credit partnerships with high schools, and persistence and attrition patterns.

Booth # 206
Hofstra University
Articulated Technological Education Pathways (ATEP)

The ATEP project is developing three semester-long courses for high school students that provide a bridge from high school technical programs to community college programs in technician education. The three courses address standards driven technology concepts and skills and STEM career choices in biotechnology, information and communications technology, and materials and manufacturing technology.

Booth # 207
Oakton Community College
Using Remote Technology in Real-Time to Enhance Nanotechnology and Training

The project’s goal is to accelerate exposure of students in grades 10-14 to the nanotechnology field and potential careers as a nanotechnician, and other related STEM professions, via highly qualified and effective STEM educators. The project offers nanotechnology training workshops to high school and community college faculty giving them the tools necessary to develop nanotechnology modules to be used in their classrooms via remote access to our laboratory.

Booth # 208
Madison Area Technical College
Career Education in Renewable Energy Technology (CERET)

CERET has offered technical training and education to incumbent workers, students, and teachers since 2002. The consortium’s Career Education Grant project has two main objectives: (1) to expand existing Train-the-Trainer Academies in biofuels and solar electricity to include advanced topics; and (2) to create three new academic certificates in solar electricity, wind, and biorenewable energy in response to national trends and regional needs.
The RAMP project provides educators and precision machining workers with the skill sets for advanced computer numeric control (CNC) machining, programming, and metrology to address the pressing need for an advanced machining workforce. The RAMP team is in the process of developing a Certificate in Advanced Machining, will provide professional development for faculty and the regional manufacturing community using blended learning, and is supporting student recruitment and retention, targeting underrepresented students.

College of the Canyons
Advanced Manufacturing and Processing Training Project (AMPT)

College of the Canyons’ AMPT project trains advanced, automated manufacturing and processing technicians needed to meet current and future industry demand by aligning, expanding, and upgrading three programs: Manufacturing Technology, Electromechanical Systems Technology, and Welding (automated robotic and laser).

Texas Engineering Experiment Station
South Texas Aviation Maintenance Technician Project (STAMP)

This project focuses on the development of web-enabled, interactive learning modules for general aviation curriculum as outlined in Federal Aviation Administration (FAA) regulations. The curriculum will cover the aspects of FAA regulations, shop practices (precision measuring tools, hand tools, non-destructive testing, and hardware), aviation science (math, physics, and blueprint/drawings), basic electricity (direct current, alternating current, and introduction to electronics), weight and balance, and ground operations.

Community College of Baltimore County, Essex
NSF ATE Project Lead the Way (PLTW) Professional Development

Project Lead the Way (PLTW) professional development builds on a Maryland model for providing training to PLTW and other technology teachers. By sharing lessons learned and following an inclusive train-the-trainer model, 1,567 participants in nine states have attended training in fischertechnic, VEX, digital electronics, Revit, civil engineering topics, and three different levels of Inventor. The professional development has resulted in increased teacher knowledge and confidence in the classroom.

Community College of Baltimore County, Essex (CCBC)
CCBC Generating Excitement and Training for Engineering and Technology (GET ET)

The GET ET project aligns Engineering by Design (EbD) engineering technology curriculum between high school systems and the local community college, making the engineering technology career pathway a more viable option for students and increasing the number of students pursuing postsecondary education. It also incorporates professional development for counselors enabling them to better identify, encourage, and provide appropriate advisement for students interested in STEM, especially females and minorities.

CUNY Baruch College
Conference on the STEM Intrapreneurship and Entrepreneurship Education Spectrum

This showcase will highlight the first two seasons of the Student Entrepreneurs project, where students at Rhodes State Community College and Kingsborough Community College use the Virtual Enterprise pedagogy to apply entrepreneurship concepts and processes to their STEM products and services.
Booth # 304
Kaskaskia College
The Geospatial Technology (GST) Advantage: Preparing GST Technicians and GST-Enabled Graduates for Southern Illinois Business and Industry

This project highlights the leveraging of GeoTech Center (ATE National Center for Geospatial Technology) resources with developing K-16 career pathways for increasing the production of geospatial technicians in Southern Illinois. Issues relating to GST STEM integration, high school STEM faculty workshops, and evolving 2+2 program alignments with regional universities highlight the challenge of developing any viable geospatial program.

Booth # 305
National Council for Geographic Education
Integrated Geospatial Education and Technology Training: Remote Sensing (iGETT: Remote Sensing)

iGETT: Remote Sensing provides professional development for faculty interested in meeting specific workforce demands for technicians who can integrate geographic information systems (GIS) and remotely sensed data. Two cohorts each receive instruction and guidance over an 18-month period that includes two summer institutes, monthly webinars, and the development of curriculum materials that are shared on the project’s web site and YouTube channel.

Booth # 306
Texas Engineering Experiment Station
Revising Science Education with Vision (REVISION)

REVISION has incorporated the Vision and Change curriculum by embedding an authentic research component into bioscience courses. The curricular reform has followed the Vision and Change initiatives by focusing on the core concepts and competencies rather than memorizing extensive course content. Assessment data show increased retention and integration into the profession of the scientific discipline from presenting at scientific meetings. REVISION is providing student outcomes that cannot result from traditionally taught freshman science classes.

Booth # 307
Denmark Technical College
Creating a Pathway for High School Minorities to Community College STEM Programs

This project will support participants who desire to pursue a degree in science, technology, engineering, or mathematics. The program will provide mentorship, internships, bridge programs, and an array of support services and activities to increase participant success. The program aims to serve at least 127 high school minority participants. One new activity under development is a youth apprenticeship program.

Booth # 308
National Alliance for Partnerships in Equity (NAPE) Education Foundation
Educators’ Equity in STEM (EESTEM) Academy

In the EESTEM program, NAPE partnered with Johns Hopkins University School of Education and community colleges and high schools in Maryland and Ohio to assess their new equity-focused educational model. The partners found it transformative in changing faculty teaching attitudes, intentions, and behaviors leading to improved retention, performance, and career choice for all students, including females and minorities. This showcase will highlight the five critical program elements, tools, and resources that lead to success.

Booth # 309
Mid Michigan Community College
Creating Plastics Technology Career Pathways in Rural Michigan

Creating laddered solutions for the Plastics Industry in rural Michigan supports entry-level, mid-level, and senior-level employees. The program is designed in conjunction with industry experts, economic development agencies, and related industry representatives to create a holistic approach to plastics engineering technology education.
Booth # 310
Kankakee Community College
Community Colleges Confronting the Conundrum (C4): A Job Market Transformation Model for Renewable Energy Technician Training

Project C4 is simultaneously expanding and improving solar technician training while developing the local solar market, training local electrical inspectors, educating the public on the benefits of solar photovoltaic technology, and developing a pipeline from high schools to community college solar training programs. The project addresses the predicted, increased demand for renewable energy technicians to provide graduating students immediate opportunities for employment. Partnering with community colleges, C4 will be replicated in seven Midwest states.

Booth # 311
City College of San Francisco
Program in Plumbing Engineering Design (PIPED)

The American Society of Plumbing Engineers and the City College of San Francisco are working collaboratively with plumbing engineering employers and high schools on PIPED. The PIPED initiative develops a national standardized curriculum and set of courses that can serve as a model for community colleges, a national certification test, lessons that can be integrated into high schools to increase STEM knowledge, and plumbing engineering design books and calculating tools.

Booth # 312
Minnesota State College – Southeast Technical
Nanotechnology Partnership for Rural Education Pathways (NANOprep)

Minnesota State’s NANOprep project will create a new cultural model to improve public awareness and increase enrollment and retention of students in nanoscience programs that will prepare skilled technicians to work in this emerging field. Partnerships among nano-related industries, workforce development, and educational institutions will be developed to design a new and improved recruitment and retention strategy to embed nanoscience concepts within the college curriculum.

Booth # 401
San Bernardino Valley College
Bridging the Water Divide: Training a New Generation of Water Technicians

A well-trained and knowledgeable workforce is vital to protecting public health and the environment as well as ensuring the long-term sustainability of water and wastewater systems. One of the major workforce challenges faced by water and wastewater agencies is finding an adequate pool of applicants and retaining qualified workers. This showcase will focus on water industry certification and outreach efforts to attract women, veterans, and underrepresented populations.

Booth # 402
Education Connection
Connecticut Pathways to Innovation (CPI) and Design 21 (D21)

The CPI and D21 project focus is to revitalize the learning environment in 38 Connecticut high schools with diverse student populations, through the creation of a career pathway option in digital engineering technology and design within its STEM Academy and non-Academy articulated programs.

Booth # 403
Kennebec Valley Community College
Energy Services and Technology Project

This program is designed to prepare students for technician-level positions in the rapidly growing field of installing, maintaining, and troubleshooting high efficiency plumbing, heating, ventilation, and cooling systems in buildings. An emphasis is placed on the enrollment of women, veterans, and adult education students. Problem based learning classes are implemented into the curriculum to engage students in solving complex problems to succeed in today’s economy.

Booth # 404
Massasoit Community College
Pipelines and Pipets: Biotechnician Training and Undergraduate Research

This project focuses on undergraduate research involving the classification of water-borne isolates found in the Taunton River Watershed. Fifty-one water-borne bacterial strains were isolated from four waterways of the Taunton River Watershed of Massachusetts. The focus of the research was to identify these bacterial strains by comparing their 16S gene sequences. Student researchers looked for any health and/or environmental significances they may have. In addition, a series of Minimum Inhibitory Concentration (MIC) tests and Minimum Bactericidal Concentration (MBC) tests were conducted on the isolates.
Booth # 405
Suffolk Community College
Leading Innovation through Green High Tech Engineering and Sustainability
This project is an example of applying NSF ATE curriculum to solve real-world problems. It offers green technology training and learning experiences for high school STEM educators, and the formation of a community of green technology practitioners evolving from our STEM college students. Practices such as student green technology internships at Brookhaven National Laboratory and development of a student organized alternate energy technology club that designs and implements green technology throughout the college campus are presented.

Booth # 406
Inver Hills Community College
Addressing Information Technology Workforce Needs in an Urban Setting
Starting with research into why underrepresented groups are less likely to enter information technology and security careers, Inver Hills Community College has designed outreach and career exploration materials, and also partnered with other organizations to develop curriculum pathways from the middle and high school levels, which allows students to obtain college credit and be introduced to these career fields.

Booth # 407
Baltimore City Community College
A Systematic Approach to Increase the Success Rates of Engineering and Technology Students at an Urban Community College
This engineering technology (ET) project model is designed to increase the success rates of ET students. To achieve the project goals, the ET model works to: (1) implement an AS in Electrical Engineering; (2) set up a state-of-the-art electrical engineering laboratory; (3) develop curriculum materials; (4) realign existing engineering and technology curriculum at the college; (5) develop advising and activities; (6) create career pathways; (7) provide internship and job opportunities; (8) and introduce ET concepts to underserved and disadvantaged high school students and veterans, and recruit them into ET programs.

Booth # 408
Jamestown Community College
HURI SURI: Helping Future Biotechnologists in Rural Appalachia HURI-up with Undergraduate Research
Jamestown Community College (JCC) is connecting residents of northern Appalachia to the growing regional biotech industry. Like most areas of rural Appalachia, regional biotech employers are frustrated by a paucity of well qualified lab personal committed to the region. The goal is to train a regional lab-ready workforce proficient in 21st century skills. To this end, JCC is offering a new biology course taught in the high schools using investigative learning and interdisciplinary content. These activities are supported by teacher training and by offering research experiences to teachers and high school students using the HURI SURI model.

Booth # 409
Northwest Vista College
ION (Improving Opportunities in Nanotechnology)
Northwest Vista College’s nanotechnology project focuses on providing immediate entry-level employment to students and/or preparing them—from research assistants to professors—in pursuit of their higher educational goals. This is accomplished through an emphasis on immediate hands-on skills and through the visiting professor lecture program. This showcase will share ideas and learning experiences on how to create opportunities for students in the nanotechnology field, as well as showcase various summer nanotechnology workshops for high school educators and students.

Booth # 410
Madisonville Community College
Integrated Multi-Skill Manufacturing Regional Partnership Project
This project is focused on developing common core content of sufficient academic rigor to support electromechanical, process control, and related technical coursework in three multi-skilled maintenance technician programs at three different community colleges. Madisonville Community College (Madisonville, KY), Ivy Tech (Bloomington, IN), and Jackson State Community College (Jackson, TN) serve similar types of industries in rural settings in western Kentucky, central Indiana, and western Tennessee.
Booth # 411
CUNY Hostos Community College
Designing Futures With Games: Game-Framed Mathematics and Science as a Pathway to Multimedia Technology Careers (G-FMS)

The G-FMS initiative aims to increase students’ understanding of STEM-based subjects at Hostos Community College by framing math and science within the context of game design and play. The traditional curriculum is augmented with subject-specific games, helping to instill student understanding of subject materials that current faculty have targeted as particularly problematic for students. In addition, the curriculum requires students to develop their own original games to use as study aids.

Booth # 412
Edmonds Community College
SAgE Collaborative: Sustainable Agriculture Education for the Puget Sound Bioregion

The SAgE Collaborative is led by Edmonds Community College in partnership with Skagit Valley College, Seattle Central Community College, and Washington State University. The mission of the SAgE Collaborative is to address the coupled environmental and ecological processes and socioeconomic, political, and cultural complexities related to sustainable food systems within and beyond the Puget Sound bioregion through innovative education, collaborative research, and community partnerships.

Booth # 501
Northwest Vista College
Student Booth: Aaron John Hodson, Kyle Everett

The nanotechnology program at Northwest Vista College focuses on providing immediate entry-level employment to students, and prepares them in pursuit of their higher educational goals. Hear from two nanotechnology students who will present on results and methods used for creating Pickering Emulsions using a combination of different chemical compounds, oils, and techniques. The uses of the emulsions, as well as the longevity of the ones students tested with varying concentrations, will also be discussed.

Booth # 502
Central Connecticut State University, Gateway Community College, and Quinebaug Valley Community College
Student Booth: Chad Whitney, Joseph Ancona, Claudia Dufour

This student display will contain information on student programs and projects involving unmanned, aerial vehicle rapid prototyping through the use of Solidworks and 3D printer model design; and the development of a Safety Harness Alert System for the construction industry.

Booth # 503
Madison Area Technical College
Student Booth: Keshena Koran, Luis Velazquez

Metal-oxide nanoparticle cathode coatings have been shown to improve the performance of rechargeable lithium-ion batteries at temperatures above 50°C. This project evaluated the effectiveness of the coatings under cold conditions. Spinel cathodes with metal-oxide coatings were tested at -5C; and the performance equaled that of uncoated controls.

Booth # 504
Macomb Community College
Student Booth: Mike McMillan

Come hear a student’s perspective on the work of the Center for Advanced Automotive Technology and the opportunities available between Macomb Community College and Wayne State University. This showcase will demonstrate how collaboration among education, industry, and government—and the connection between the community college and four-year institution—helped to shape a student’s educational pathway and choice of an automotive industry-related career.

Booth # 505
Middle Georgia State College and Daytona State College
Student Booth: Sarah Hollifield, Patrick Vilkinofsky

Cyberforensics and game development are continuously growing fields with limitless possibilities and applications. Come hear from two sides of an ATE program about how the Advanced Cyberforensics Education consortium prepared an alumnus for tomorrow’s challenges and a current student to bring education into the 21st century.

Booth # 506
Clark State Community College
Student Booth: Shaun Foor

Students in Clark State Community College’s ATE Cyber-pros project work as interns learning about cybersecurity. Academic projects include a HACKFEST and working with faculty externs on cybersecurity projects for industry. The intern/extern team model provides a unique student learning and faculty development opportunity.
Booth # 507
Massachusetts Bay Community College
Student Booth: Veranika Hlushakova, Bruno Veiga, Talia Whyte

This showcase presents both curriculum and outreach projects from BATEC’s National Center of Excellence for Computing and Information Technology. These include a multi-disciplinary curriculum unit (the Shopping Cart experience), a student-staffed technical help desk (TechBay), student internships (Tech Apprentice), and student authored videos promoting computing majors (LoveTech).

Booth # 508
Central New Mexico Community College
Student Booth: Thaddeus Foster

This student booth will feature information on the Southwest Center for Microsystems Education, as well as have on hand completed pressure sensor waffers, art waffers, and a step-by-step portfolio from the fabrication clean room.

Booth # 509
Tidewater Community College
Student Booth: Jeremy Hancock

This showcase will highlight the opportunities for skilled trades experience and modeling and simulation skills development available to students through the Apprentice School at Newport News Shipbuilding in partnership with Tidewater Community College.

Booth # 510
Tidewater Community College
Student Booth: Michael D. Treadwell III

This showcase presentation will describe and illustrate all of the trades provided by the Oceanengineering Marine Science Division in an effort to create a stable workforce for the company. The presentation will cover the general student course load for the four years of the program.

Booth # 511
Diablo Valley College
Student Booth: Bachir Benkirane, Sviatlana Zoryna

Students from Diablo Valley College will cover a variety of topics involved in digital modeling analysis and fabrication, such as: digital mold making and casting of ceramics utilizing computer numeric control (CNC) technology; design-build projects incorporating digital fabrication; robotics and Arduino micro-controllers; architectural modeling and design utilizing Building Information Modeling (BIM); and scripting utilizing Grasshopper and related software for 3D printing.

Booth # 512
Sinclair Community College
Student Booth: Ethan Kern, James Mitchem

The goal when producing a new electric guitar model is to get everything right on the first try. Sometimes you fail to get everything right. If you are lucky, you figure out your mistake on your prototype. What can you do if you find your mistake after producing 120 expensive parts? Learn the answer from two Sinclair Community College students.

Booth # 601
Del Mar College
Student Booth: Andrea Alfonso, Jamie L. Vulgamore

Students will present on two projects. The first is on designing vectors, which has become increasingly important for biomedical and research advancement. By manipulating and re-engineering the intricate structural components of bacteriophage, infectious bacteria can be specifically targeted and fought. By analyzing the conservative components of bacteriophage, pathogenic species can be contained and controlled. The second project focuses on Lipid-Droplet Associated Proteins (LPADs). Lipid droplets (LDs) have been characterized for developing seeds, because of synthesis of large quantities of triacylglycerol (TAG). However, most cells synthesize small amounts of TAG. Recently LPADs have been identified to specifically target LDs. Interacting proteins were identified using yeast two-hybrid screening.

Booth # 602
University of Pittsburgh
Student Booth: James M. Joseph

The University of Pittsburgh’s Department of Rehabilitation Science and Technology, in the nationally acclaimed School of Health and Rehabilitation Sciences, offers the Advancing Inclusive Manufacturing (AIM) program which provides veterans and service members in transition with academic and vocational training opportunities. This project’s mission is to continuously improve the mobility and function of people with disabilities through advanced engineering in clinical research and medical rehabilitation.
Booth # 603
River Valley Community College
Student Booth: Jeffrey Blomquist, Andrew Duncklee, Travis Cunningham

With the health care industry becoming more connected to the web than ever before, cybersecurity will become even more important to ensure that healthcare providers and associated businesses, and every aspect of their operation, is electronically secure. Students will discuss their unique program of study that focuses on the integration of IT with the needs of healthcare. Cybersecurity is the practice of protecting computer systems against unauthorized access or attack and maintaining the smooth functioning of information systems at all levels.

Booth # 604
Jamestown Community College
Student Booth: Maria Sena

Learn about a student research project. Meprins inactivate CCL2 and have been linked to breast cancer cell metastasis. Breast cancer commonly metastasizes to bone marrow and evades the apoptotic effects of chemotherapy. When found in these circumstances in bone marrow, CCL2 transcripts increase while meprin transcripts are undetectable suggesting that chemotherapy supports the patient’s survival of breast cancer.

Booth # 605
Jefferson State Community College
Student Booth: Nicholas Meadows

This showcase will highlight one student’s progression from a dual enrollment program to college. He will explain how his technical classes prepared him to transition into the workforce, and gave him the skills to be successful in achieving his future career goals.

Booth # 606
Central Maine Community College
Student Booth: Ian Munsell

The RAMP project is developing curriculum for a certificate in advanced machining. This display will include samples of projects being developed for the certificate.

Booth # 607
Massasoit Community College
Student Booth: Amanda Burke

This project focuses on undergraduate research involving the classification of water-borne isolates found in the Taunton River Watershed. Hear directly from a student involved in conducting this research.

Booth # 608
Dakota County Technical College (DCTC)
Student Booth: Preston Finger, Samantha Zahratka, Jared Kimball

Students will be present on how their DCTC education helped to advance their careers, as well as provide a complete overview of the basic silicon-based solar cell, including multi-junction solar cells and concentrated photovoltaics.

Booth # 609
CUNY Hostos Community College
Student Booth: Rocio Rayo

The Game-Framed Mathematics and Science initiative aims to increase students’ understanding of STEM-based subjects by reframing math and science within game play and the iterative design of student games. Learn about game development, analysis, and play testing from a current student.

Booth # 610
Jefferson Community and Technical College
Student Booth: Christopher Wright

This display features the mobile device app called Collector for ArcGIS. Collector is a powerful new tool in the world of Geospatial Information Systems that allows gathering map data in the field. Multiple users can go offline and mark locations and add attachments like photos and video then upload them to a prepared map later.

Booth # 001
National Science Foundation

The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. The foundation competitively awards grants for research and education in the science, technology, engineering, and mathematics fields.

Booth # 002
ATE Central – Supporting the ATE Community

ATE Central is an online portal that supports and highlights the work of the ATE community and that showcases an expansive collection of ATE-created curricula, learning objects, web sites, and media. It also includes a comprehensive database of project and center information, and an array of services and tools that leverage and tie together all this data in various ways to serve and promote the work of the ATE community.
Booth # 003
**EvaluATE – Evaluation Resource Center for Advanced Technological Education**

EvaluATE promotes the goals of the ATE program by partnering with ATE projects and centers to strengthen the program’s evaluation knowledge base, expand the use of exemplary evaluation practices, and support the continuous improvement of technician education throughout the nation. Resources include webinars, workshops, a quarterly newsletter, and web site with digital library and evaluator directory.

Booth # 004
**Mentor-Connect – Leadership Development and Outreach Initiative for ATE**

Mentor-Connect is designed to fill a void for the ATE program; address the fact that roughly two-thirds of the nation’s community colleges have never been awarded funding from the NSF ATE program; better manage a rapidly growing number of requests received by ATE center PIs and NSF program officers related to grant proposal development/project management; and develop grant-writing skills among STEM faculty who lack sufficient grant staff (or sponsored research officers) at their institutions.

Booth # 005
**HI-TEC – High Impact Technology Exchange Conference**

HI-TEC is a national conference on advanced technological education where technical educators, counselors, industry professionals, and technicians can update their knowledge and skills. Charged with educating America’s technical workforce, the event focuses on the preparation needed by the existing and future workforce for companies in the high tech sectors that drive our nation’s economy. HI-TEC uniquely explores the convergence of scientific disciplines and advanced technologies. Join us July 27-30 in Portland, Oregon, for HI-TEC 2015.

Booth # 006
**ATE Centers**

The National Science Foundation’s Advanced Technological Education (ATE) Centers of Excellence ensure that our future technical workforce receives the education and tools necessary to excel professionally to meet the needs of our ever-growing high tech industries. For more information, visit www.atecenters.org. NSF ATE Centers partner with industry for a new American workforce.
TeachingTechnicians.org provides the resources, strategies and models you need to improve and expand your technician education programs.
# Showcase Session III

**Friday, October 24**
**ATE Projects and Students**
10:00 am – 12:15 pm • Exhibit Hall

### Booth# | Alpha By Organization
---|---
105 | Asheville-Buncombe Technical Community College
| Skilled Students Get Jobs: Recruiting Women and Engaging All Students

507 | Asheville-Buncombe Technical Community College
| Student Booth: Meredith Sheehan

006 | ATE Centers

002 | ATE Central – Supporting the ATE Community

506 | Baltimore City Community College
| Student Booth: Igor Cannon, Troy Cottrell

511 | Bay Area Video Coalition
| Student Booth: Gabriela Quintana

505 | Bluegrass Community and Technical College
| Student Booth: Ebony Nava, Sandhya Paudel

301 | Brookdale Community College
| E-books and Mobile Apps for Technician Education

307 | CBIA Education Foundation
| Mechanical and Manufacturing Technologies for Energy and Sustainability

404 | City College of San Francisco
| Stem Cell Pipeline

311 | Cold Spring Harbor Laboratory
| Genomic Approaches in Biotechnology

209 | Concord Consortium
| Collaborative Research: Simbuilding – Teaching Building Science with Simulation Games

308 | Contra Costa Community College District
| Digital Modeling, Analysis, and Fabrication Project

406 | CUNY Borough of Manhattan Community College
| Fostering Student Success in Geospatial Technology

401 | Cuyahoga Community College
| Youth Technology Academy: Pathway to Technology Degrees

003 | EvaluATE – Evaluation Resource Center for Advanced Technological Education

210 | Everett Community College
| Advanced Technological Education for Aerospace and Advanced Manufacturing

501 | Florence-Darlington Technical College
| Student Booth: Adam McInville, Franklin Brown

502 | Florence-Darlington Technical College
| Student Booth: David K. Lee, Tony Mozeak

412 | Forsyth Technical Community College
| Biosciences Industry Fellowship Project

303 | Hagerstown Community College
| Pathways to Cybersecurity and Information Assurance Careers

### Booth# | Alpha By Organization
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304 | Hagerstown Community College
| Development of a Biotechnology Microscopy Training Center

203 | Highland Community College
| Highland Community College Mechanized Vineyard Teaching Project

005 | HI-TEC – High Impact Technology Exchange Conference

306 | Institute for Women in Trades, Technology, and Science
| Increasing the Number of Women in Technical Careers: Online Professional Development of Leadership Teams at Community Colleges

512 | Ivy Tech Community College
| Student Booth: Matthew Krueger

402 | James A. Rhodes State College
| Mathematics Transitions in STEM Education

202 | J.F. Drake State Technical College
| Digital Technology Education Collaborative

409 | Jobs for the Future, Inc.
| Work-based Learning: Preparing Incumbent Workers for Advanced Manufacturing Careers

305 | Joliet Junior College
| Integrating Sustainability through Technical Education

206 | Kentucky Community and Technical College System
| Mechatronics and Innovation for Rural Technicians

309 | Lewis and Clark Community College
| Implementation and Expansion of Science-based Service Technology in HEVs

503 | Lompoc High School
| Student Booth: Alma Mendez, Justin Angulo, Noah Hutton, Manuel Lujan, Luis Rodriguez

207 | Madison Area Technical College
| Automate! Building Automation Systems

204 | New England Board of Higher Education
| Problem Based Learning in Advanced Manufacturing: Transforming 21st Century Technician Education
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<td>Wayne Early Middle College High School and Wayne School of Engineering Student Booth: Jaydyn Anthony Kincaid, Jacob Seate</td>
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<td>Weber State University Developing a Vision and Plan for the Northern Utah Geospatial Technology Education Program</td>
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Booth # 101
South Florida State College (SFCC)
SFCC Bioenergy Education Program
Curriculum frameworks and maps for associate degrees and college credit certificates in biofuels technology and biomass cultivation have been designed at South Florida State College. The biofuels industry is emerging in Florida; and this program is the first in the state to prepare technicians specifically to work in fuel production plants or in biomass cultivation operations.

Booth # 102
Technical College of the Lowcountry
Emergent Use of Agriscience Biotechnology
The use of biotechnology is expected to be a critical factor in future efforts to increase crop yields and to expand food production in areas where water and arable soil are in short supply. Recently, there has been a strong push to recruit and mentor agriculture biotechnicians. The Technical College of the Lowcountry has developed a certificate program to train agriscience technicians. This showcase will focus on the establishment of an agriscience biotechnology program.

Booth # 103
University of Hawaii
Cybersecurity Education, Curriculum, and Workforce Development
The University of Hawaii – Maui College is the only provider of higher education in Maui County. With a focus on STEM education and emerging careers, this projects enhances the local workforce with skills in cybersecurity tools, technologies, and practices.

Booth # 104
Northern Arizona University
Collaborative Project: Geospatial Connections Promoting Advancement to Careers and Higher Education
This collaborative project between Mesa Community College and Northern Arizona University encourages college faculty and high school teachers to integrate geospatial technologies into existing courses through project based instruction. The project’s goal is to build awareness of and interest in careers that employ spatial tools as a component of their overall solution. This showcase will highlight engaging, browser-based mobile applications that enable real-time collaborative mapping, data analysis, critical thinking, and communication across disciplines.

Booth # 105
Asheville-Buncombe Technical Community College
Skilled Students Get Jobs: Recruiting Women and Engaging All Students
Twenty-eight percent – What’s Your Number? Women receive only 28 percent of degrees and certificates in STEM disciplines. This display will share strategies used to retain more women in designated programs through problem based learning, a Women in Technology group, and instructor training.

Booth # 106
Santa Rosa Junior College (SRJC)
Improving Pathways in Sustainable Agriculture Education
The project aims to provide a more streamlined 2+2+2 education in the field of sustainable agriculture (SA) by improving articulation with local high schools and state-supported universities in California. High school students are introduced to sustainable agriculture through outreach and a summer academy program where they receive dual credit and also credit by examination (CBE) for selected high school courses. For students enrolled in SA programs at SRJC, improving retention and completion rates are accomplished through enhanced advising, modifications to curriculum, increased course offerings and the development of internship opportunities.

Booth # 201
Sinclair Community College
Lead with Guitars in STEM
The STEM Guitar project is hosting faculty training through Guitar Building Institutes around the United States. The five-day institutes focus on STEM for middle and high school teachers. The institutes present and teach participants hands-on, applied learning techniques to help engage students and spark excitement for learning STEM subject matter. There will be guitar kit samples, curriculum links, and opportunities to partner for upcoming institutes.
Booth # 202
J.F. Drake State Technical College
Digital Technology Education Collaborative (DigiTEC)
DigiTEC provides professional development, curriculum materials, training kits, articulation models, outreach models, and supplemental teaching materials to encourage student interest in STEM careers that use digital technology in engineering and manufacturing applications.

Booth # 203
Highland Community College (HCC)
Highland Community College Mechanized Vineyard Teaching Project (MVTP)
HCC-MVTP is a two-year project focused on creating a commercial-scale vineyard to train students in vineyard mechanization and commercial-scale vineyard operations. This showcase focuses on the vineyard expansion and equipment acquisition completed in the first year of the grant as well as plans for the second year.

Booth # 204
New England Board of Higher Education (NEBHE)
Problem Based Learning in Advanced Manufacturing: Transforming 21st Century Technician Education
This curriculum and professional development project built on NEBHE’s previous PHOTON Problem Based Learning (PBL) and STEM PBL projects introduces secondary and postsecondary STEM educators and teacher educators offering manufacturing technology education in New England to PBL. The project is creating authentic real-world multimedia case studies developed in collaboration with advanced manufacturing industry partners to be infused into existing curricula, and coaches instructors through developing their own PBL case studies with industry or other community partners.

Booth # 205
Weber State University
Developing a Vision and Plan for the Northern Utah Geospatial Technology Education Program
This showcase will share Weber State University’s plan to become a model two-tier community college and university geospatial technology program that prepares both postsecondary students and professionals for successful employment and advancement in the geospatial workforce across northern Utah.

Booth # 206
Kentucky Community and Technical College System
Mechatronics and Innovation for Rural Technicians
This project seeks to address the shortage of high tech manufacturing technicians to meet state and regional workforce needs by increasing access to advanced manufacturing technology programs. It is working to develop a systemic framework to attract and return future technicians through strong partnerships among postsecondary institutions, secondary institutions, business and industry, and community organizations; and prepare multi-skilled technicians and/or operators for employment and advanced manufacturing.

Booth # 207
Madison Area Technical College
Development of a Technical Program in Stem Cell Technologies: Responding to an Emerging Need
This project has produced a two-semester certificate program in human stem cell technologies that prepares students for employment in stem cell related companies and labs.

Booth # 208
University of Illinois at Urbana – Champaign
The Applied Baccalaureate Degree: An Emerging Pathway to Technician Education
This showcase provides research-based resources and materials from an ATE targeted research project on Applied Baccalaureate (AB) degree programs associated with NSF ATE projects and centers. Results of a national survey and case study research on selected AB degree programs will be shared.

Booth # 209
Concord Consortium
Collaborative Research: Simbuilding – Teaching Building Science with Simulation Games
The Concord Consortium and Santa Fe Community College will showcase a family of simulation games for teaching and learning building science.

Booth # 210
Everett Community College
Advanced Technological Education for Aerospace and Advanced Manufacturing (ATEAAM)
The ATEAAM is working together with high school and college educators to create curriculum that prepares students to be industry approved and work ready for aerospace advanced manufacturing jobs. A career coach goes into classrooms and helps students bridge from high school to college in advanced manufacturing programs. This showcase illustrates an interactive outreach lesson for a group of 20-30 students, outreach material, and a database that tracks student interactions.
Booth # 211
Sinclair Community College
Leadership Capacity Building for Manufacturing and Manufacturing-related Programs

Sinclair Community College, Ivy Tech Community College – Northwest, and Purdue University – Calumet offer this NSF ATE program to help faculty revitalize their engineering technology programs and build administrative support to revise curricula, provide greater value to current students, and attract more students to the program. To accomplish this goal, the program provides leadership development of faculty and administrators to address the many challenges in creating change. Plan to join the 2014-2015 Educator Leader Cohort forming now!

Booth # 212
Metropolitan Community College
Automate! Building Automation Systems

Modern, effective building automation systems rely on the coordination and interaction of black box components with input and output, and databases which are programmed and assessed via both internal networks and the Internet—all requiring strict security protocols. Automate! focuses on developing IT-savvy technicians beginning with high school outreach workshops and leading to a complete associate degree in building automation systems and IT.

Booth # 301
Brookdale Community College
E-books and Mobile Apps for Technician Education (E-MATE)

The E-MATE project team will share its e-book development work collaborating with the National Center for Optics and Photonics Education and the National Center for Supply Chain Technology Education. E-MATE, E-books, and Mobile Apps for Technician Education, is a three-year project to develop interactive e-books to document best practices and lessons learned, ultimately creating a framework educators can use with their own content to develop interactive learning objects and e-books.

Booth # 302
South Central College
South Central College: iMEC

iMEC is an innovative distance learning delivery model for mechatronics engineering technology curriculum. Key to iMEC is the creation of mechatronics machines that can be remotely accessed, controlled, programmed, and viewed via the Internet by remote learners. These remote learners can introduce machine failures and use data acquisition to diagnose the machine fault. Coupled with online curriculum, this delivery model provides students with a remotely accessible, “hands-on” learning environment for developing machine troubleshooting skills.

Booth # 303
Hagerstown Community College
College Pathways to Cybersecurity and Information Assurance Careers

The focus of our three-year NSF grant lies in four areas: to strengthen the secondary school cybersecurity experience by tailoring activities for students, teachers, and underserved populations; to develop cyber training through the Continuing Education division of the college; to develop a learning space that offers a penetration testing lab environment; and to develop sustainability strategies.

Booth # 304
Hagerstown Community College
Development of a Biotechnology Microscopy Training Center

Hagerstown Community College’s Biotechnology Microscopy Training Hub engages K-14 students and their teachers in STEM through hands-on, inquiry-based lessons focused on developing skills to explore the microscopic world. We will present an overview of our programs, including our K-12 outreach and Lab in a Box program, Summer Biotechnology Institutes for teachers and advanced high school students, College for Kids microscopy programs, and the resources available on site at HCC and for download via our web site.

Booth # 305
Joliet Junior College
Integrating Sustainability through Technical Education (ISTTE)

The ISTTE project will integrate sustainable energy technology practices and hands-on learning within various existing technical programs. In addition, a new Certificate in Sustainable Energy Technology will be developed and implemented. Pathways will be developed for entry into technical areas with emerging sustainable energy opportunities by providing intensive project based learning and dual enrollment opportunities for secondary education, as well as professional development and curriculum for instructors.
Booth # 306
Institute for Women in Trades, Technology, and Science
Increasing the Number of Women in Technical Careers: Online Professional Development of Leadership Teams at Community Colleges

This new project provides ATE grantees with the tools and grant funded professional development to help teams of educators increase the enrollment and retention of female students (and retention of male students) in community college STEM courses in which they are underrepresented. Stop by our booth to learn more about the WomenTech Educators Training, follow-up support, and resources available to all ATE grantees through this new project and the existing CalWomenTech Scale Up project.

Booth # 307
CBIA Education Foundation
Mechanical and Manufacturing Technologies for Energy and Sustainability

This program helps community college and university students obtain the technology and professional skills, including teamwork, leadership, and project planning, required to meet today’s workforce demands. Academic partnerships with industry, hospitals, and government entities using real-world applications have been proven to engage diverse populations. Teams are inter-institutional and interdisciplinary to capitalize on the synergy between the theoretical knowledge of university faculty and students and the requisite hands-on technical skills of community college students and faculty.

Booth # 308
Contra Costa Community College District
Digital Modeling, Analysis, and Fabrication (DMAF) Project

This showcase will feature student projects conducted under NSF funding for the DMAF project. Projects include digital mold making and casting of ceramics utilizing computer numerical control (CNC) technology, design-build projects incorporating digital fabrication, robotics and Arduino micro-controllers, architectural modeling and design utilizing Building Information Modeling (BIM), and scripting utilizing Grasshopper and related software for 3D printing.

Booth # 309
Lewis and Clark Community College
Implementation and Expansion of Science-based Service Technology in HEVs

This showcase features a project grant focused on the expansion of education related to hybrid electric vehicle (HEV) technologies for the purpose of educating automobile service technicians.

Booth # 310
Salt Lake Community College
A Biomanufacturing Enterprise for Innovative Student Training and Entrepreneurship

The contract manufacturing organization (CMO), STUDENTfacturED, is a pioneering training program directed at the effective teaching and reinforcement of core concepts and skills desired by employers in the biotechnology manufacturing (biomanufacturing) industry. The students operate the STUDENTfacturED enterprise to learn and apply skills in critical thinking, product development, production, quality systems, and relevant government regulations.

Booth # 311
Cold Spring Harbor Laboratory
Genomic Approaches in Biotechnology

Cold Spring Harbor Laboratory’s DNA Learning Center (DNALC), Bio-Link, and 12 community colleges offer week-long Genomic Approaches in BioSciences workshops. Educators use cutting-edge science tools in hands-on laboratories and bioinformatics investigations, and learn how these technologies can prepare students for specialized life science elective courses, independent research projects, and biotechnology careers. Workshops integrate theoretical, laboratory, and computer technology materials with practical advice on classroom management and career exploration.

Booth # 312
Mount Wachusett Community College
Stackable Training for Laboratory Science and Quality Technicians in Biopharmaceutical and Biomedical Manufacturing

Mount Wachusett Community College will present stackable training modules developed within this NSF ATE project. Examples include a 10-hour Quality Systems overview incorporated into a noncredit workforce training, a 32-hour intensive Quality Systems training for advanced and incumbent workers, and credit courses and programs to be articulated to four-year institutions. Similarly, we have used this model to develop specific training on analytical instrumentation and education building up following Bloom’s taxonomy levels.
Booth # 401
Cuyahoga Community College
Youth Technology Academy: Pathway to Technology Degrees

The primary deliverable of this project is a pre-engineering experience, coursework, and project based instruction that includes strong, technical training with additional math preparation. This project works to enable high school students to successfully pursue postsecondary STEM studies as soon as they arrive in college rather than being delayed by remedial coursework.

Booth # 402
James A. Rhodes State College
Mathematics Transitions in STEM Education

University, college, and high school partners design, implement, and evaluate a mathematical modeling course for high school seniors with the goals of enhancing student interest in and preparedness for two-year STEM programs. Teacher professional development and curriculum design are emphasized. The course focuses on engaging students in gathering, representing, analyzing, and interpreting data during activities that apply mathematics in STEM fields. Technologies include graphing calculators, sensors, and interfaces that enhance students’ data collection and analysis experience.

Booth # 403
Southeast Community College
SECURE-IT Cybersecurity Project

The SECURE-IT project is developing and adapting curriculum to formulate an AAS degree focus in cybersecurity that meets the CAE²Y requirements for transfer to four-year institutions. The project is also working to increase female participation and male/female graduation rates in the Computer Information Technology program.

Booth # 404
City College of San Francisco
Stem Cell Pipeline

The Stem Cell Pipeline grant is developing and testing a cell culture/stem cell research curriculum for high school students to be taught in a community college setting. This nine-week course introduces high school students and their teachers to the basics of cell culture and stem cells. Practical experience includes use of common laboratory equipment such as micropipettes, centrifuges, and inverted and fluorescent microscopes. Students gain valuable hands-on experience while learning in a college atmosphere.

Booth # 405
Northeast Iowa Community College
Engineering Technicians in Northeast Iowa

The goal of Engineering Technicians in Northeast Iowa is to encourage growth in technician training through a comprehensive career pathway that includes a new mechanical engineering technician program focusing on 21st century technical skills for the local advanced manufacturing sector. The project emphasizes the recruitment and development of women and other potential technicians throughout a predominantly rural region.

Booth # 406
CUNY Borough of Manhattan Community College (BMCC)
Fostering Student Success in Geospatial Technology

This project focuses on the development, implementation, and assessment of GIS-related core courses, which are building the foundation for the future development and implementation of a full-scale GIS program at the CUNY BMCC. The exemplary educational materials and key pedagogical strategies in GIS were developed with assistance from CUNY Hunter College experts; the National Center for Geospatial Technology representatives; some two-year and four-year institutions; local private industries; and federal, state, and city agencies.

Booth # 407
Polk Community College
Open-Entry/Open-Exit Advanced Manufacturing Engineering Technology

Polk State College transitioned an Engineering Technology AS program from the traditional lecture/lab format to open-entry/open-exit (OEOE)—including course realignment, curriculum development, lab design, registration changes, advising challenges, financial assistance, and veterans’ benefits accommodation. The shift from lecture/lab-based classes to an OEOE, hybrid, competency-based, learner-centered, self-paced, non-term, faculty-mentored format allows the courses to be offered in a flexible format where students attend at the times most convenient for them.
**Booth # 408**
University of South Florida  
**Successful Academic and Employment Pathways in Advanced Technologies**

PathTech examines educational and career pathways to and from engineering technology AS/AAS degree programs in the Tampa Bay area. Interviews with high school and community college students and representatives from local industry reveal motivations for entering engineering technology (ET) programs and the challenges faced by ET students in the local workforce.

**Booth # 409**
Jobs for the Future, Inc.  
**Work-based Learning: Preparing Incumbent Workers for Advanced Manufacturing Careers**

Jobs for the Future (JFF) and Owensboro Community and Technical College have partnered to offer work-based courses that engage employers, incumbent workers, and community college faculty in manufacturing technician education. The model leverages instruction and skill development inherent in the job itself, using actual job tasks and responsibilities to teach applied and academic skills. WGBH and JFF are documenting lessons from the project in a multimedia toolkit to support the model’s development in other community colleges.

**Booth # 410**
Texas Engineering Experiment Station  
**Discover, Relate, Engage, Attract, Motivate with Interactive Technologies (DREAM-IT)**

DREAM-IT is a project to stimulate awareness of and interest in technical education and careers. It is designed to inform high school students, parents, high school teachers, and career counselors about potential technical careers for students in the South Texas area. DreamCamp, held each summer, engages students in hands-on activities to explore and investigate technical careers that are facilitated by locally available education at Del Mar College.

**Booth # 411**
Santa Fe Community College  
**Cybersecurity Program Development**

The Cybersecurity Program Development project has developed two AS degree tracks and three college credit certificates. We will demonstrate the Canvas-based online curriculum developed for our Foundations of Information Technology course. The curriculum is designed to increase student engagement in an online learning community.

**Booth # 412**
Forsyth Technical Community College  
**Biosciences Industry Fellowship Project (BIFP)**

The BIFP is a 30-day professional development program in North Carolina based at Forsyth Technical Community College in Winston-Salem. Ten instructors from across the U.S. are invited to participate in the program to gain exposure to bioscience labs and industries across the state. The object of the fellowship is to take the information back to the instructors’ colleges in a contextualized manner for sharing.

**Booth # 501**
Florence-Darlington Technical College  
**VESTA**

VESTA provides students with access to nationally recognized expert instructors through online courses and participation in local field practicums. VESTA also provides leadership, expertise, resources, academic programs, and technical assistance to students interested in entering and advancing careers within the grape and wine production industry.

**Booth # 502**
Florence-Darlington Technical College  
**Student Booth: David K. Lee, Tony Mazeak**

An associate degree in Network Systems Management is the foundation for careers in multiple fields. This project will explore the career opportunities within the ATE community focusing on the computer industry, high-demand applications, and entrepreneurial opportunities through a fusion of network systems management with supply chain management.

**Booth # 503**
Lompoc High School  
**Student Booth: Alma Mendez, Justin Angulo, Noah Hutton, Manuel Lujan, Luis Rodriguez**

For a national wind energy competition, students designed and fabricated turbines. They analyzed blade variables and energy output, and then used modeling software to test custom blade designs. Students manufactured blades and gear systems using laser cutters and 3D printers.

**Booth # 504**
Missouri State University  
**Student Booth: Alyssa Cassidy**

VESTA provides students with access to nationally recognized expert instructors through online courses and participation in local field practicums. VESTA also provides leadership, expertise, resources, academic programs, and technical assistance to students interested in entering and advancing careers within the grape and wine production industry.
Booth # 505
Bluegrass Community and Technical College
Student Booth: Ebony Nava, Sandhya Paudel

Bluegrass Community and Technical College has developed an excellent biotechnology program. The growing biotechnology industry in Kentucky is well-served by the preparation offered to students of this program. Internship placements with local biotech companies benefit the students, the college, and the industry. Hear from current BCTC students about recent experiences in the program involving testing the effectiveness of certain plants for commercial use.

Booth # 506
Baltimore City Community College (BCCC)
Student Booth: Igor Cannon, Troy Cottrell

This showcase will feature two students studying in BCCC’s Robotics and Mechatronics Technology program. The display will feature Lego Mind storm robots and robotics videos; demonstrate the benefits of the technology offered to students at BCCC; and highlight the importance of robots to the future of humankind.

Booth # 507
Asheville-Buncombe Technical Community College
Student Booth: Meredith Sheehan

This showcase presentation will document a student’s experience as the Ambassador for Asheville-Buncombe Technical Community College’s Women in Technology club. As a Student Ambassador, Ms. Sheehan attended community events and served as a mentor to other women majoring in STEM programs at the college.

Booth # 508
Orangeburg-Calhoun Technical College (OCtech)
Student Booth: Michael Milton

OCtech Instrumentation and Sustainable Agriculture program students are creating a collaborative project using National Instruments LabView software and data acquisition to control and monitor a project involving hydroponics and aquaponics. Mr. Milton is a second-year instrumentation student who is currently in an apprenticeship with Continental Tire.

Booth # 509
Wayne Early Middle College High School and Wayne School of Engineering
Student Booth: Jaydyn Anthony Kincaid, Joseph Seate

Two students will present information about their schools’ dual enrollment programs. They will also discuss their personal experiences in dual enrollment and share information on the program’s benefits.

Booth # 510
Tidewater Community College/AMSEC LLC
Student Booth: Marcus Maximin

AMSEC is a college industry partner with Tidewater Community College that provides naval architecture and marine engineering, naval ship systems assessments, maintenance engineering, and waterfront maintenance support.

Booth # 511
Bay Area Video Coalition
Student Booth: Gabriela Quintana

The Bay Area Video Coalition inspires social change by empowering media makers to develop and share diverse stories through art, education, and technology.

Booth # 512
Ivy Tech Community College
Student Booth: Matthew Krueger

Ivy Tech is developing a microelectromechanical systems (MEMS) certificate and will be developing several electronic modules to be used in tandem with kits developed by the Southwestern Center for Microsystems Education. These modules will include a preamp to interface with pressure transducers and strain gauges to be included in the MEMS kits.

Booth # 001
National Science Foundation

The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. The foundation competitively awards grants for research and education in the science, technology, engineering, and mathematics fields.

Booth # 002
ATE Central – Supporting the ATE Community

ATE Central is an online portal that supports and highlights the work of the ATE community and that showcases an expansive collection of ATE-created curricula, learning objects, web sites, and media. It also includes a comprehensive database of project and center information, and an array of services and tools that leverage and tie together all this data in various ways to serve and promote the work of the ATE community.
EvaluATE – Evaluation Resource Center for Advanced Technological Education

EvaluATE promotes the goals of the ATE program by partnering with ATE projects and centers to strengthen the program’s evaluation knowledge base, expand the use of exemplary evaluation practices, and support the continuous improvement of technician education throughout the nation. Resources include webinars, workshops, a quarterly newsletter, and web site with digital library and evaluator directory.

Mentor-Connect – Leadership Development and Outreach Initiative for ATE

Mentor-Connect is designed to fill a void for the ATE program; address the fact that roughly two-thirds of the nation’s community colleges have never been awarded funding from the NSF ATE program; better manage a rapidly growing number of requests received by ATE center PIs and NSF program officers related to grant proposal development/project management; and develop grant-writing skills among STEM faculty who lack sufficient grant staff (or sponsored research officers) at their institutions.

HI-TEC – High Impact Technology Exchange Conference

HI-TEC is a national conference on advanced technological education where technical educators, counselors, industry professionals, and technicians can update their knowledge and skills. Charged with educating America’s technical workforce, the event focuses on the preparation needed by the existing and future workforce for companies in the high tech sectors that drive our nation’s economy. HI-TEC uniquely explores the convergence of scientific disciplines and advanced technologies. Join us July 27-30 in Portland, Oregon, for HI-TEC 2015.

ATE Centers

The National Science Foundation’s Advanced Technological Education (ATE) Centers of Excellence ensure that our future technical workforce receives the education and tools necessary to excel professionally to meet the needs of our ever-growing high tech industries. For more information, visit www.atecenters.org. NSF ATE Centers partner with industry for a new American workforce.
Benefit From
Contribute To

The ATE Program Through Mentor Connect

Just-in-time Knowledge Transfer
Get a Mentor
Be a Mentor
Become a Leader

Increase Your Impact

www.mentor-connect.org
AACC and NSF wish to congratulate the following ATE students and recent alumni selected to attend the 2014 ATE Conference.

Andrea Alfonso, Del Mar College, TX
Joseph Ancona, Gateway Community College, CT
Justin Angulo, Lompoc High School, CA
Bachir Benkirane, Diablo Valley College, CA
Jeffrey Blomquist, River Valley Community College, NH
Franklin Brown, Florence-Darlington Technical College, SC
Amanda Burke, Massasoit Community College, MA
Iggy Cannon, Baltimore City Community College, MD
Alyssa Cassidy, Missouri State University, MO
Travis W. Cunningham, River Valley Community College, NH
Claudia Dufour, Quinebaug Valley Community College, CT
Andrew Duncklee, River Valley Community College, NH
Kyle Everett, Northwest Vista College, TX
Preston Finger, Dakota County Technical College, MN
Chelsea Fitzgerald, Collin College, TX
Shaun Foer, Clark State Community College, OH
Thaddeus Foster, Central New Mexico Community College, NM
Jeremy Hancock, Tidewater Community College, VA
Veranika Hlushakova, Massachusetts Bay Community College, MA
Aaron John Hodson, Northwest Vista College, TX
Sarah Hollifield, Middle Georgia State College, GA
Noah Hutton, Lompoc High School, CA
James M. Joseph, University of Pittsburgh, PA
Ethan Kern, Sinclair Community College, OH
Jared Kimble, Dakota County Technical College, MN
Jaylyn Anthony Kincaid, Wayne Early Middle College High School, NC
Keshena Koran, Madison Area Technical College, WI
Matthew Krueger, Ivy Tech Community College, IN
Chris LaBranche, Asnuntuck Community College, CT
David K. Lee, Florence-Darlington Technical College, SC
Manuel Lujan, Lompoc High School, CA
Marcus Maximin, Tidewater Community College/AMSEC LLC, VA
Adam McInville, Florence-Darlington Technical College, SC
Mike McMillan, Macomb Community College, MI
Nicholas Meadows, Jefferson State Community College, AL
Alma Mendez, Lompoc High School, CA
Michael Milton, Orangeburg-Calhoun Technical College, SC
James Mitchem, Sinclair Community College, OH
Tony Mozeak, Florence-Darlington Technical College, SC
Ian Musnell, Central Maine Community College, ME
Ebony Nava, Bluegrass Community and Technical College, KY
Sandhya Paudel, Bluegrass Community and Technical College, KY
Gabriela Quintana, Bay Area Video Coalition, CA
Rocio Rayo, Hostos Community College, NY
Luis Rodriguez, Lompoc High School, CA
Jacob Seate, Wayne School of Engineering, NC
Maria Sena, Jamestown Community College, NY
Meredith Sheehan, Asheville-Buncombe Technical Community College, NC
Michael D. Treadwell III, Tidewater Community College, VA
Bruno Veiga, University of Massachusetts - Boston, MA
Luis Velazquez, Madison Area Technical College, WI
Patrick Vilkinofsky, Daytona State College, FL
Jamie L. Vulgamore, Del Mar College, TX
Chad Whitney, Central Connecticut State University, CT
Talia Whyte, Massachusetts Bay Community College, MA
Christopher Wright, Jefferson Community and Technical College, KY
Samantha Zahratka, Dakota County Technical College, MN
Sviatlana Zoryna, Diablo Valley College, CA
Save the Date!

High Impact Technology Exchange Conference
Educating America’s Technical Workforce

July 27–30, 2015
Portland Marriott Downtown Waterfront • Portland, Oregon

CALL FOR PROPOSALS
Call for workshop proposals closes Jan 15.
Call for breakout and poster session proposals closes Feb 2.
Proposal form will be online Nov 17.

HI-TEC is a high-technology professional development opportunity for secondary and postsecondary educators, counselors, technicians, industry professionals, and trade organizations.

HI-TEC supports the mission of the National Science Foundation’s Advanced Technological Education (ATE) program—to strengthen the skills of technicians whose work is vitally important to the nation’s prosperity and security.

www.highimpact-tec.org
Registration
Registration is located in the West Conference Foyer of the Omni Shoreham Hotel. You must be fully registered to receive a name badge, conference program, and other materials.

Hours of operation:
- Wednesday, October 22, 10:00 am – 8:00 pm
- Thursday, October 23, 7:00 am – 5:30 pm
- Friday, October 24, 7:30 am – 12:00 pm

Accessibility Information
All meeting rooms can be accessed through the elevators in the West area of the hotel with the exception of the Regency and Ambassador Ballrooms. A wheelchair lift is located next to the Ambassador Ballroom main entrance and can be taken down to the Regency level for entry to both Ambassador and Regency Ballrooms. Restrooms with wheelchair access are located on both Level 1B and 2B (inside of the Health Club), on the lobby level, and in Robert’s Restaurant.

Emergency Procedures
Dial “0” on any house phone and report your situation to the operator. If the fire alarm should sound, wait for verbal instructions. Please check for exits nearest your location and do not use the elevators in case of a fire emergency.

Smoking Policy
The Omni Shoreham Hotel is a non-smoking property. Smoking is only allowed outside in designated areas.

Messages
There is a message board located next to the registration area for participant use.

Tickets
Tickets will be collected at the pre-conference workshops that require them. If available, additional tickets can be purchased at conference registration. Once on site, the costs of unused tickets can not be refunded. However, AACC will assist with matching a buyer for unused tickets, if possible. Please see the staff at the conference registration desk.

Badge Identification
Each person who registers for the ATE Conference must wear their name badge for entry into sessions, meal events, receptions, and the exhibit hall.

Business Center
The business center at the Omni Shoreham is located next to the West Registration Desk and Foyer. It is managed by the UPS Store. Hours: Monday – Friday, 7:00 am – 6:00 pm; Saturday, 10:00 am – 2:00 pm; Sunday by prior arrangement. Please note that AACC does not maintain any photocopying equipment.

Internet Café and WiFi Hot Spot
The café is located in the Executive Room across the foyer from the West Registration desk.

Hours of operation:
- Wednesday, October 22, 10:00 am – 7:30 pm
- Thursday, October 23, 7:00 am – 5:30 pm
- Friday, October 24, 7:30 am – 10:00 am
AREA RESTAURANTS

(within walking distance of the Omni Shoreham Hotel)

**AFGHAN GRILL**, 2309 Calvert Street, (202) 234-5095
Serving unique Afghan cuisine for over 25 years. Open for lunch & dinner daily, 11am-11pm.

**CAFÉ PARADISO**, 2649 Connecticut Avenue, (202) 265-8955
Offering Northern Italian dishes with fresh, hand-made pastas. Serving lunch & dinner seven days a week.

**CHIPOTLE**, 2600 Connecticut Avenue, (202) 299-9111
Casual Mexican Grill, offering freshly made burritos, fajitas, & tacos for lunch & dinner seven days a week.

**DISTRICT KITCHEN**, 2606 Connecticut Ave NW, (202) 238-9408
A very trendy New American restaurant, generating buzz around the city with its cuisine prepared by Chef Drew Trautmann.

**HOT N’ JUICY CRAWFISH**, 2651 Connecticut Avenue, (202) 299-9448
New to the neighborhood seafood. Only DC outpost of the Las Vegas Legend. Be ready to shuck your own.

**ITALIAN PIZZA KITCHEN**, 2608 Connecticut Avenue, (202) 939-2979
A new favorite casual pizza spot. Take out available.

**LEBANESE TAVERNA**, 2641 Connecticut Avenue, (202) 483-7420
Known for “family friendly” & “consistently excellent” authentic Middle Eastern fare, as stated in Zagat’s restaurant guide.

**MCDONALDS**, 2616 Connecticut Avenue, (202) 462-8773

**MEDATERRA**, 2614 Connecticut Avenue, (202) 797-0400
Offering Mediterranean-American cuisine with an Egyptian flare in a modern Art Deco setting.

**MR. CHEN’S CHINESE**, 2604 Connecticut Avenue, (202) 797-9668
Authentic Chinese cuisine using organic vegetables along with a health-conscious cooking style. Delivery available.

**MURPHY’S IRISH PUB**, 2609 24th St, (202) 462-7171
Serving casual lunch & dinner entrees in a convivial setting. Also features TV sports & live Irish music nightly.

**NEW HEIGHTS**, 2317 Calvert St, (202) 234-4110
A long-time, upscale DC favorite with award-winning New American cuisine. Open for dinner Monday-Saturday.

**NOODLES AND COMPANY**, 2635 Connecticut Avenue, (202) 518-0020
Offering a variety of pasta dishes, soups and salads.

**OPEN CITY CAFÉ**, 2331 Calvert St, (202) 332-2331
Breakfast, lunch & dinner in a casual, coffee-house setting. Also features a full-service bar & late-night hours.

**PASTA ITALIANA**, 2623 Connecticut Avenue, (202) 332-2207
Delicious Italian cuisine. Delivery is available.

**PETITS PLATS**, 2653 Connecticut Avenue, (202) 518-0018
Traditional French cuisine in a very nice, relaxing setting with private upstairs dining room & a delightful Sunday Brunch.

**PIZZA**, 2653 Connecticut Avenue, (202) 518-1160
Casual carry-out bistro with excellent hand-made pasta and pizzas prepared in a wood burning pizza oven.

**PIZZA KITCHEN**, 2608 Connecticut Avenue, (202) 939-2979
Offering a large selection of Italian cuisine. Pizza, pasta, calzones, paninis and much more.

**RAJAJI**, 2603 Connecticut Avenue, (202) 265-7344
Specializing in Northern & Southern Indian cuisine & tandoori specialties in a casual atmosphere.

**TASTE OF INDIA**, 2621 Connecticut Avenue, (202) 483-1115
Authentic Indian cuisine seven days a week. 11am – 10pm.

**TONO SUSHI**, 2605 Connecticut Avenue, (202) 332-7300
Traditional Japanese cuisine with freshly prepared sushi, teriyaki & tempura dishes. Open daily for lunch & dinner.

**UMI JAPANESE CUISINE**, 2625 Connecticut Avenue, (202) 332-3636
Creative sushi rolls, teriyaki, and bento boxes (for dinner), on the 2nd floor. Delivery and takeout possible.

**WOODLEY CAFÉ**, 2619 Connecticut Ave NW, (202) 332-5773
Serving great burgers & casual American fare in a family-friendly environment.
Many thanks to the following individuals for their dedicated assistance in planning the 2014 ATE Conference.

Ann Beheler, National Convergence Technology Center, Collin College, TX
Rachael Bower, ATE Central, University of Wisconsin–Madison, WI
David Brown, National Science Foundation, VA
David Campbell, National Science Foundation, VA
V. Celeste Carter, National Science Foundation, VA
Vince DiNoto, National Geospatial Center of Excellence, KY
Diane Dostie, Central Maine Community College, ME
Ellen Hause, American Association of Community Colleges, DC
Mary Heiss, American Association of Community Colleges, DC
Elaine Johnson, Bio-Link, City College of San Francisco, CA
Ken Laryea, American Association of Community Colleges, DC
Casey O’Brien, National CyberWatch Center, Prince George’s Community College, MD
Monica Pfarr, American Welding Society Foundation, FL
Gerhard Salinger, National Science Foundation (retired), VA
Gordon Snyder, National Center for Optics and Photonics Education, MA
Michael Staley, Seminole State College of Florida, FL
Will Tyson, University of South Florida, FL
Karen White, 360 Degree Manufacturing Center, Bemidji State University, NE
Lori Wingate, EvaluATE, Western Michigan University, MI
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Elizabeth Teles  
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Paul Tymann  
ATE Program Director

Yvette Weatherston  
ATE Program Director
Please mark your calendars as the following dates have been selected for the 2015 and 2016 ATE Principal Investigators Conferences.

**2015 ATE PRINCIPAL INVESTIGATORS CONFERENCE**

October 21-23, 2015
Omni Shoreham Hotel
Washington, DC

**2016 ATE PRINCIPAL INVESTIGATORS CONFERENCE**

October 26-28, 2016
Omni Shoreham Hotel
Washington, DC