

Highlights of Advanced Manufacturing and Engineering Technology Resources from ATE Centers April 28, 2016

James "Jim" Janisse - Welcome everyone to our webinar today, thank you for joining us. The webinar is Highlights of Advanced Manufacturing and Engineering Technology Resources from ATE Centers. Next slide please.

Webinar Details

James "Jim" Janisse – This is Jim Janisse I have the privilege of being the moderator today. I'm with the University of Wisconsin-Stout; past principal investigator on several grants and partnering with the FLATE center on leading mechatronics community exchange. Just so your aware today the webinar you will be in listening mode. Accessing from computer or phone and you have any particular questions we ask that you submit those down in the lower chat window, we'll try and monitor those, we have two Q&A sessions one in the middle and one at the end of will try to get to as many of those as we can and otherwise we will have a capturing and follow up with you later if need be. The reminder again that this webinar is being recorded this will enable you to share accordingly with your colleagues. Next slide please.

Brought To You By

James "Jim" Janisse - This webinar is brought to you by CCTA the Center's Collaborative for Technical Assistance. It's brought to you with additional support from the ATE Collaborative Impact Project and as we go to the next slide we're going to have Marilyn tell you more about CCTA.

The CCTA is Led By

Marilyn Barger - Thank you Jim, we didn't get a sound check so I hope everyone can hear me. The CCTA is led by the Centers you see on this side, CTC Center in Texas, the SC ATE Center and South Carolina, my own center FLATE, Bio-Link in California and MATEC Networks. Next slide.

CCTA Purpose

Marilyn Barger – So the purpose of the CCTA the Collaborative Centers for Technical Assistance to specifically respond to a DOL request to the NSF ATE program to have the centers provide assistance to some of the TAACCCT grantees and you can see the kind of assistance they were looking for coaching, in person convenings, peer-to-peer learning, some best practices from our long history of working collaboratively with industry next slide please.

CCTA Activities are Relevant for

Marilyn Barger - So our activities are relevant for not just the Department labor grants but also other NSF foundation projects and centers, any groups that work collaboratively with industry particularly workforce oriented programs. Next slide.

Deliverables

Marilyn Barger - So what are we doing with this project, we're doing topical webinars like this one today, we're doing these monthly in this same time slot on Thursday afternoons and presenting existing and new solutions providing the live and recorded resources and they're all be archived on the ATEcentral

dot net, which is a repository for all NSF ATE materials and other online media including videos and transcripts will also be available. There's more deliverables coming up next slide.

Deliverables Continued

Marilyn Barger - There will be some regional discipline specific conferences or convenings. We will be producing some and we have already produced a couple best practice guides and we'll also be hosting some of our own convenings like the one we will be hosting this summer at HI-TEC conference it's going to be Friday after the conference, will talk more about that in a little bit. Next slide.

Poll #1: Your Affiliation

James "Jim" Janisse – Its back to me now Marilyn and ready to do the poll here, we really want to understand our audience today and so we're asking you to look at the survey questions check first option if you're involved with an NSF grant, b, if your involved with a TAACCCT grant, if your involved in both probably qualify for saint hood check that box, and if neither applies be sure to select that. And right now we'll take a poll and understand our audience. Poll closing in 5 seconds, get your answers in 5, 4, 3, 2, 1. Interesting to see it's kind of a diverse group heavily skewed somewhat towards forty-three percent NSF, 25% TAACCCT grant, and 20% of you are saints, hopefully regardless of where you fall there you will get some value out of today. Next slide.

Overview

James "Jim" Janisse - The overview today is many of us have found ourselves trying to find resources for manufacturing education, the whole model of NSF ATE centers really concentrates a wealth of best and emerging practices certainly skill alignments, curriculum really the focus is to find consolidate all the resources that support 2 year technician development. What we're doing in today's format is you're going to learn quickly about six manufacturing centers, we're using kind of a fast pace lightning round type of webinar that will allow you to have 6-8 minutes with each of these premier centers. The next slide we have learning objectives for today is to hopefully by the end of this next slide please.

Learning Objectives

James "Jim" Janisse - You'll really get to know how to access these manufacturing lighted centers beyond just the resources we've already discussed we're hoping you'll also gain access to a variety of evidence based research tools to help you really integrate them into your curricula. With that I am going to turn over to Marilyn to introduce our presenters today.

Presenters

Marilyn Barger - Thanks again Jim. So again a lightning round kind of webinar here so we'll be quick and short but giving some highlights from each of our centers and the panelist today include: Kris Frady from the CA2VES center; Beverly Hilderbrand from CARCAM; Jeremy Leffelman from the 360 center; Monica Pfarr from WELD-ED; and Karen Wosczyzna-Birch from Reginal Center for Next Generation Manufacturing "RCNGM". Next slide.

NSF ATE Program & ATE Centers

Marilyn Barger - So a little bit about the center's real quickly and backup since there's a lot of ATE people hopefully your familiar with these two resources about ATE program, the ATE Centers Impact book and the ATE 20 book, both are downloadable on their website.

NSF ATE Centers

Marilyn Barger - Generally groups are classified our centers and even the projects according to these eight different categories of advanced technology and today we're just focusing on the top one and I wanted to bring to your attention that there's a lot of great resources and other technology areas as well in the different ATE centers, next.

NSF ATE Advanced Manufacturing Centers and Projects

Marilyn Barger – Just to put them on a map here ATE manufacturing related centers with the circles around them, this map is available on the ATE central the other bubbles on this map are projects that are manufacturing focused and the center's work with many of the projects around the country in different capacities sometimes mentoring sometimes sharing and developing resources but as a whole this is the community I would say of the centers and the ATE manufacturing projects and centers, next.

Florida Advanced Technological Education Center of Excellence

Marilyn Barger- And now we're going to move right into talking about FLATE and some of the resources we have at our center, our mission is to be the leading resource for education and training expertise leadership projects and services to promote and support the workforce in the high-performance production and manufacturing community in our state. We got this little byline from our NVC a few years ago, impact locally and lead nationally, next.

A.S. Engineering Technology Degree

Marilyn Barger – As a regional center we really focus on our state, its complemented by a state department of education system for the CTE programs for high school and the community college and the two year colleges and our big contribution to the program to curriculum, was the development of Engineering Technology umbrella degree that supports manufacturing and as an umbrella I say it has a lot of different specialization tracks. You'll see the flow the career pathways that map here on the left and the colleges that are now engaged in Florida right now that are offering this degree, so nineteen of the twenty eight colleges and 19 of the 25 in the state actually offer technical programs related to manufacturing, next slide.

Forum on Engineering Technology

Marilyn Barger - I think the glue that holds us together is our great model for engineering technology forum, we've been meeting actually since 1996 I believe around the state it's a great organization where we just share in a forum format, new programs, new projects, issues with administrators even though there's administrators there, issues with the higher-ups administrators and that's a great model that we like to share we have some documentation about the form how it set up that you may be interested in. It's really engaging for the faculty and it encourages them to work together across the state to build stronger programs and a lot of different not just the technical parts but the teaching and pedagogy Resources for recruiting and all of those things that make a good program in the community colleges, next.

FLATE Guides Best Practice

Marilyn Barger - We also are the authors for several number of best practice guides; you'll see their front pictures here. They're all available on our website from our many years of experience we've salvaged the things that worked and collected them and documented them in these resource guides which are available on our website as downloadable PDF and flipbooks for anything from aligning curriculum to external standards to processes for reviewing curricula to different outreach activities to professional development, robotics camps, industry tourism the like, next.

Made in Florida

Marilyn Barger – And all of our outreach is housed under our made in Florida umbrella and for those resources we have a separate website that's madeinflorida.org where there's again a lot of information and downloadable resources for educators and also for industry who may be going out into schools and the community we encourage this a lot, so we provided them with a lot of resources to help them do that, including videos, handouts and PowerPoints and those kinds of resources, next.

FLATE's wiki

Marilyn Barger – Probably the most comprehensive place to find stuff or links to stuff, products that FLATE has produced its resources is on our wiki. On our wiki we've got an icon menu system here where you can find lesson plans for K-12, resources for the community college programs, our made sort of video resources, all of our presentations, publications and meetings information it's also reposted on this website on the section with the FLATEr on it. PD and summer camp with LCC are here, next.

A.S. Engineering Technology Degree

Marilyn Barger - One of the things we've just started doing in the last two years is taking a good solid look at the curriculum alignment with different industry credentials we've done this with the MSC finished the NIMS credentials and are now working on aligning our welding programs to AWS these are standard by standard cross walks and then summary of which credentials are attainable by different programs in the state at different levels at high school, post-secondary programs and also two-year degree programs in these different technical areas. So it's a great resource, we offer statewide articulations for industry credentials and having an alignment of exactly how they fit together it's kind of an important tool for the educators to use and validate their credits that they're giving, next.

FLATE: Florida Advanced Technological Education Center of Excellence

Marilyn Barger - And just a summary of our websites and now I'm going to pass it over to Kris Frady from the CA²VES center, next.

Center for Aviation and Automotive Technological Education Using Virtual E-Schools

Kris Frady - Good afternoon everybody I hope you're doing well, I am with the CA²VES center and as our name shows our focus is on automotive and aviation but beyond that we also focus in advanced manufacturing as well as engineering technologies as you'll see from some of the resources. We are a center from Clemson University, if you'll go to the next slide please.

Center for Aviation and Automotive Technological Education Using Virtual E-Schools

Kris Frady - You'll be able to see who some of our Co-PIs on this center are as well. So we partner with three other technical colleges here in South Carolina as well as the SC ATE Center which is another NSF ATE center and you can see from the highlighted pieces there in our mission that our primary research focus is to do research centered resources as well as creating digital learning tools to be used in technological education, next slide please.

EducateWorkforce

Kris Frady - This is an image of one of our biggest initiatives it educateworkforce.com so this will be one of the first resources that you want to make note of. On this site we have over ten courses, I want to say the last count it was around fifteen and these courses align with the manufacturing standards Skills Council and also aligns with some basic electricity, metrology, we have some soft skills materials up there and the first three modules of every course are broadly and widely available and they integrate all of the pieces that you see here. We have brief video lectures, we integrate some virtual reality we also

do what we are calling openText as well as having some IBook's, which I show you some images of later, the assessments that we have are interactive meaning the students get immediate feedback and their placed throughout the system in a way that chunks the information for them. So this is a novel approach because what we've done is we've used a platform that was created by MIT that was called EDX if you're familiar with EDX.org it's a great place to go and get resources for post-secondary particularly focusing on four year level education so we took this platform that they make broadly available and rebuilt it for technological education and so it follows through in a very self-guided way, s next slide please.

EducateWorkforce

Kris Frady – This next slide is going to give you a little bit of view under the hood. So this slide you see in the top left hand corner shows you what your course listings will look if you enroll in different courses as a student and then the other two images show you what it looks like when your inside a course, you have a brief video lecture you'll notice it's close to caption, we've also done a lot of things to ensure that there's a lot of accessibility for students regardless of disability whether that be a physical disability or whether that be a learning disability or really to cater to a variety of learning styles so we used Universal Design for Learning as we've designed a lot of this and those of you that are TAACCCT grantees we also are on three different rounds of TAACCCT and we do instructional design so I know you're familiar with universal design learning and from doing some of the curriculum that you have in part of that TAACCCT, but we found that it was the best practice and integrated into all of the curriculum that were now creating and sending out, ok next slide please.

Instructor Tools and Analytics

Kris Frady – These are resources for instructors so if you're an instructor and you want to apply these in the classroom we can create for you a course and you have inside the course your gradebook you also have different analytic so you can see which videos are being watched, which assessments are being done, how successful are students with those assessments, you can do things like batch enrolling and unrolling, so you have a lot of control over being able to see information about what your students are doing within this particular environment. Next slide please.

Exploring Advanced Manufacturing

Kris Frady – You just heard previously from Marilyn and this is an initiative that our two centers collaborated on to create a course called Exploring Advanced Manufacturing and it's a mini course. There are several models in here that are great for career exploration, recruitment and introductory course materials this course is broadly and widely available to any and all who want to use it and it's an introduction to advanced manufacturing and some of the different types of roles you can play as a technician in that particular environment and you'll notice one of the items there in the lower right corner is an interactive ePUB we have created a lot of iBooks and ePUBs that can be used on tablets, phones and multiple devices they do not have to be used in just the apple platform. So that's another really innovative and fun piece you can incorporate in with your students, next slide please.

Virtual Reality Scenarios & Tools

Kris Frady - Getting an image of some of the virtual reality that we've incorporated into the environment that's one of our primary focus and you can see it kind of moves through the manufacturing floor environment, immerses students, we have hand tools we have larger equipment, we have a scenario where they walk through a TAC safety infractions so a lot of materials are available to students to experience more authenticity in their learning next slide please.

iBooks and e Pubs

Kris Frady – This show you the suite of eBooks and iPubs that we've created or I should say iBooks and ePUBs. The top row you see the iBooks and those of course are just within the Apple platform the ePub our first one was the Exploring Advanced Manufacturing and this fall will be releasing another ePUB with the DOL Vets program that's focused on recruiting women veterans into advanced manufacturing fields and technology fields so we look forward to being able to share that. Next slide please.

Increasing Diversity and Quality of Advanced Manufacturing Pipeline

Kris Frady - Our last slide here is just a brief look at some other materials that we create that we're making available on our website we're about to roll out our new website so if you aren't able to get to it when you go and visit us today please keep us in mind and over the next month and as we come into the summer semester our new website is being released by the university and we will have some of these other recruitment and pathway initiative STEM type lessons that will be available as well on our website. And at this time I'd like to hand over the conversation to Beverly at CARCAM. Next slide please.

Industry Focused Education for Technical Careers

Beverly Hilderbrand – Thank you Kris, as she said I'm Beverly Hilderbrand, the Center Director and PI for CARCAM and our industry focus is on education for technical careers in particular for automated manufacturing and automotive careers is an excellent field of study and career opportunity. We partner with regional organizations such as these noted here on the slide, the Alabama Automotive Manufacturing Association, Alabama Technology Network, Alabama's Industrial Development Training Authority and the k-12 system and of course many manufacturing industries, next slide.

CARCAM Best Practice Guides

Beverly Hilderbrand - Here are some of the best practice guides that we have available on our website which is www.carcam.org as well as these are available on the ATE central website also. The first one on the left is a best practice for robotics and STEM camps each of our partner colleges host a summer camp for either teachers or counselors or middle school or high school students. This guide includes tips and templates for hosting a successful camp. The other one we have noted here in the middle is a partnership with FLATE we created a guide for curriculum review process, this outlines methods vetting and standardizing curriculum. And then the third one here is CGA or Curriculum Gap Analysis Guide, this is a curriculum survey model that was designed to provide a method to gain feedback from industry on specific skills knowledge and ability or SKA levels that are required for adequate knowledge to perform skills required for a multi skilled technician, next slide.

CARCAM Partner College Network

Beverly Hilderbrand - This shows our network of partner colleges here in Alabama they're located as you can see throughout the state and we have experienced faculty members at each one of these locations that are teaching courses in AC/DC, Programmable Logic Controllers, Robotics, Industrial Automation, etc. And you're welcome to utilize them as a resource and their contact information is noted on our CARCAM website. Next slide.

AMP it Up! Advanced Manufacturing Partnerships: Education and Industry Working Together to Develop Highly Skilled 21st Century Technicians

Beverly Hilderbrand - As you can see these are our goals we have the goals of working with workforce development and STEM learning. Highlighting career pathways for students and stackable credentialing and as well as professional development for incumbent workers and faculty members. We have numerous industry partners that we collaborate with to accomplish this and each of our colleges work

together within their regional industry areas to provide co-op and internship opportunities for our students, this usually requires a memorandum of agreement MOA between the college and the industry that outlines the specifics of just what is expected from each entity. We have found that industry considers the co-op, apprenticeship, internship program and excellent workforce pipeline because the participants understand the basic concepts of the process once they have actually seen what it's like in the workplace the college's value these programs because the students bring real-world knowledge to be shared in the classroom back to the faculty and their peers and this really piques their interest. The students are obtaining jobs through these programs, next slide.

Alabama Automotive Manufacturing Technology AS Degree

Beverly Hilderbrand - This outlines the AUT degree or Automotive Manufacturer degree for a multi-skilled Megatronics technician, this includes specialization tracks so that students can pursue the fields that they're most interested in, next slide.

Future Technologies Identified

Beverly Hilderbrand - These are the future technologies identified by the Alabama Department of Labor some statistics here this shows CARCAM focuses primarily on automotive manufacturing but as you can see the higher priority is for some of the skill work in CNC, robotics and these are some of the primary subjects that are required for a multi-skilled technician as well as in automotive as well as many other manufacturing areas and it does include see the 3d modeling, CAD, CAM, next slide please.

www.msamc.org

Beverly Hilderbrand - Here's a website that is a product of our department of labor grant we were involved are involved in a multistate manufacturing consortium or MSAMC and its comprised of the work of thirteen community colleges just in nine southeastern states as one of the TAACCCT grants. This website is really a great resource for online curriculum, problem-based objectives, regional Labor Statistics, additional other things, there is a video available also on the web sites for instructors with PPO's on integrated systems. This just has a lot to offer, I hope you'll make not of this website. Next slide. Backup one.

www.msamc.org

Beverly Hilderbrand - This is just an example of the detail that you can find on one of the PBL tabs on this website. This shows mechapracticums on specific topics such as mechanical drives and you can see this is really outlined well, next slide.

CARCAM

Beverly Hilderbrand – Again, I hope you'll utilize our website for information and possibly begin to follow us on Twitter or Facebook. Thank you and I wanna go ahead and turn it over to Jim.

Questions

James “Jim” Janisse - Thanks Beverly, at this point we do have time for a couple questions and first one we have is for Marilyn is FLATE still offering the toothpick factory? Can you explain that Marilyn?

Marilyn Barger – Sure, the audio is a little broken up for me, I hope everyone else's coming through clear. I heard the toothpick factory and I knew that was for me. It's a hands-on simulations for engaging students in small groups and with the teamwork skills and that little teams make custom toothpicks and there's some game cards like you would have on a board game there's not actually a board but they

work on actually making some custom toothpicks for specific orders. Oh yes it's still available on that wiki site and there's information there behind the icon that says toothpick factory.

James "Jim" Janisse - Thank you Marilyn the other question we have time for before our next break is this the whole topic of recruiting, I got this question through email a lot of good work goes into the centers and our manufacturing technician programs but there's always a challenge of recruiting, and how do you attract candidates to manufacturing industry, I guess that's a question I'll open up to either Kris or Beverly. What's your experience or how do you offer resources to help people with recruiting.

Beverly Hilderbrand - This is Beverly I'll jump in on that and say that we're involved with a lot of the regional career expos that take place here in the state we have a lot of those going on in coordination with industries or with the workforce development regions and a lot of times will focus on a particular age group say eighth graders most recently we had about four thousand eighth graders come through on a two-day event and they were shown all of the hands-on type options that were available through booth exhibits that gave them ideas as far as a lot of the opportunities out there for technical careers.

James "Jim" Janisse – Ok great.

Kris Frady – This is Kris I can add onto that with some of the things that we're doing, I mentioned the toolkit that we're making that going to be focused on women veteran one of our Co-PI Spartanburg Community College does summer camps, we do professional development with educators to try to emphasize to them to administrators, to guidance counselors to high school teachers and middle school even the importance of events manufacturing is a component of an economic development plan in your region and community so they really understand how to help advise students towards these two year degree programs and certificate programs really can added benefit to their community. We've created a digital lesson plan that actually goes with the Exploring Advanced Manufacturing that we would be most happy to share with anybody who has an interest here you want to follow up on that and then you saw there the career pathways map time image of that just gives them a brief over of things and then of course doing some different career fairs and different conference types of activities with educators and then we do have a research emphasis looking at why are students choosing this information or choosing these pathways. We're working right now with all of the manufacturing students in North Carolina and looking up why did they enroll in advanced manufacturing course in high school for a certificate hoping that will help us to understand more about recruitment into these programs so stay tuned we are happy to share those results once we publish those soon.

James "Jim" Janisse - Thank you so much Kris and Beverly great answers there, hopefully as the audience can see there is a lot of options and resources out there. We're about the halfway point and we're doing well, but with that were going to shift gears and go to Jeremy and we will take questions again at the end. So it's all yours Jeremy.

360 Manufacturing and Applied Engineering ATE Regional Center of Excellence

Jeremy Leffelman – Thank you Jim. Well good afternoon my name is Jeremy Leffelman, I'm the Director of 360 Manufacturing and Applied Engineering ATE Center of ATE Reginal Center of Excellence located at Bemidji, Minnesota or at Bemidji State University which is roughly an hour and a half away from the Canadian border. Next slide please.

360 Manufacturing and Applied Engineering ATE Regional Center of Excellence

Jeremy Leffelman – So a little bit about 360 we are an innovative education and industry collaboration to recruit, educate and train workers for dynamic careers in advanced manufacturing. Obviously at the regional center for ATE we do service outside of Minnesota, but within Minnesota specifically right now we have about 27,000 open jobs in areas like welding and machining and automation type careers. So we're really focused on filling the advanced manufacturing pipeline with qualified technicians. Next slide please.

360 Manufacturing and Applied Engineering ATE Regional Center of Excellence

Jeremy Leffelman – Our center consists of 15 different state colleges and universities and institutions with roughly 42% of MnSCU. We've been in existence since 2006 we're both state and federally funded. We started with NSF in 2009 with what was known as the eTECH project and we became an NSF ATE regional center in 2012. As you can see on the graphic to the left we have a pretty broad reach within the state of Minnesota, next slide please.

360 - eTECH

Jeremy Leffelman – The first thing I wanted to share with you today is what's known as 360 eTECH you can see the link at the bottom of the screen. What this is our online and hands-on manufacturing education program this services both adults as well high school students through one of our TAACCCT grants that we're a part of, there was actually a print reading simulation that can be used as a resource that has been implemented in some of our courses as well as state wide. So, it's a pretty good resource you can certainly contact me directly if you would like access to that. So 360 eTECH program is comprised of four certificates, we have a production technology certificate, automation, machining and then welding. And our production technologies certificate is aligned with the manufacturing skills standard council CPT certification, next slide please.

360 Career Success Skills

Jeremy Leffelman - Another resource that is available upon request via the link below we developed a combination of 26 online learning modules that really are about building teamwork, reliability, helping people be more affective listeners, improve their verbal communication skills, things like that. These 26 modules are 100% free to use if you click the link below we will send out a unique link to you and all that we ask that you let us know how you're using them if you are part of education manufacturing things like that and the purpose behind will it graduate a better employee, next slide please.

Dream It. Do It. Minnesota

Jeremy Leffelman – Our Dream It Do It Minnesota program we have various resources available one is known as an Adopt a School Guide many times manufacturers do not really have any idea how to get into contact with local schools whether that's kindergarten through 12th grade obviously that it's the future pipeline of employees for these manufacturers, so what we've developed through our Dream it Do it program is known as an adopt a school guide which really gives advice and best practices on how manufacturers best pair and partner with schools in their area. We have also developed a teacher's guide on manufacturing just provides lessons, activities, as well as videos included within each of these features guide is a DVD that highlights 26 different manufacturers within the state of Minnesota. It's a way to get people interested and kind of away from that perception of dark, dirty and dingy environment. We also have a youth outreach tool kit which has easy to use materials for both influencers as well as youth. The last thing I'll touch on as far as Dream It Do It is what's known as our game app this is available via iTunes as well as the android store I believe is what it's called, but this is a game app that's targeted to a middle school audience where kids can go in and help these manufacturers build

various pieces of equipment, you know what are the best manufacturing processes get a certain product produced, so it's really a good educational game and I encourage you to check that out and more information on that can be found on dreamitdoitmn.com. Next slide please.

Manufacturing Career Tool

Jeremy Leffelman - Finally we have in development what's known as the manufacturing career tool this is going to be an interactive career tool which will introduce you to manufacturing careers based on some focus group data that we have collected the focus group wanted to focus on a Day in the Life in manufacturing, so whether that's the good the bad, the stresses the positive aspects of manufacturing what really its manufacturing all about so within this career tool which we're developing we have company profiles, we've got videos, were also having more of fun quizzes its nothing more than to technical or professional so to speak, it's more of a fun quiz to help align people to certain careers. So the ages of this career tool we're looking at between fourteen and twenty years old so if you like more information about this in the future I can certainly provide that as well. That is all I have and I'm passing the presentation to Monica Pfarr with Weld-Ed.

Weld-Ed

Monica Pfarr –Great, well thank you very much I appreciate that. Good afternoon my name is Monica Pfarr and I'm with the National Center for welding education and training or Weld- Ed, next slide please.

Weld-Ed

Monica Pfarr - You'll see here that Weld-Ed's focus and our mission is really on increasing the quality and quantity of welding and materials joining technicians to meet industry demand and we have several goals that we utilize to meet our mission, next slide please.

Partners and Affiliates

Monica Pfarr – Weld-Ed is a truly a partnership between industry and education as you'll see here the primary industry partner for Weld-Ed is the American Welding Society we also have eight community colleges and two universities who serve as our regional centers these ten educational institutions are the individuals who are responsible for carrying out the goals and objectives of our center in addition to that we have an affiliate network of over 80 education and industry organizations that participate in our offerings utilize our resources and take advantage of the other programs that we offer, next slide please.

National Occupational Overview Welder Occupations

Monica Pfarr – Weld-Ed has truly become the primary resource for employment projection and other workforce data in the welding industry we really are the voice of data for the industry as this chart depicts these are seven standard occupational codes in which welding is a primary skill and Weld-Ed can gather information or as you can see on this slide at the bottom right hand corner the kind of information that we can gather shows for example that there are four hundred thousand positions that will be necessary to fill by the year 2025 in just these standard occupation these seven standard occupational codes and we do collect data for other occupations in our industry such as welding technicians, welding inspectors and welding engineers, next slide please.

Welding Programs Student Enrollment/Completion Data

Monica Pfarr – Weld-Ed conducts an annual survey of 500 welding schools and we collect both secondary and postsecondary and we collect a host of information including the number of students that are enrolled and completing welding programs and you can see here we've been tracking data now

for six years and we're showing a pretty steady increase in not only the enrollment but also in the completion rates of students with in the secondary and postsecondary, next slide please.

Faculty Professional Development

Monica Pfarr - Another goal of Weld-Ed is faculty professional development we have seven modules that you can see listed here that we offer for faculty in the welding field, we offer each of these modules during the summer there each a one-week training both some lecture as well as a lot of hands-on time we offer these modules at our partner institutions around the country the schedule and registration link is available there at weld-ed.org new this summer is module number seven non-destructive testing it's going to be offered at Chattanooga State Community College. So we're excited to offer yet another faculty professional development module, next slide please.

Scholarships

Monica Pfarr - In partnership with the American Welding Society we are very focused on scholarships for students pursuing welding education as you can see here's the American Welding Society in last year awarded over \$700,000 in scholarships to students at community colleges at universities students pursuing welding, welding technology and welding engineering so if you are at an institution that has a welding program I would really recommend you share this information with their students the online application is available at AWS.org, next slide please.

Free at CareersInWelding.com

Monica Pfarr – Student recruitment is another significant focus for our center we have a host of resources that are available for free on our website CareersInWelding.com we have print resources we have DVDs we even have the Iron Man comic book I encourage you once again if you have a welding program and are looking to recruit students please go to the website you can order whatever quantity you need and we will ship those to you for free, next slide please.

Careers in Welding Mobile Exhibit

Monica Pfarr - Also along the lines of student recruitment we have a 53 foot mobile exhibit pictured in the top left corner there. This mobile welding trailer travels the nation on an 18 week annual tour, we've been on the road for four years and we average about 25,000 visitors each year. We take the trailer to very large events state fairs, SkillsUSA national convention, the FFA National Conference, a lot of farm shows and Ag shows and we really focus on trying to educate the general public about the exciting and highly technical careers that are available within the welding industry there's 5 virtual-reality welding simulators on board as well as a lot of other hands-on exhibits. As you can see there if you want to view the tour scheduled for this year you can see that at explorewelding.com let me just say that we do need volunteers to help us staff the exhibit at all of the shows that we attend we have a lot of high school students, high school faculty, community college students and faculty who always volunteer and they make excellent volunteers your welcome to share information about your welding program because we want to show local programs when we're out at all of these events. So once again explorewelding.com if you're interested in where we're going to be or in helping us out at one of our upcoming events, next slide. Now it's time for me to hand off the presentation to Karen Wosczyzna-Birch at RCNGMC

RCNGM

James "Jim" Janisse - We're not we're still confirming some technical things, if Karen is not able to join at this moment, Marilyn will do the introduction hopefully Karen will join in. At this point Marilyn if you can go ahead, that would be great.

Marilyn Barger – Ok, next.

COT-RCNGM Goals: Regional Center in New England

Marilyn Barger – So if Karen comes on I'll be glad to turn it over to her, we're having trouble getting her connected right now. So the regional center for next generation manufacturing has four goals they are centered in Connecticut but they serve the New England states for manufacturing education at community colleges. Their first goal might sound we're starting to sound like a broken record we have student recruitment and persistence, their next goal professional development, goal three curriculum development and last but not least dissemination and regional collaboration amongst its partners, next please.

Who We Are:

Marilyn Barger – Well so who are we? The next generation center you'll see that the whole K12, k20 area, there's middle school segment with a comprehensive high schools their inner-city school after school programs at the secondary level they have 17 technical high schools and also work with the comprehensive high school, that's a term we don't use in Florida but I guess that a regular high school for us and then provide them with career and tech education pathways into manufacturing. The seamless pathways include a variety of stackable credentials they work with all of these secondary programs work directly with the College of Technology Partners which is coordinated group through the state system of the 12 community colleges that offer technology focus programs they are kind of regrouped as the COT. They also work with 4 of the sorry 8 of the four-year universities in the northeast and have regional collaborations with some recognizable New England states Maine, Massachusetts, Rhode Island, New Hampshire, and Vermont, next slide please.

Teachers Guide with Curriculum and DVD

James "Jim" Janisse – Has Karen been able to join yet?

Marilyn Barger - I don't hear her they were trying to open (inaudible) didn't work. Ok so, in the recruitment area they've developed two really powerful recruitment tools one is Manufacture Your Future they are now in their second edition of this it's a nice DVD about manufacturing in the northeast along with a companion workbook for teacher's, career coaches and guidance counselors and even industry can use these to promote manufacturing careers when they go out into the community and into schools. And then the second one much more focused on recruiting women this is probably a topic we all struggle with but the similar idea of the package a nice DVD focused on women working in the manufacturing field along with a companion workbook with lesson plans and recruitment materials and exercises for teachers to use with their students and other educators to make them more aware of what they can do to encourage girls and young women into manufacturing pathways as well as you know what the obstacles are, what keeps them or shy's them away from these types of career paths, alright next slide.

Student Expos/Symposiums: Model One

Marilyn Barger - One of the things that the regional center has done, the next generation center has done quite a lot of it is homed student expos/symposiums they have a couple of models this first one is a model where they recreate a factory floor in a number of different stops along a one way path that the students flow through and the pathway is the whole manufacturing cycle and they actually make something during this expo. So they start with the design pods as they call them go through a couple of processes and end up with some level do dad I'm sure that changes can. You can see the different stops that they might have so it's kind of a unique approach to an expo, industry comes in and sets up those pods and delivers the message about manufacturing careers to those students come through from the high schools and probably middle schools there. So there are some more details on this slide but I don't

want muck it up too much so I'll stop there, but it's a great approach I have actually been to one or two of those events and they are quite exciting high energy for the for the kids going to there, they love seeing things being made.

Model Two: Reginal Symposium Models at Host Community Colleges

Marilyn Barger - The second model is a little bit more of a symposium model that actually happens not in an expo location but in at a host community college that brings us the secondary students right to the college which is always a good opportunity to get them hooked on our programs. So they do in this particular the manufacturing process format is the first one and this is a sequential presentations of how a product is made which is similar to that Expo in a different venue. It's surrounded by a company exhibits and demonstrations they'll do a tour of the college laboratories for manufacturing and as defined it's kind of structured and scheduled event. The next alternative format is 40 minute workshop presentations concurrently sort of like a conference, company exhibits and demonstrations also so this is more like a conference that we educators or administrators might attend and then some general sessions where everyone meets together for talks and discussions, next.

Faculty- Industry Externships

Marilyn Barger -On the professional development under that goal 2 they do some unique things at the next generation center, they have a faculty have a great program for faculty industry externships every summer where the faculty can go for four weeks into a company, they are paid a stipend, they are paid half of it in the summer and then the other half when they develop a curriculum piece that aligns to the work they did at their externships. I know they've done this gosh ever since they started the center was first funded, and have a great wealth of resources that have been developed from the teachers that have participated besides having the teachers have a hands-on experience right in a manufacturing facility totally different for a lot of educators that come out of school and go right out of college and go right into teaching. They offer best practice guide on their website you can access that for this type of the externship program, next.

High School Counselor Workshops

Marilyn Barger - Another activity that they do for professional development is their counselor workshops they do these at community colleges is again talked a lot about what the careers are provide the DVDs and that kind of things very specifically for counselors and career guidance professionals, next.

Other Resources

Marilyn Barger - And a little bit of other resources, a little bit on the outreach side they do a teacher's one-week dissemination workshop every summer in the past this was even held at the coast guard academy, additional workshops scanning down to the bold number two are with some of their partners the College of Central Maine for example they have excellent machining program and they've partnered to help provide that professional development with those other opportunities in New England and again in the outreach area they took on may be the first center that took on all by themselves putting on a Maker Faire last October and they'll be doing that again this October, it was quite successfully with a lot of attendees and students information about careers and jobs was available there as well as education programs that the different community colleges in Connecticut, alright next.

Questions

Marilyn Barger – I think this is back to Jim.

James “Jim” Janisse – Yes of course thank you Marilyn and thank you Karen for putting all that good information together. We’re going to try to get you out of here on the hour so there were a couple of questions we’ll follow up with later that are related to create a common. We want to give Marilyn the last five minutes here to share some upcoming events, share all contact information for your presenters and we’ll come back for a very quick survey so with that I’ll turn it back to you Marilyn.

Marilyn Barger – Alright, thanks Jim. I’m glad you’re watching the time I wasn't it so much, next.

Join Us – All Webinars 3 pm Eastern

Marilyn Barger – So as I said earlier we do the CCTA grant project is providing webinars once a month at this particular time I think that the N is cut off under my picture there but its three PM eastern time on usually the third Thursday of the month. The next one on May 25th is Meeting Requirements, Exceeding Expectations: Understanding the Role of Evaluation in Federal Grants. An important topic Lori Wingate from EvaluATE center will be presenting, next month so I hope many of you will join us.

Join us in Pittsburgh, PA

Marilyn Barger – And of course hope you all know about HI-TEC but if you don’t this is a great conference that the centers produced every year this summer it will be at Pittsburgh, with our host the Community College of Allegheny County July 25th – 28th check it out on our website if you aren’t registered already. Next.

Register for HI-TEC and TAACCCT Convening

Marilyn Barger - In conjunction with HI-TEC on Friday following HI-TEC, HI-TEC is Monday through Thursday and that Friday, we've last year we held a convening for the TAACCCT to provide more technical assistance there, we’ll be doing that again this year, so that’s Friday, July 29th it requires a separate registration you'll see the link on this slide that's on that HI-TEC website but there is no charge for this particular convening from the CCTA for the HI-TEC excuse me for the TAACCCT grant of course it’s good for all grantees, all people who are working in consortium industry, consortiums for workforce. I encourage anyone planning on attending HI-TEC to also enroll in this convening on Friday, next.

Q&A and Contacts

Marilyn Barger – So quick slide to aggregate all of our contact information, you can check out later in the recorded slides, next.

Webinar Survey

Marilyn Barger - And there we are at the webinar summary, so I think we're right just about on time. I'd like to thank my co-presenters today since I have like one minute to do that and letting me beat one them continuously about time time time for six of us to present on one webinar. Thanks to Jeremy, Monica, Kris, Beverly, let’s see I missed somebody Karen, for pulling together such a nice presentation and with that please take a moment to help us improve the CCTA webinar series by answering the questions on this webinar survey that is going to pop-up momentarily I belief and thank you Jim for hosting us.