



ATECENTERS

Highlights of Advanced Manufacturing and Engineering Technology Resources from ATE Centers

April 28, 2016

Webinar will begin at 3pm ET

[CLICK HERE TO WATCH THE WEBINAR RECORDING](#)



Webinar Details

- For this webinar you will be in listen only mode using your computer or phone
- Please ask questions via the question window
- This webinar is being recorded – you will be sent a recording link





Brought To You By

CCTA | CENTERS COLLABORATIVE FOR TECHNICAL ASSISTANCE

With Additional Support by the ATE
Collaborative Impact Project

ATECENTERS

Disclaimer: This material is based upon work supported by the National Science Foundation under Grants # 1205077 and # 1261893. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



The CCTA IS Led By



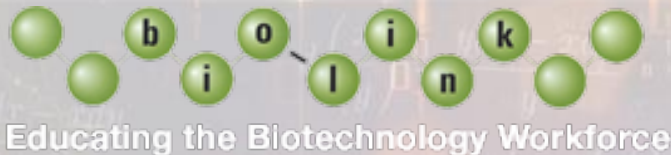
National Center for Convergence Technology (CTC)
based at Collin College in Frisco, TX (lead)



South Carolina ATE National Resource Center (SCATE)
based at Florence Darlington Technical College in Florence, SC



Florida ATE Center (FLATE)
based at Hillsborough Community College in Tampa, FL



Bio-Link Next Generation National ATE Center for Biotechnology and Life Sciences (Bio-Link)
based at City College of San Francisco in San Francisco, CA



Networks Resource Center
based at the Maricopa Community College District in Phoenix, AZ

CCTA Purpose

- Respond to a request from the Department of Labor (DOL) to the NSF to have ATE Centers provide technical assistance services to DOL TAACCCT grantees
 - Success coaching
 - In-person convenings
 - Knowledge management /best practices
 - Peer-to-peer learning

CCTA Activities are Relevant for

- Department of Labor grants
- National Science Foundation Projects and Centers
- Workforce-oriented programs of all kinds

Deliverables

- Topical Webinars and Teleconferences On
 - Existing and new solutions
 - Live/recorded with attendee Q&A
 - Archived on www.atecentral.net
- Other online media including videos and transcripts

Deliverables Continued

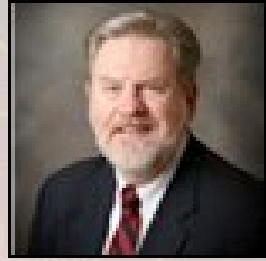
- Invitations to regional discipline-specific conferences
- Identify and document best practices
- Host convenings



Poll #1: Your Affiliation

- A. I am involved with an NSF grant
- B. I am involved with a TAACCCT grant
- C. Both
- D. Neither

Overview



Looking for manufacturing education resources? All NSF ATE Centers develop a wealth of best and promising practices, skills alignments, curriculum, and other resources that support 2-year academic technical programs. Learn more about 6 Manufacturing focused centers, their resources and how best to access them in this fast paced lightning round type webinar.



Learning Objectives

At the end of this webinar, participants will:

1. Know how to access manufacturing-related resources from NSF ATE Centers
2. Discover and locate a variety of evidence-based research tools available for integration into technological education curricula



PRESENTERS



James Janisse
Moderator
Business & Industry
Faculty, University of
Wisconsin-Stout



Marilyn Barger
P I & Executive Director
Florida Advanced
Technological Education
Center (FLATE)



Kris Frady
Director of Operations
CA2VES



Beverly Hilderbrand
Principal Investigator (PI)
CARCAM



Jeremy Leffelman
Principal Investigator (PI)
360 Center

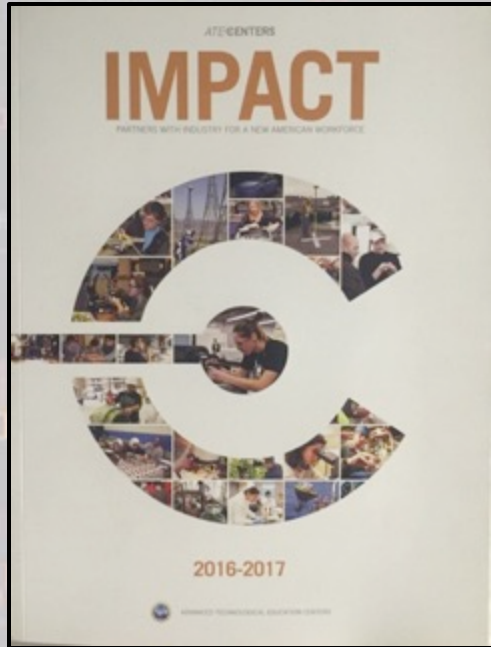


Monica Pfarr
Principal Investigator (PI)
WELD-ED



Karen Wosczyzna-Birch
Principal Investigator (PI)
RCNGM

NSF ATE Program & ATE Centers



Partners with Industry for the NEXT American Workforce

www.atecenters.org

NSF ATE Centers



Advanced Manufacturing Technologies

Agricultural & Biological Technologies

Energy & Environmental Technologies

Engineering Technologies

Information Technologies

Learning, Evaluation & Research

Micro & Nano Technologies

Security Technologies

NSF ATE Advanced Manufacturing Centers and Project



Florida Advanced Technological Education Center of Excellence



FLATE will be Florida's 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.

Impact locally. Lead nationally.



A.S. Engineering Technology Degree Pathways to Manufacturing & Advanced Technology Careers



★ PSC
2008

★ TCC
2010

★ 2003, 2010
FSCJ

★ GCCC
1997, 2003, 2014

★ FGC
2011

★ DSC
2000, 2005, 2011

★ CCF
2007

★ SSC
2008

★ LSSC
2016

★ VC
1999, 2006, 2015

★ BCC
2007

★ HCC
2005, 2013

★ UCF
1996

★ SPC
2009, 2013

★ PSC
2009, 2014

★ SCF-M
1998, 2012

★ IRSC
1998, 2006, 2012

★ 2004
PBSC

★ 2015
FKCC

★ 2001

Meeting locations since 1996

FORUM on Engineering Technology



Learn. Share. Grow. Innovate.



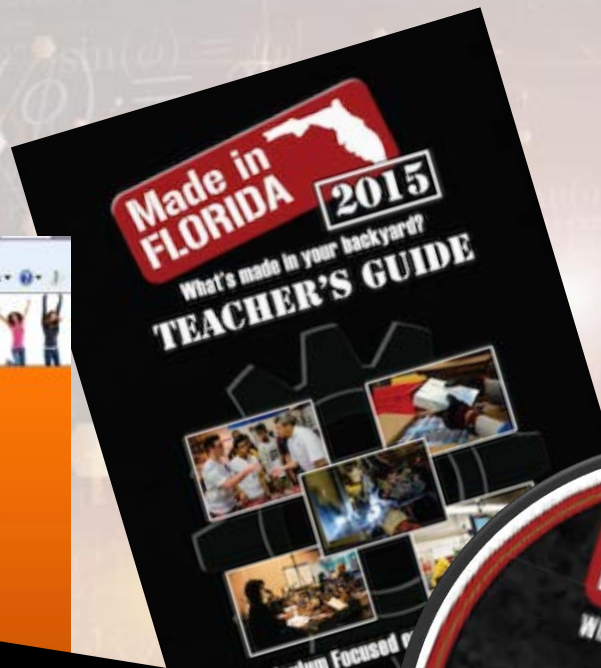
FLATE GUIDES

BEST PRACTICE



www.fl-ate.org/Best_Practices/

Made in FLORIDA





www.madeinflorida.org

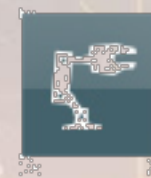
FLATE's wiki

...full of great FREE RESOURCES for you!

www.flate.pbwiki.com

<p>Made in Florida STEM Lesson Plans</p>  <p>For Elementary, Middle & High School Educators</p>	<p>Career Education Resources</p> 	<p>Modules for Advanced Technological Education</p> 	<p>The Toothpick Factory</p>  <p>A Simulating Game for Soft Skills</p>	<p>Student Activity Sheets</p> 
<p>Industry Tour Resources</p>  <p>Find pre-tour lessons, post-toursurveys and many resources for all your <i>Made in Florida</i> tours!</p>	<p>Recruiting all GIRLS who love S.T.E.M.!</p>  <p>Resources for GIRLS in STEM!</p>	<p>FLATE Presentations, Publications, Meetings & Webinars</p>  <p>FORUM an Engineering Technology</p> <p>WAG</p>	<p>Professional Development Opportunities for Teachers</p>  <p>NEW! Summer Energy Camp for Teachers</p>	<p>Camp Resources</p>  <p>STEM Summer Camps</p> <p>Robotics & Energy Camp Resources for everyone.</p>
<p>Read FLATE's Monthly Newsletter!</p> 		<p>FLDOE Career Resources</p> <p><u>Florida's new education and career planning system!</u></p>  <p>FLORIDA DEPARTMENT OF EDUCATION fldoe.org</p>		

A.S. Engineering Technology Degree *Manufacturing & Advanced Technologies*



Credential Alignment & Articulations High School, Post Secondary Technical, A.S. levels

CNC Machining

last edited by MARKYN BARGER 2 weeks ago

Page history

This page houses links to the new 2015 Florida Machining Technology Curriculum Frameworks for High School and PSAV hosted on the FDOE website. It also hosts the alignment and crosswalk of the Curriculum Framework standards and benchmarks to the skills in NIMS Machining Level 1 & Level 2 credentials.



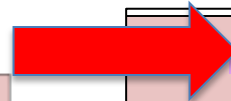
This image cannot currently be displayed.



[Link to FDOE Manufacturing cluster home page](#)

****NOTES to Educators and Users of the Alignments and Crosswalk Documents**

FLORIDA SECONDARY LEVEL ALIGNMENTS/CROSSWALKS	FLORIDA POST SECONDARY LEVEL ALIGNMENTS/CROSSWALKS
Link to current FDOE Secondary Machining Technology Framework Secondary Machining Technology Framework alignment and crosswalk to NIMS credentials Secondary "High Level" Machining Tech-NIMS Alignment (alignment summary)	Link to current FDOE Post Secondary Machining Technology Framework Post Secondary Machining Technology Framework alignment and crosswalk to NIMS credentials Post Secondary "High Level" Machining Tech-NIMS Alignment (alignment summary)
FLORIDA A.S. LEVEL ALIGNMENTS/CROSSWALKS	
Link to current FDOE AS ET Degree Frameworks (w/ Mechanical Fabrication & Design specialization) ET Degree Mechanical Fabrication and Design Specialization alignment and crosswalk to NIMS credentials Links to current FDOE Frameworks for College Credit Certificates (CCCs) under Mechanical Fabrication and Design Specialization: CNC Machinist / Fabricator (CCC - 0648051002) CNC Machinist Operator / Programmer (CCC - 0615000015) Mechanical Designer and Programmer (CCC - 0615080503) CCC-NIMS alignment files: CNC Machinist Operator CCC alignment and crosswalk to NIMS credentials CNC Machinist-Fabricator CCC alignment and crosswalk to NIMS credentials Mechanical Designer and Programmer CCC alignment and crosswalk to NIMS credentials Florida AS ET Degree "High Level" Alignment (alignment summary)	
FLORIDA CAPE FUNDING LISTS and STATEWIDE ARTICULATIONS FDOE Website for CAPE Certification Lists (secondary and post-secondary) and statewide articulations	



FLORIDA POST SECONDARY LEVEL ALIGNMENTS/CROSSWALKS

[Link to current FLDOE Post Secondary Machining Technology Framework](#)

[Post Secondary Machining Technology Framework alignment and crosswalk to NIMS credentials](#)

[Post Secondary "High Level" Machining Tech-NIMS Alignment \(alignment summary\)](#)



FLATE: Florida Advanced Technological Education Center of Excellence



www.fl-ate.org

www.madeinflorida.org

www.flate.pbwiki.com

www.flate-mif.blogspot.com



CA²VES



Center For Aviation And Automotive Technological Education Using Virtual E-Schools

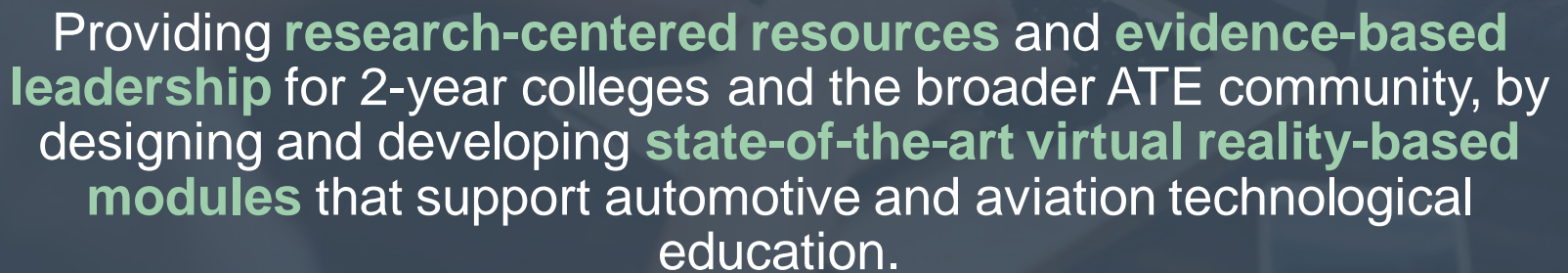
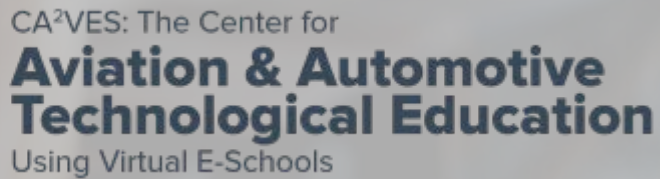


CA²VES: The Center for

**Aviation & Automotive
Technological Education**

Using Virtual E-Schools



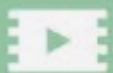


SPARTANBURG
COMMUNITY
COLLEGE



EducateWorkforce

A resource for technical colleges,
and their students.



Video Lectures



**Virtual
Reality**



**Open Texts
& ePUBs**



**Interactive
Assessments**



**A Novel
Approach**



**Industry
Backed**

CURRENT COURSES



Final Control Elements

AMTEC - AMT1064
Started - Jan 04, 2016

View Course

Want to change your account settings? Click the arrow next to your username above.



Manufacturing Processes

Clemson - ME3120
Started - Jan 06, 2016

View Course



Fundamentals of Manufacturing

Clemson - ME2220
Started - Jan 06, 2016

View Course



Exploring Advanced Manufacturing

CUOWD - EAM101
Started - Jan 02, 2019



Workforce Fundamentals

CUOWD - WF111
Started - Apr 17, 2015



Manufacturing

CUOWD - MAN109
Started - Jan 01, 2020

Overview

1. Reading Comprehension

2. Locating Information

Introduction

2.1 Reading for Information Activity

2.2 Locating Information in Visual Representations of Data Activity

2.3 Charts Activity

2.4 Diagrams Activity

2.5 Maps Activity

2.6 Graphs Activity

2.7 Use of Materials Activity

2.8 Blueprints Activity

Summary

Assessment

Module Performance

3. Critical Thinking / Analysis Skills

4. Basic Math

5. Mathematical Applications

6. Introduction to Computing

7. Computer Application and Skills - Word

8. Computer Application and Skills - PowerPoint

Locating Information in Visual Representations of Data

OBJECTIVES

After completing this lesson, the learner will be able to:

- Explain the process for locating information on visual representations of data

Please visit the [eBook](#) for more information.



In addition to extracting information from documents, you may find yourself having to interpret charts, graphs and other visual representations of data in order to identify important information. These tasks are more complex and taking the information you need when you are overwhelmed with data can be a difficult and stressful task.

SUMMARY

- The process for locating information on an image involves identifying the type of visual display, reviewing the display information, determining the location of the data, reading the information, and then using the data to make a decision.

Introduction



If you are interested in a career in manufacturing, the next step is to determine what kind of career you may want to pursue. It takes a variety of individuals with different skills and responsibilities to keep a manufacturing facility running. Each manufacturing job can be categorized into six main career clusters: production, maintenance, quality assurance, logistics, process development, and safety and health. In each career cluster, there is a wide variety of jobs at multiple education levels to fit your career goals.

Whether you have a high school equivalent with professional certifications or a college degree, there are great career opportunities available. This section will give you a brief introduction to each career cluster, the types of job opportunities associated with each cluster, and the education needed to be competitive for particular jobs.

GETTING STARTED

Each of the buttons below contains a link to a dedicated page for that career cluster. The career cluster name has been abbreviated here for simplicity, but will reflect the full name on the linked page. To help you navigate to the career clusters that interest you, these buttons will be available at the bottom of each cluster page. The [Home](#) button will return you to this page and the [End](#) button take you to the [Module Summary](#).

During your journey through this course, you will find many opportunities to learn more about the manufacturing industry.



EducateWorkforce

Instructor Dashboard

VIEW COURSE IN STUDIO

To gain insights into student enrollment and participation visit EducateWorkforce Insights, our new course analytics product.

COURSE INFO MEMBERSHIP STUDENT ADMIN ANALYTICS

STUDENT GRADEBOOK

Click here to view the gradebook for enrolled students. This feature is only visible to courses with a small number of total enrolled students.

View Gradebook - Pre-computed grades available for Mar 15, 2016 at 22:58 EST

Recomputation of course grades will occur daily at the following times: 04:00:00 AM | 07:00:00 PM (EST)

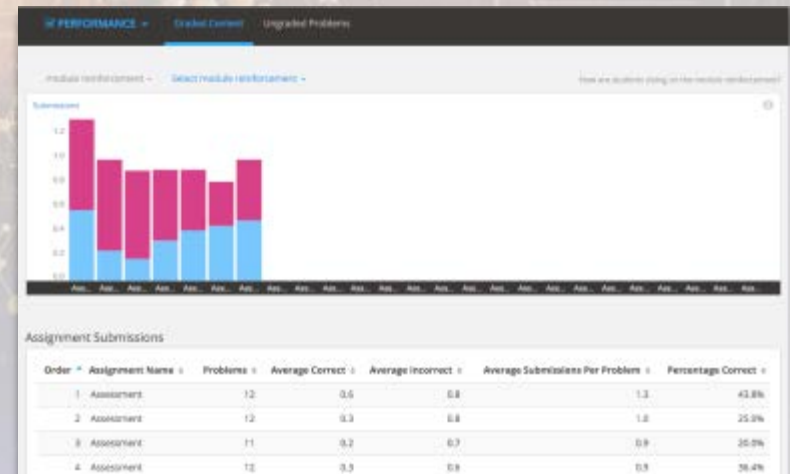
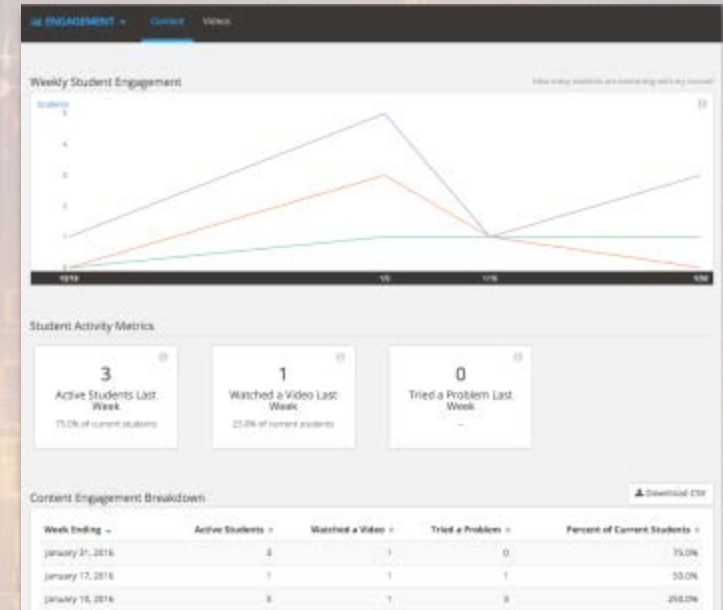
Gradebook

Current as of: Mar 15, 2016 at 22:58 EST

Recomputation of course grades will occur daily at the following times: 04:00:00 AM | 07:00:00 PM (EST)

		Module 1				Module 2			
		1.1 Defining Manufacturing	1.2 Production Systems	2.1 Physical Properties	2.2 Chemical Properties	2.3 Mechanical Properties	2.4 Manufacturing Properties	2.5 C	No
Username	Full Name	Activity (pts: 13)	Activity (pts: 7)	Module Reinforcement (pts: 13)	Activity (pts: 4)	Activity (pts: 7)	Activity (pts: 3)	Activity (pts: 4)	Act
		15	7	5	4	7	3	3	
		15	7	4	4	7	3	3	
		15	7	4	4	7	3	3	
		15	7	4	4	7	3	3	
		15	7	4	4	7	3	3	
		15	7	4	4	7	3	3	
		15	7	4	4	7	3	3	
		15	7	4	4	7	3	3	
		15	7	4	4	7	3	3	

Export Grades



Instructor Tools & Analytics





- Career exploration
- Recruitment
- Introductory course materials

About the course

Exploring Advanced Manufacturing is designed to expose students to career opportunities and the exciting advances in today's modern field of advanced manufacturing.

How to register

- ▶ Go to **EducateWorkforce.com**
- ▶ Select **"Courses"** menu and click on the Exploring Advanced Manufacturing course image (pictured to the right).
- ▶ Click **"Register for EAM101"**
- ▶ Follow the on-screen instructions to create an account or login to an existing account.

What you will get

6 Modules

26 Videos

4 Assessments

1 Virtual Reality Simulation

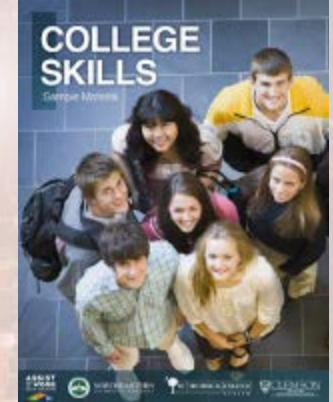
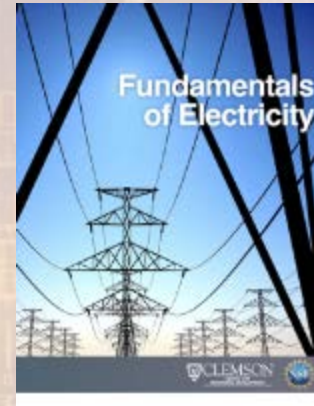
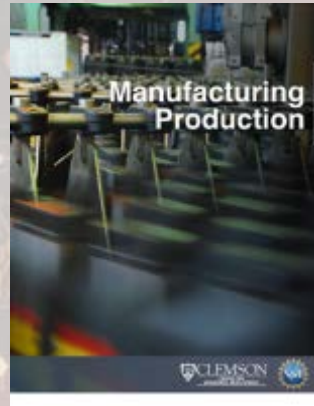
1 Interactive EPUB



Virtual Reality Scenarios & Tools

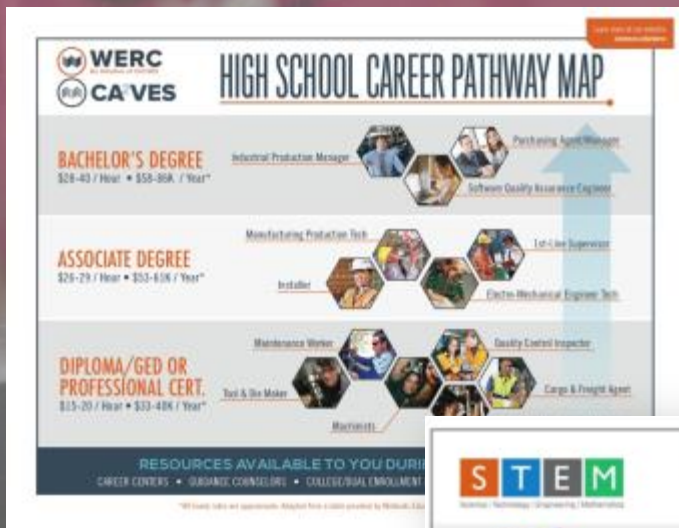


iBooks and ePUBs



Compatible with:





STEM
 Science • Technology • Engineering • Mathematics

Sharing South Carolina STEM Related Activities

Get involved!
 Discover great activities in STEM happening near you.

- Day Camps
- Special Events
- Options for All Ages
- Free and Paid Activities

Find Activities
 Zip Code: [input]
 All Activities [dropdown]
 Search Activities

Marketing Heading One
 Your marketing text in this space. This is where a small sentence or paragraph text might be placed. Your marketing text in this space.

Second Marketing Heading
 Your marketing text in this space. This is where a small sentence or paragraph text might be placed. Your marketing text in this space.

© Copyright 2012 STEM Science Technology Engineering Mathematics



Increasing Diversity and Quality of the Advanced Manufacturing Pipeline



INDUSTRY FOCUSED EDUCATION FOR TECHNICAL CAREERS

Beverly Hilderbrand, Director/PI
Gadsden State Community College

www.carcam.org

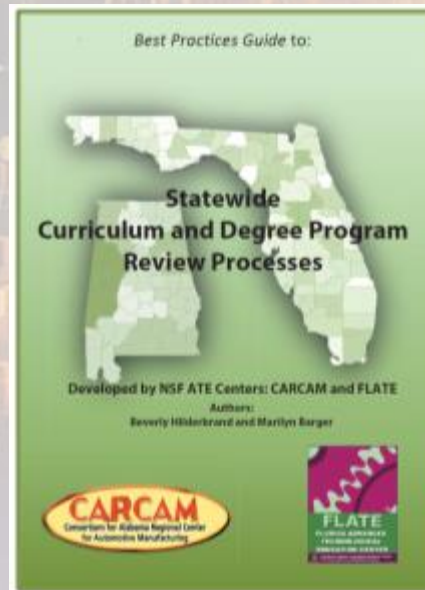


CARCAM BEST PRACTICE GUIDES

STEM/Robotics Camp Best Practices Handbook 2016



Curriculum Review Process Guide

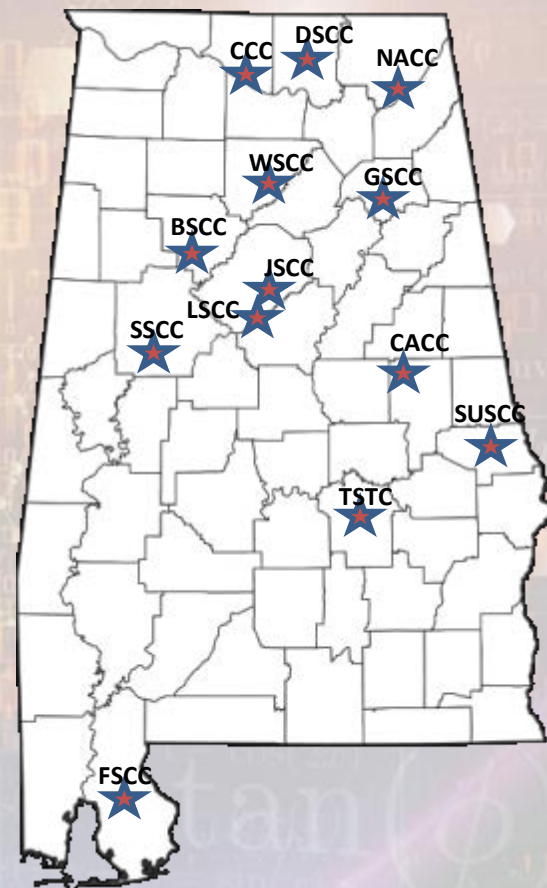


CGA Best Practice Guide



CARCAM PARTNER COLLEGE NETWORK

- Bevill State Community College
- Calhoun Community College
- Central Alabama Community College
- Drake State Community & Technical College
- Faulkner State Community College
- Gadsden State Community College
- Jefferson State Community College
- Lawson State Community College
- Northeast Alabama Community College
- Shelton State Community College
- Southern Union State Community College
- Trenholm State Community College
- Wallace State Community College - Hanceville



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

Goals:

- 1) *Workforce development and STEM learning*
- 2) *Career pathway*
- 3) *Stackable credentialing*
- 4) *Professional development*



Alabama Automotive Manufacturing Technology AS Degree

I. General Education

English/Speech

Math

Humanities/Ethics

22 credit hours

Science

Social Science

Microcomputer Applications

II. AUT Core

Automotive Concepts

Lean Mfg./Safety

Robotics

21 credit hours

Electronics/AC/DC

Blue Print Reading

Programmable Logic Controllers (PLC)

III. Specialization Tracks

Drafting

Electronics

Industrial Automation

21-33 credit hours

Machining

Welding

Warehouse Logistics*

Total 64 – 76 hours

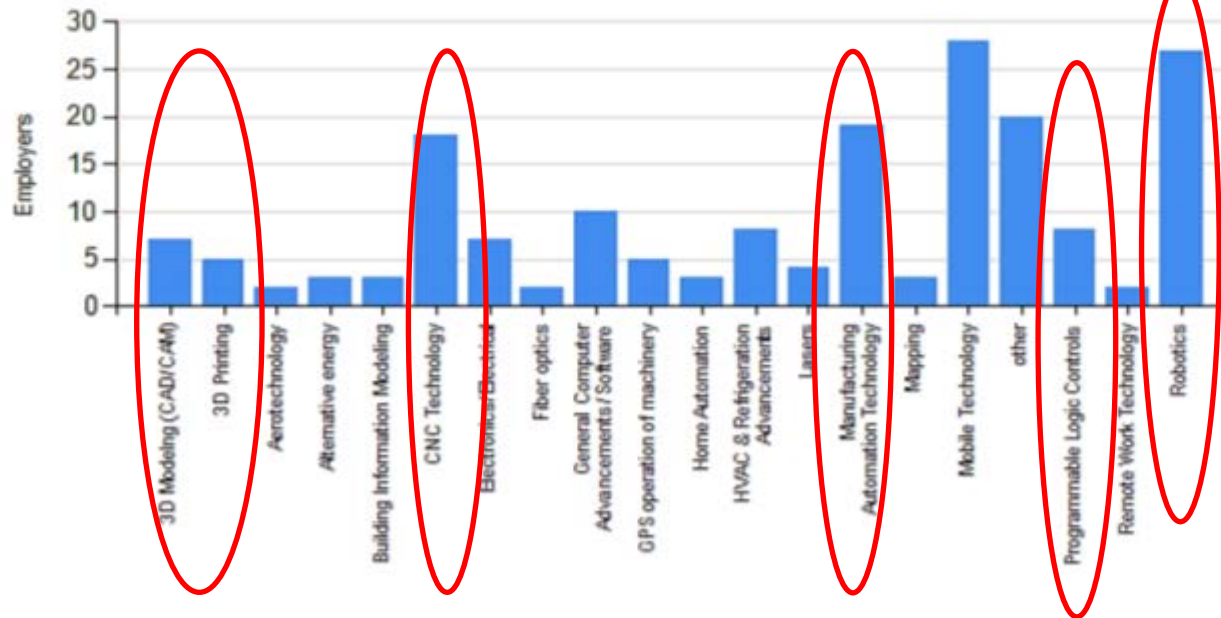
* New

FUTURE TECHNOLOGIES IDENTIFIED

Future Technologies Identified by Employers
Industry: All Industries - Area: All Areas



Alabama Department of Labor



www.msamc.org



The screenshot shows the homepage of the M-S AMC website. At the top, the navigation bar includes the M-S AMC logo, the tagline "NATIONAL INNOVATION. LOCAL IMPLEMENTATION.", and links for "Log-in", "Office 365", and "SharePoint". Below this, a secondary navigation bar contains links for "Home", "About", "Resources", "Partners", "News", "Insights", "A Look Ahead", "Media", "Contact", and a "SEARCH" button. The main content area is dominated by a large banner image showing a group of young women working at a long table in a manufacturing or workshop environment, assembling white plastic components. Overlaid on the bottom left of this image is the text "GIRLS EMPLOYED IN MANUFACTURING" in large red letters, and "GSCC introduces students to manufacturing" in smaller white letters below it. To the right of the banner image, there is a vertical sidebar with four blue boxes, each containing a yellow title and a brief description: "DASHBOARD", "PBO PERFORMANCE-BASED OBJECTIVES", "PBL PROJECT-BASED LEARNING", and "MEI MANUFACTURING EDUCATION INSTITUTE".

M-S AMC

NATIONAL INNOVATION. LOCAL IMPLEMENTATION.

Log-in Office 365 SharePoint

Home About Resources Partners News Insights A Look Ahead Media Contact SEARCH

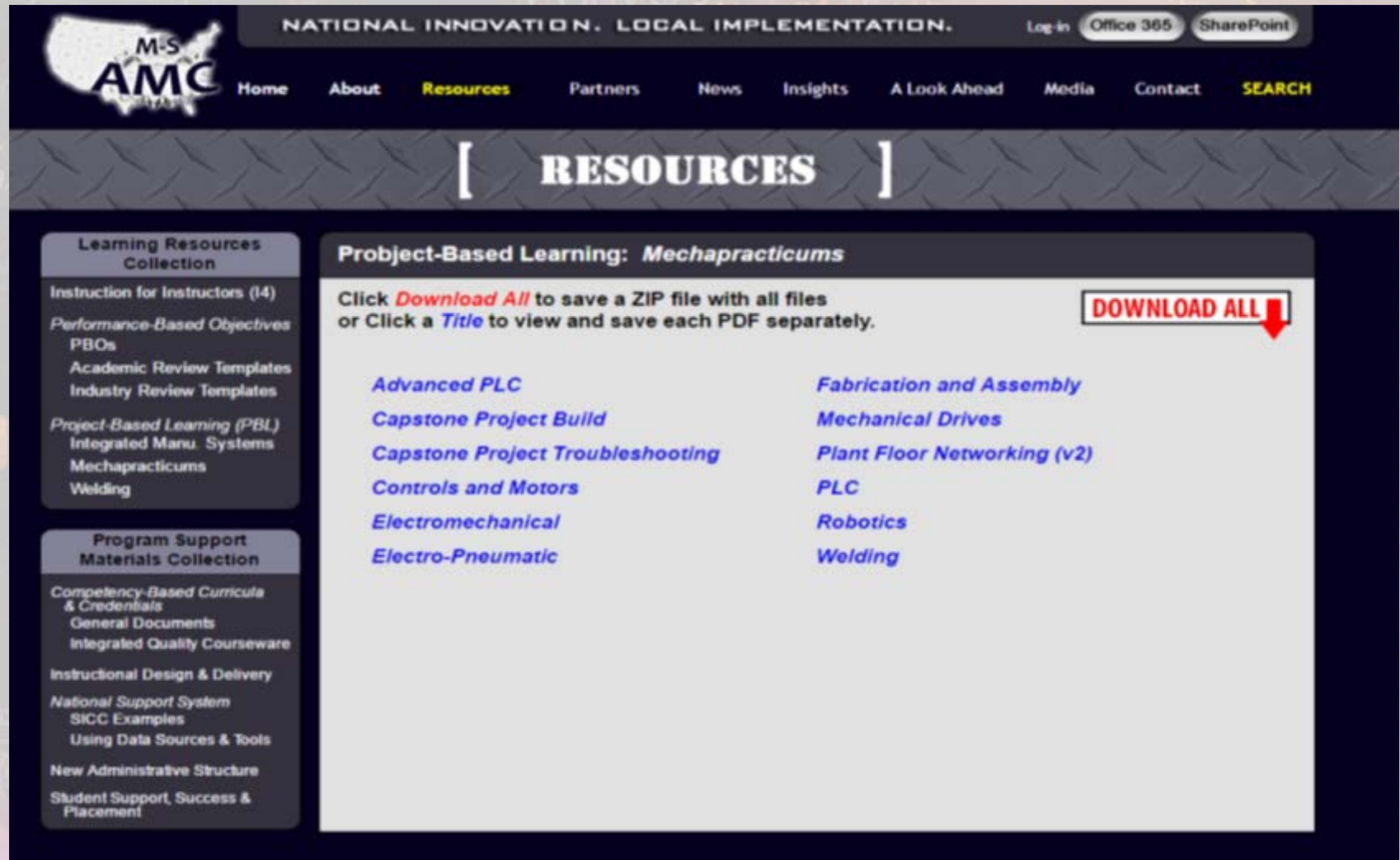
GIRLS EMPLOYED IN MANUFACTURING
GSCC introduces students to manufacturing

DASHBOARD

PBO
PERFORMANCE-BASED OBJECTIVES

PBL
PROJECT-BASED LEARNING

MEI
MANUFACTURING EDUCATION INSTITUTE



The screenshot shows the MSAMC website with a dark blue header and a textured grey banner for the 'RESOURCES' section. The left sidebar contains two collections: 'Learning Resources Collection' and 'Program Support Materials Collection'. The main content area is titled 'Project-Based Learning: Mechapacticums' and features a 'DOWNLOAD ALL' button with a red arrow. Below the button, two columns of links list various mechanical and electrical topics.

MSAMC NATIONAL INNOVATION. LOCAL IMPLEMENTATION. Log in Office 365 SharePoint

Home About **Resources** Partners News Insights A Look Ahead Media Contact **SEARCH**

[RESOURCES]

Learning Resources Collection

- Instruction for Instructors (I4)
- Performance-Based Objectives PBOs
- Academic Review Templates
- Industry Review Templates
- Project-Based Learning (PBL) Integrated Manu. Systems
- Mechapacticums
- Welding

Program Support Materials Collection

- Competency-Based Curricula & Credentials
- General Documents
- Integrated Quality Courseware
- Instructional Design & Delivery
- National Support System
- SICC Examples
- Using Data Sources & Tools
- New Administrative Structure
- Student Support, Success & Placement

Project-Based Learning: *Mechapacticums*

Click **Download All** to save a ZIP file with all files or Click a **Title** to view and save each PDF separately.

DOWNLOAD ALL ↓

Advanced PLC	Fabrication and Assembly
Capstone Project Build	Mechanical Drives
Capstone Project Troubleshooting	Plant Floor Networking (v2)
Controls and Motors	PLC
Electromechanical	Robotics
Electro-Pneumatic	Welding



www.carcam.org

THANK YOU!

Beverly Hilderbrand, Director/PI
bhilderbrand@gadsdenstate.edu

256.439.6871





Questions?

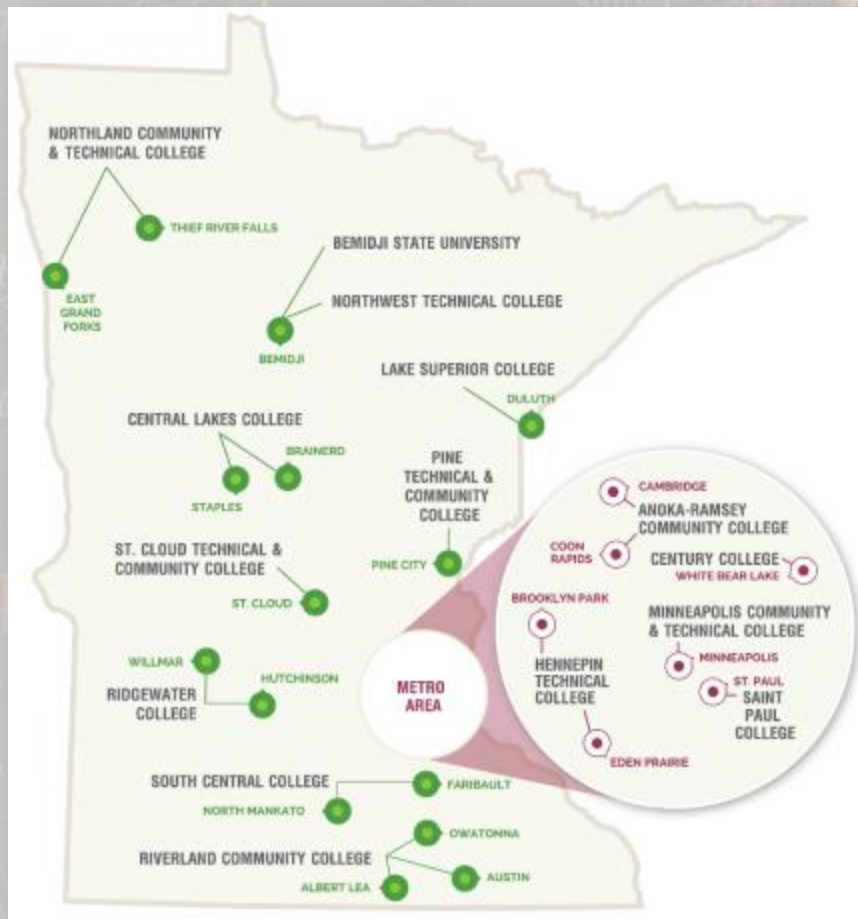
360 Manufacturing and Applied Engineering ATE Regional Center of Excellence



360 Manufacturing and Applied Engineering ATE Regional Center of Excellence

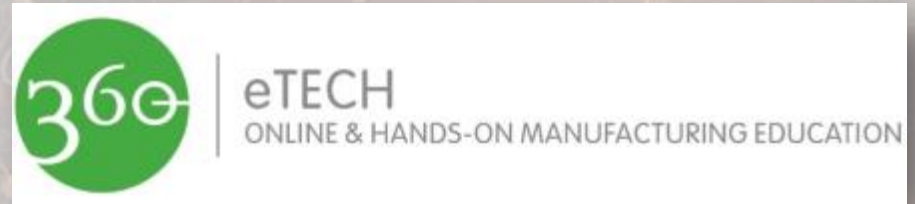
- 360 is an innovative education and industry collaboration to RECRUIT, EDUCATE, and TRAIN workers for dynamic careers in advanced manufacturing.
- Focused on filling the advanced manufacturing pipeline with qualified technicians





- 360 Consists of 15 MnSCU institutions (42% MnSCU)
- In existence since 2006
- State and federally funded
 - NSF Project “The eTECH Project” in 2009
 - NSF-ATE Regional Center 2012

360 | eTECH



- Online and hands-on manufacturing education
- Adults and high school students
- Print Reading simulation
- 4 certificates
 - Production Technologies
 - Automation Technologies
 - Machine Technologist
 - Welding Technology

<https://360etech.org/>



360 | Career Success Skills

- 26 online learning modules
- To graduate a better qualified employee
- Provide faculty & industry with curriculum that addresses important skills
- Topics include verbal communications, reliability, effective listening, and more



<http://www.360mn.org/action/skill-development/>

Dream It. Do It. Minnesota

- Adopt-A-School Guide
 - Framework to work with K-12
- Teacher Guide
 - Lessons, activities, and videos
- Youth Outreach Toolkit
 - Easy-to-use materials for influencers and youth
- Game app

<http://www.dreamitdoitmn.com/>



Manufacturing Career Tool

- Developing interactive career tool to introduce youth to manufacturing careers
- Focus group data
 - Web tool with facts and quiz
 - Showcase “A Day in the Life” in manufacturing



WELD-ED

National Center for Welding Education and Training





Vision

Weld-Ed is a national partnership of colleges, universities, professional societies, government, and private industry committed to increasing the number and quality of welding and materials joining technicians to meet industry demand.

Mission

Weld-Ed strives to improve the quality of education and training services to address the hiring and professional development needs of the welding industry.

Partners and Affiliates

American Welding Society (AWS)

Regional Centers

- Chattanooga State Technical Community College (TN)
- Lorain County Community College (OH)
- College of the Canyons (CA)
- Honolulu Community College (HI)
- Illinois Central College (IL)
- North Dakota State College of Science (ND)
- Texas State Technical College (TX)
- Yuba College (CA)
- Weber State University (UT)
- The Ohio State University (OH)

Affiliate network of over 80 education and industry



National Occupational Overview

Welder Occupations

SOC Code	Description	2015 Jobs	2025 Jobs	Change	Openings
47-2011	Boilermakers	17,245	18,288	1,043	8,980
51-2041	Structural Metal Fabricators and Fitters	79,977	86,841	6,864	40,213
47-4221	Structural Iron and Steel Workers	62,051	70,857	8,806	30,227
51-4121	Welders, cutters, solderers and brazers	374,935	408,894	33,959	129,725
51-4122	Welding, soldering, and brazing machine setters, operators, and tenders	58,950	69,558	10,608	26,306
47-2152	Plumbers, pipefitters, and steamfitters	393,485	468,906	75,421	129,049
47-2211	Sheet Metal Workers	137,308	156,658	19,350	46,851
	Total	1,123,952	1,280,002	156,050	411,353

Welding Programs

Student Enrollment/Completion Data

Academic Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Secondary Enrolled	68,079	83,187	88,247	114,313	96,449	105,156
Secondary Completed	32,473	41,403	52,345	60,261	50,102	71,841
Post-Secondary Enrolled	25,180	29,228	43,465	51,358	69,672	53,919
Post-Secondary Completed	10,778	13,601	21,603	23,613	23,341	25,652

Faculty Professional Development

Summer One-Week Training:

Module # 1 – Welding Metallurgy

Module # 2 – Joining and Cutting Processes

Module # 3 – Design / Assembly / Robotic Welding

Module # 4 – Weld Quality and Inspection, Welding Codes, Specifications & Safety

Module # 5 – Laser Welding

Module # 6 – Instructional Design and Teaching Strategies for Welding Technicians

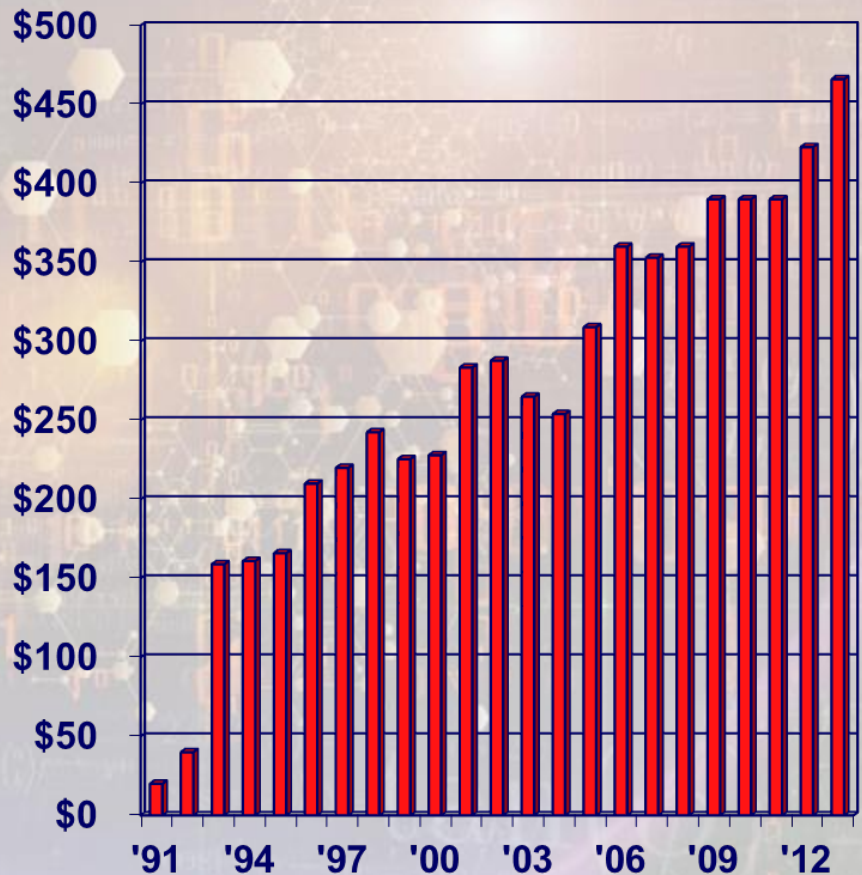
Module # 7 – Non Destructive Testing

Registration at
www.weld-ed.org

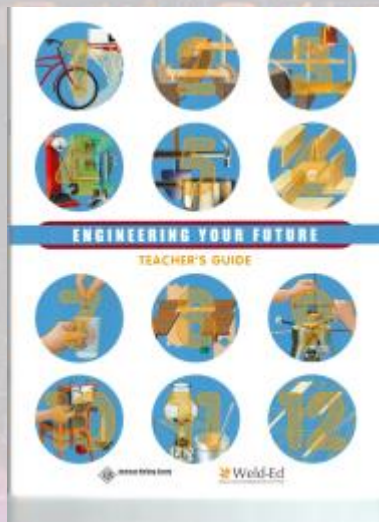
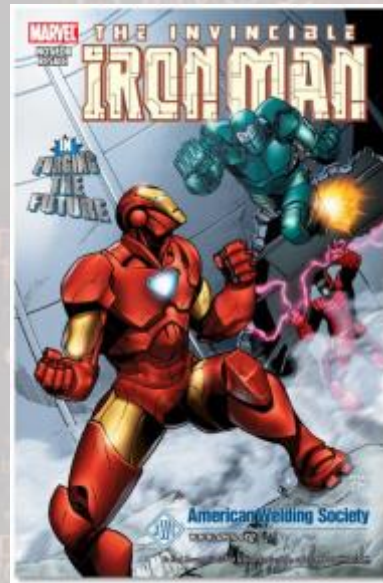


Scholarships

- In 2015, there were more than 500 recipients, and over \$700,000
- Total of 5,370 students and over \$6.4 million in 25 years



FREE at CareersInWelding.com



Careers in Welding Mobile Exhibit



Tour Schedule at
www.explorewelding.com



RCNGM



Regional Center for Next Generation Manufacturing



COT-RCNGM Goals: Regional Center in New England



Goal One

- Student Recruitment & Persistence

Goal Two

- Professional Development

Goal Three

- Curriculum Development

Goal Four

- Dissemination – Regional Collaboration



WHO WE ARE:



Middle Schools

- Comprehensive Schools
- CPEP: Inner City After School and Summer Programs
- Skills21 at EDUCATION CONNECTION

Secondary Schools

- 17 Technical High Schools
- Comprehensive High Schools
- Career Technical Education (CTE) Pathways

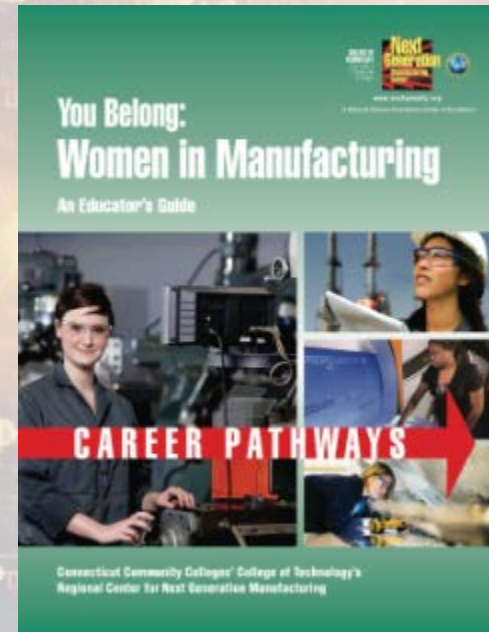
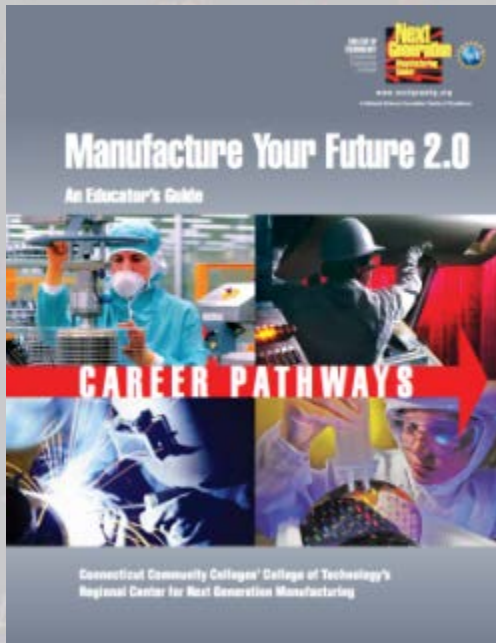
COT

- Seamless Pathways that Include Stackable Credentials
 - 12 Community Colleges in CT
 - 8 Four-Year Universities
 - Regional Collaborations in ME, MA, RI, NH, VT

1. Student Recruitment & Persistence:

Teachers Guide with Curriculum and DVD

Manufacture Your Future 2.0



You Belong: Women in Manufacturing

Resources: www.nextgenmfg.org

STUDENT EXPOS/SYMPOSIUMS: Model One

Benefits

- ✓ Appreciation for the manufacturing process
- ✓ Essential understandings of careers
- ✓ Current workplace practices and technologies
- ✓ Opportunity for students to network
- ✓ Opportunity to promote educational career pathways
- ✓ Exposure to your college campus and what you have to offer

MODEL 1: STATEWIDE: Recreation of a factory floor (pods)
CNC: CAD/CAM; Metal Stamping; Wire/Spring Electroplating Lasers;
Injection Molding

3,000 students, three days
In kind: marketing, communications, public affairs)
Cash support from RCNGM, Companies



Model Two: REGIONAL SYMPOSIUM MODELS AT HOST COMMUNITY COLLEGES (Two Formats)

A. Manufacturing Process Format

- ✓ 10-minute sequential presentations – how a product is made
- ✓ Company exhibits/demos
- ✓ College tour (if time)
- ✓ Highly structured/scheduled

B. Workshop Format

- ✓ 40-minute workshop presentations held concurrently
- ✓ Company exhibits/demos held concurrently
- ✓ General assembly (space/time allowing)



2. Professional Development

Faculty-Industry Externships

- Work Based Learning
- 4-Week full-time for faculty and teachers
- Curriculum Integration
- In partnership with industry
- Creates Long Term Education – Industry Partnerships
- RESOURCE:
 - BEST PRACTICE GUIDE AND CURRICULUM ON WWW.NEXTGENMFG.ORG



2. Professional Development/Marketing

High School Counselor Workshops



Workshop Model

- Host Community College: Overview & Tour by students and faculty
- Overview of Manufacturing Programs offered
- Job Placement with Salaries
- Guest Speakers from Local Manufacturers
- Improve Perception of Manufacturing
- DVD and Student Profiles
- BEST PRACTICES GUIDE ON:

WWW.NEXTGENMFG.ORG



OTHER RESOURCES:

1. Summer Teachers' One Week Dissemination Workshop

- Teamwork and Professional Skills; Hands-on Workshops
- Curriculum Development
- Tunxis CC, Farmington CT – July 11-15, 2016
- Other Resources: State and Regional Manufacturing Surveys: Industry Needs, Higher Education
- Deloitte Surveys (2)
- CT Business & Industry Association Surveys

2. MFG Workshops with CMCC, ME

3. Greater Hartford Maker Faire:

- 2nd Annual: October 8, 2016

[RESOURCES ON WWW.NEXTGENMFG.ORG](http://WWW.NEXTGENMFG.ORG)



THANK YOU!!!!



Questions?





Join Us – All Webinars 3 pm Eastern

MAY 25, 2016

Meeting Requirements, Exceeding Expectations: Understanding the Role of Evaluation in Federal Grants

External evaluation is a requirement of many federal grant programs. Understanding and addressing these requirements is essential for both successfully seeking grants and achieving the objectives of funded projects. In this webinar, we will review the evaluation language from a variety of federal grant programs and translate the specifications into practical steps. Topics will include finding a qualified evaluator, budgeting for evaluation, understanding evaluation design basics, reporting and using evaluation results, and integrating past evaluation results into future grant submissions.

Presenters:

Lori Wingate Director of Research The Evaluation Center at Western Michigan University

- **For Other Upcoming Webinars See:**
<http://www.atecenters.org/ccta>



Join us in Pittsburgh, PA!



July 25-28, 2016



www.highimpact-tec.org



Register for HI-TEC and TAACCCT Convening

HI-TEC Conference July 27-28 in Pittsburgh, PA

Register at <http://www.highimpact-tec.org/registration.php>.

Free follow-up **TAACCCT technical assistance convening** for all TAACCCT grantees and others who can benefit on **Friday, July 29.**

Q&A and Contacts

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WEBINAR SURVEY

Please take a moment to help us become better

Highlights of Advanced Manufacturing and Engineering Technology Resources from ATE Centers

Thanks For Attending