

Welcome

FLATE INDUSTRIAL ADVISORY COMMITTEE

Meeting #19

**Southern Manufacturing Technologies and
Commercial Design Services
Tampa, FL**

**THURSDAY, MAY 26, 2011
4:30 – 6:30 PM**

Hillsborough Community College • St. Petersburg College • University of South Florida-College of Engineering



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FLATE VISION

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 FLORIDA, LEAD NATIONALLY

Hillsborough Community College • St. Petersburg College • University of South Florida-College of Engineering



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AGENDA

- Pre-meeting tour of SMT
- Welcome and Introductions
- Industry Partnerships Study - Report from SRI
- CTEF presentation
- FLATE Evaluator update
- FLATE Renewal
- FLATE updates and announcements
- Next meeting Sept 16 or 23, 2011 @ TBD
- Adjournment



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INTRODUCTIONS: FLATE LEADERSHIP



Richard Gilbert, Ph.D.
Chemical and Biomedical Engineering
FLATE Co-PI - University of South Florida
Tampa, FL



Marilyn Barger, Ph.D.
PI and Executive Director
FLATE, Hillsborough Community
College, Tampa, FL



Brad Jenkins
Engineering Technology
FLATE Co-PI - St Petersburg College
St. Petersburg, FL



Phil Centonze
Evaluator for FLATE
Pos-Impact, Inc.



Tina Brudnicki
Member and Industry
Relations Manager Society
of Manufacturing Engineers



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CC Partnership & Instructional Impacts: Progress Report

*Raymond McGhee, SRI International
Joseph Ames, Ames Associates*

Funded by NSF grant DUE-0903331



Progress Report

- Study Goals
- Research Questions
- Conceptual Model
- Research Sites
- Progress
- Next Steps

Study Goals

Describe the features of selected ATE industry-community college partnerships and the conditions that support integration of partnership goals in the classroom.

Develop and disseminate tools and materials for partnership-building and integrated instructional practice.

Partnership Research Questions

- What are the attributes of successful community college-industry partnerships?
- What are the necessary preconditions and mechanisms, both formal and informal, which catalyze effective community college-industry partnerships?
- What leadership, management, and communication skills do the respective partners need for successful collaborations?



Instructional Research Questions

- What mechanisms do instructors use to learn about partnership and industry learning goals?
- To what extent do partnership goals penetrate the technician education and transfer track classrooms?
- What steps do faculty members take to address industry goals through instruction?
- How rigorous and workforce relevant are the assignments and assessments used in partnership classrooms from the perspectives of industry and education expert panelists?
- What steps do industry representatives take to help faculty make classroom assignments and assessments more rigorous and relevant to the changing workforce?

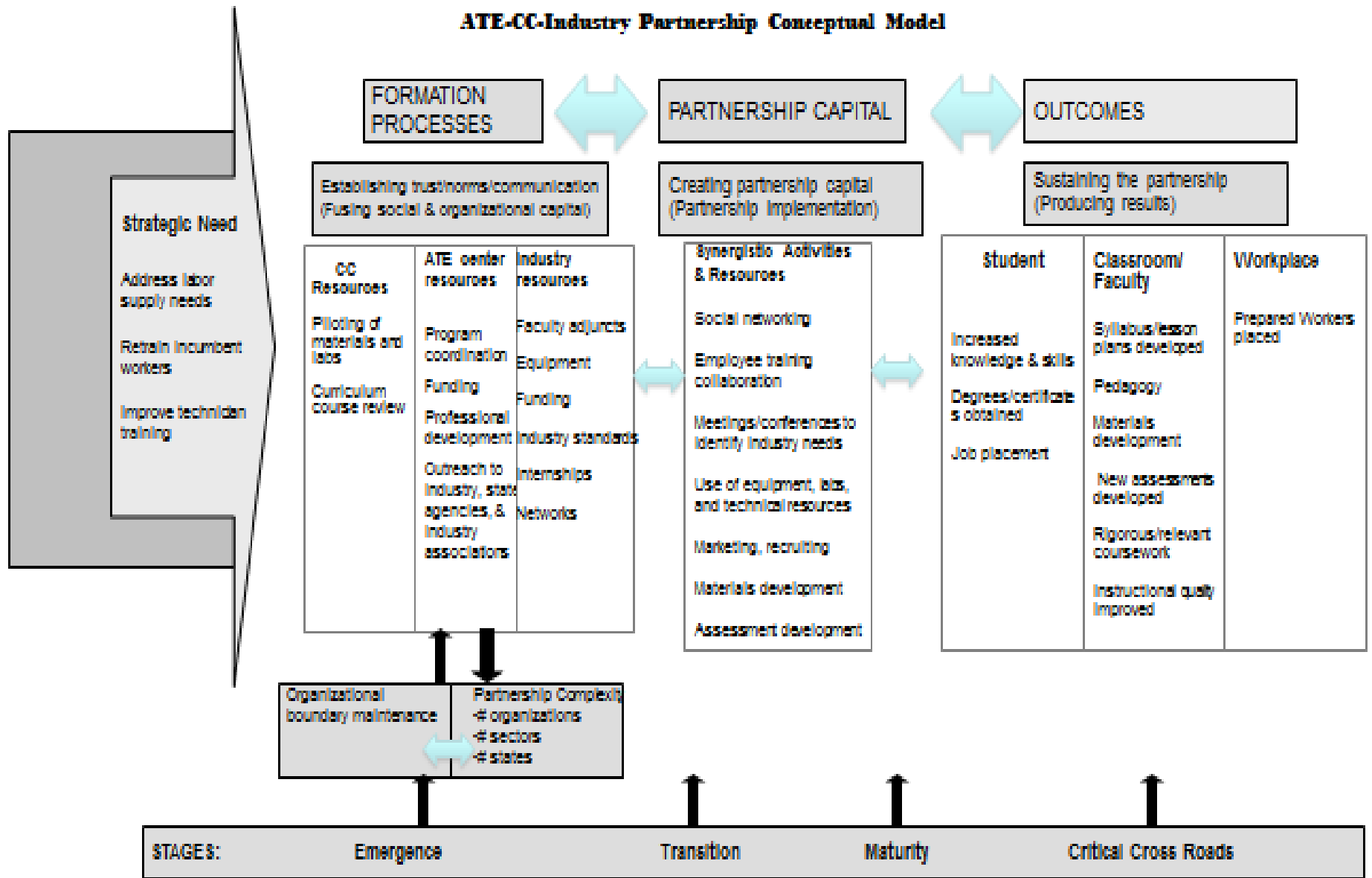


Major Concepts

- Formation Processes
- Partnership Capital
- Strategic Need
- Outcomes
- Stages
 - Emergence
 - Transition
 - Maturity
 - Critical Cross Roads



ATE-CC-Industry Partnership Conceptual Model



Partnership Study: Early Impressions

- ET frameworks have helped to catalyze partnerships around tech training.
- Strategic need: changes in Space Coast economy is important formation factor.
- CC and industry partnerships support tech training in different ways.
- Incumbent workers returning community college face many challenges.

Partnership Study Next Steps

- Validating debriefing documents
- Cross-case analysis
- Final site visit in 2011-12
- Draft report
- Dissemination

Research Sites

- FLATE Regional Center - Brevard CC (Adv. Manufacturing)
- CREATE Regional Center - Cerro Coso CC (Wind/solar)
- National Center for Information & Communication Technology (Orange Coast CC)
- Project - Ivy Tech CC in Indiana (Biotechnology)

CTEF: Career and Technical Education Foundation

www.careertechedfoundation.org

Paul Wahnish, Founder and CEO



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Evaluation Update & Stakeholder Survey

Phil Centonze

POS-IMPACT LLC

FLATE External Evaluator



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FLATE's Stakeholder Survey - 2009

- 21% response to 890 requests
- Despite 91% Agreement – FLATE's staff, products & Services are easily accessible – Survey indicated need for greater outreach effort to stakeholders (i.e. Educators & Industry stakeholders) to make better known what products & services are available



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Performance Measures & Results

Curriculum Effectiveness

- Program Adoptions at Community & State Colleges
10
- Total Degree Enrollment - ET & Related Programs
4,714 up 18% in 2 years
- Total Enrollment ET Degree & Related Degree Plus Certificate Program
5,095 up 12% in 2 years



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Performance Measures & Results

Curriculum Effectiveness

- Total Degree & Certificate Program Completions
893 up 35% in 2 years
- High School Enrollment - Technology Programs
14,592 down 19% in 2 years
- High School Technology Program Completions
2,732 down 12% in 2 years



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Performance Measures & Results

Curriculum Effectiveness

- PSAV Enrollments - Technology Programs
359 down 16% in 2 years
- PSAV Completions - Technology Programs
43 up 26% in 2 years
- Alignment of ET core with MSSC CPT
Quality 82%
Safety 87%
Production & Processes 42% (small sample, still in progress)



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Performance Measures & Results

Outreach Effectiveness

- *NEXT* Magazine – Student Inquiries
7% (steady over 4 years)
- Student Survey – Considering Career in Manufacturing
(on scale of 1 to 5, highest agreement)
3.3 Before Tour
3.5 After Tour
- FLATE Award Nominations
7 up from 4 in 3 years



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Performance Measures & Results

Outreach Effectiveness

- Made-In-Florida Viewing Opportunities
 - 913** DVDs distributed since publishing in 2006
 - 1,216 Online Views (MIF page) since Implementation in 2008**



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Performance Measures & Results

Professional Development Effectiveness

- ET Forum Attendance
59 in 2010 up from 42 in 2007
- Professional Development Hours Provided
1,364 up 224% in 4 years
- Faculty Survey – Usefulness of FLATE Professional Development services

(on scale of 1 to 5, highest agreement)

Steady at about 4.5 since 2008



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Performance Measures & Results

Florida Sterling Evaluation Scoring

2008 310 points

2010 362 points



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Key Strengths & Opportunities

Strengths:

- Communication with Stakeholders
- Focus on organizational sustainability

Opportunities & Recommendations:

- Selection & use of comparative information
- Expansion of outreach to South Florida geographic area
- Aggregation for analysis of all sources of stakeholder feedback
- FLATE can continue play a role to reverse unfavorable trends in enrollments in High School & PSAV technology programs



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FLATE

2011 Renewal Strategies



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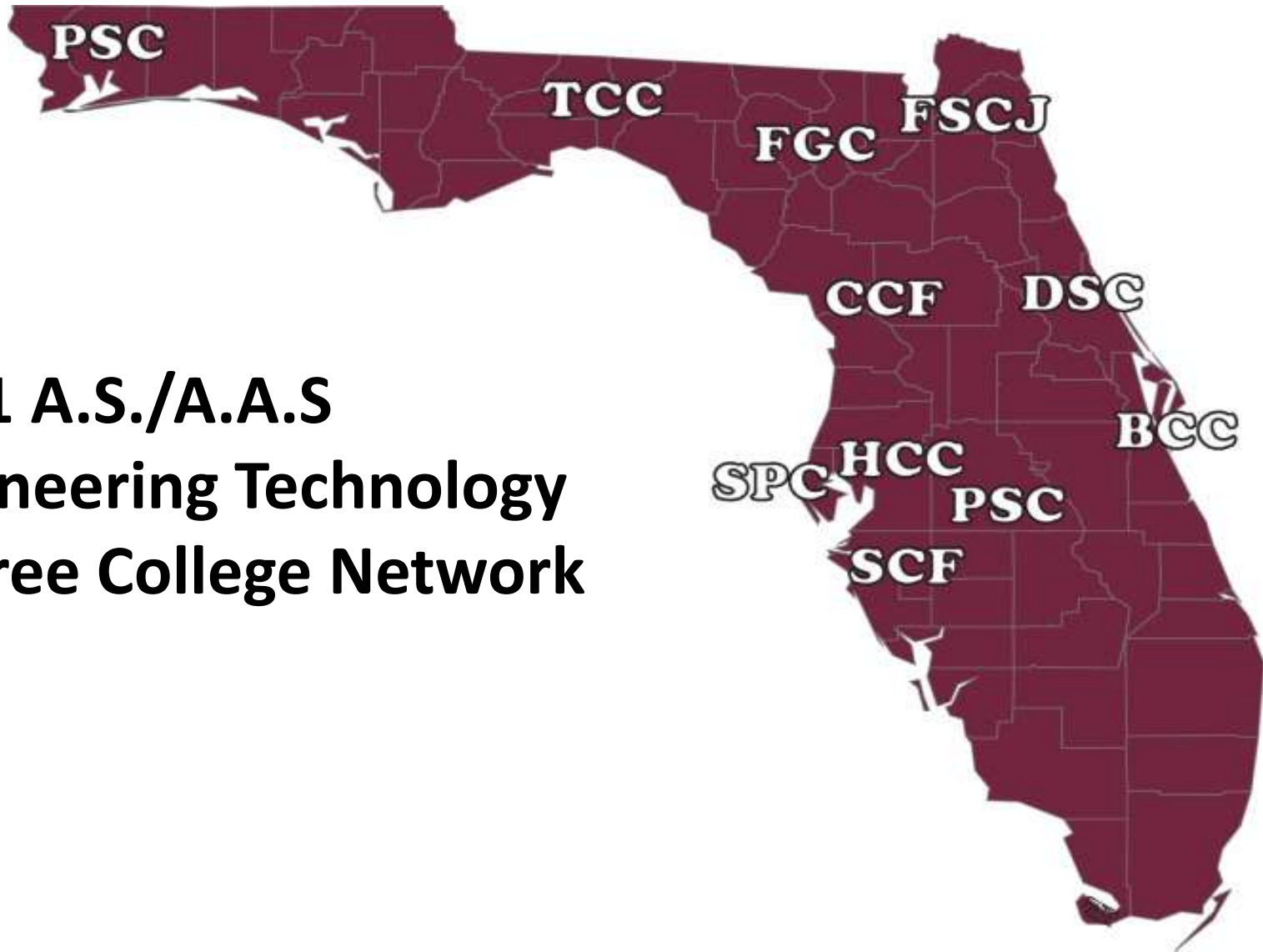
FLATE continues to focus on its 4 goals as a path to fulfilling its mission.

- In order for us to go forward with our FLATE renewal proposal, we need to show NSF that we are expanding into new areas and activities to support both the education initiatives as well as providing response to the industry sector. Although we have been successful in achieving our three goals for the FLATE Center: Curriculum, Professional Development, and Outreach, the renewal process for sustainability has to indicate new initiatives and activities related to our goals.



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2011 A.S./A.A.S Engineering Technology Degree College Network



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College	Degree Specialization(s)	College Credit Certificate(s)
Brevard Community College (BCC)	<ul style="list-style-type: none"> ●Electronics ●Advanced Technology ●Alternative Energy Systems 	<ul style="list-style-type: none"> ● Engineering Technology Support Specialist ● Applied Technology Specialist ● Alternative Energy Systems Specialist ● Composite Fabrication and Testing
College of Central Florida (CCF)	<ul style="list-style-type: none"> ● Quality 	<ul style="list-style-type: none"> ● Lean Six Sigma Green Belt ● Computer Aided Drafting ● Alternative Energy Systems Specialist
Daytona State College (DSC)	<ul style="list-style-type: none"> ● <i>In Progress</i> 	<ul style="list-style-type: none"> ● <i>In Progress</i>
Florida State College @ Jacksonville (FSCJ)	<ul style="list-style-type: none"> ●Advanced Manufacturing 	<ul style="list-style-type: none"> ● Engineering Technology Support Specialist ● CNC Machinist
Hillsborough Community College (HCC)	<ul style="list-style-type: none"> ●Advanced Manufacturing 	<ul style="list-style-type: none"> ● Engineering Technology Support Specialist ● Automation ● Lean Manufacturing ● Engineering Technology Support Specialist
Florida Gateway College (FGC)	<ul style="list-style-type: none"> ●Quality 	<ul style="list-style-type: none"> ● Engineering Technology Support Specialist ● Lean Six Sigma Green Belt ● Six Sigma Black Belt
Pensacola State College (PSC)	<ul style="list-style-type: none"> ●Mechanical Design & Fab 	<ul style="list-style-type: none"> ● CNC Machinist / Operator ● Computerized Woodworking ● Mechanical Designer/ Programmer
Polk State College (PSC)	<ul style="list-style-type: none"> ●Advanced Manufacturing 	
St. Petersburg College (SPC)	<ul style="list-style-type: none"> ●Electronics ●Quality ● Biomedical Systems ● Digital Design & Modeling 	<ul style="list-style-type: none"> ● Engineering Technology Support Specialist ● Lean Six Sigma and Green Belt ● Six Sigma Black Belt ● Medical Quality Systems ● Computer Aided Drafting ● Alternative Energy Systems Specialist ● Rapid Prototyping and Design
State College of Florida (SCF)	<ul style="list-style-type: none"> ●Electronics ●Digital Design & Modeling 	<ul style="list-style-type: none"> ● Engineering Technology Support Specialist ● Alternative Energy Systems Specialist ● Computer Aided Drafting ● Electronics
Tallahassee Community College (TCC)	<ul style="list-style-type: none"> ● <i>In Progress</i> 	<ul style="list-style-type: none"> ● Composite Fabrication and Testing ● Lean Six Sigma Green Belt ● Alternative Energy Specialist ● CNC Machinist / Operator ● Hydraulics, Pneumatics and Motors in Mfg

FLATE UPDATES

Outreach



Curriculum Reform



Professional Development



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Advancing Excellence in Engineering Technologies



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“Made in Florida” CAMPAIGN

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“Made in Florida” OUTREACH CAMPAIGN – NEXT ADVERTORIAL

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Summer Robotics Camps (middle & high school students)

- 6 @ HCC, including South Shore
- 2 @ Central Florida, Ocala
- 3 @ Florida Gateway, Lake City
- Sponsors: Publix, SME, BAMA, Technical Training Aids,, Sun Hydraulics, Tour location (TBD)

Junior Achievement Partnership

- Up to 50 high school students for 2 day robotic experience

Summer Energy Camp @ South Shore



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5th Annual FLATE Awards

2011 Nominations Open Through August 31



- Secondary Educator
- Post-secondary Educator
- Industry Partner

Thanks to our sponsors and partners!

Secondary



Post-Secondary



Industry



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SPONSORED REPORT

Dream it, design it, then make it.

Learn how to earn your spot in Florida's high-tech fast lane.

Florida is one of the biggest innovation hubs in America, generating opportunities that have local and global impact on manufacturing and production industries. If you are intrigued by technology, pursuing a career in manufacturing is your ticket to success.

Zach Lance, 24, is a Brevard Community College student pursuing a degree in manufacturing technology. He is currently working on a project that involves taking advantage of great career opportunities in modern manufacturing by remaining parts out of composite materials for lunar rovers. “Every part of every day exciting,” Zach says.

Manufacturing is a dynamic industry that is constantly evolving. It is an essential part of modern manufacturing, incorporating “green” concepts. And the high-tech composite materials used in manufacturing are an essential part of modern manufacturing in aerospace and marine industries. In fact, demand for trained technicians is growing rapidly, and the demand for trained technicians is growing rapidly, and the demand for trained technicians is growing rapidly.

Florida has over 14,000 manufacturers that employ over 355,000 people with an average annual salary of \$48,000.

For a group of engineers and technicians, finding the solution to a problem, and knowing I have the appropriate skill set, is so very fulfilling,” Zach says. The mathematics, science and engineering technology classes that he has taken have given Zach a great background and practical hands-on experience for what he does every day on the job.

In today's manufacturing world, global partnerships are key to optimal development and production. Zach loves the opportunity to work on lunar rovers with NASA's international partners like Canada, Germany and China. With his work experience and community college education, Zach dreams of attending an engineering college and feels well prepared to meet future challenges.

Check out these websites to learn more about Florida manufacturing careers, companies and educational opportunities.

www.MAF.org
www.fl-ate.org
www.conmed.com
BannerCenter
www.banner-mfg.org
Atlantic Marine, LLC
www.atlanticmarine.com
HOERBIGER
www.hoerbiger.com
BASF
www.basf.com
PCS Phosphate
www.pcsphosphate.com
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www.FloridaNEXT.com 53

2010-2011 Florida Trend NEXT

2010-2011 - third quarter report 2011-2012

- Sponsors: Banner Center, BASF, BITT, ConMed Linvatec, FLATE, Hoerbiger, MAF, Mosaic
- *draft 2011 advertorial in process*



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“Made in Florida” OUTREACH – MIF WEBSITE



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[Company Overviews](#)

[Educational Outreach](#)

Everyday, you enjoy things you may not realize were made in Florida. Behind every product and technology you use, there is a world of manufacturing. Today, in Florida, more than 14,000 different companies and 355,000 people work in the manufacturing field. These employees are making, on average, over \$48,000 a year!! That's over \$23 per hour, amazing!!!

CURRICULUM REFORM

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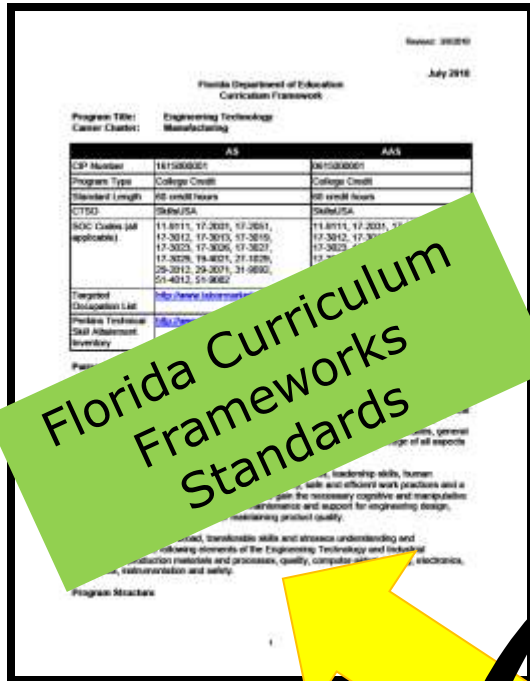
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ET DEGREE SKILLS ALIGNMENT

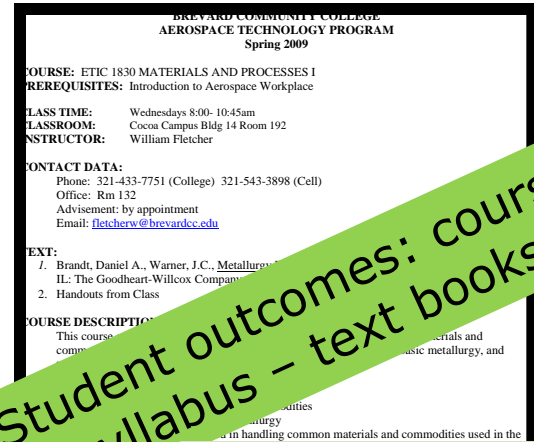
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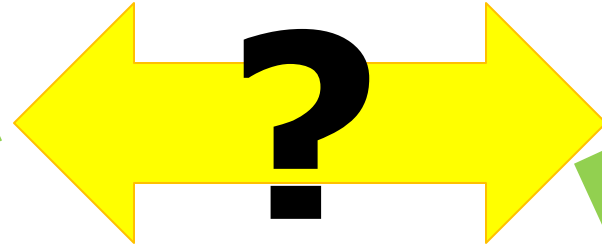


Florida Curriculum Frameworks Standards

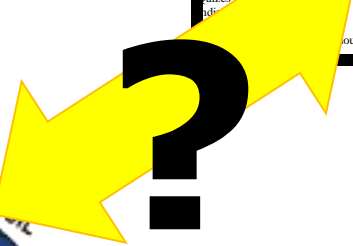
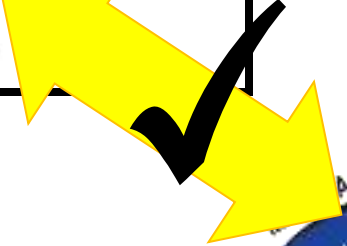


Student outcomes: course syllabus - text books

Common student outcomes defined for 3 ET Core courses - ready for implementation 2011-12
More to come for 2012



External Standard



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ET DEGREE SKILLS AIGNMENT

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MSSC TEST	Courses	N	% passed
✓ Safety	ETI 1701 - Industrial Safety	42	88%
✓ Quality	Intro to QC Intro to QA Quality	30	76%
Mfg processes & materials	ETIC 1830 - Materials & Processes 1	29	69%
Maintenance awareness			

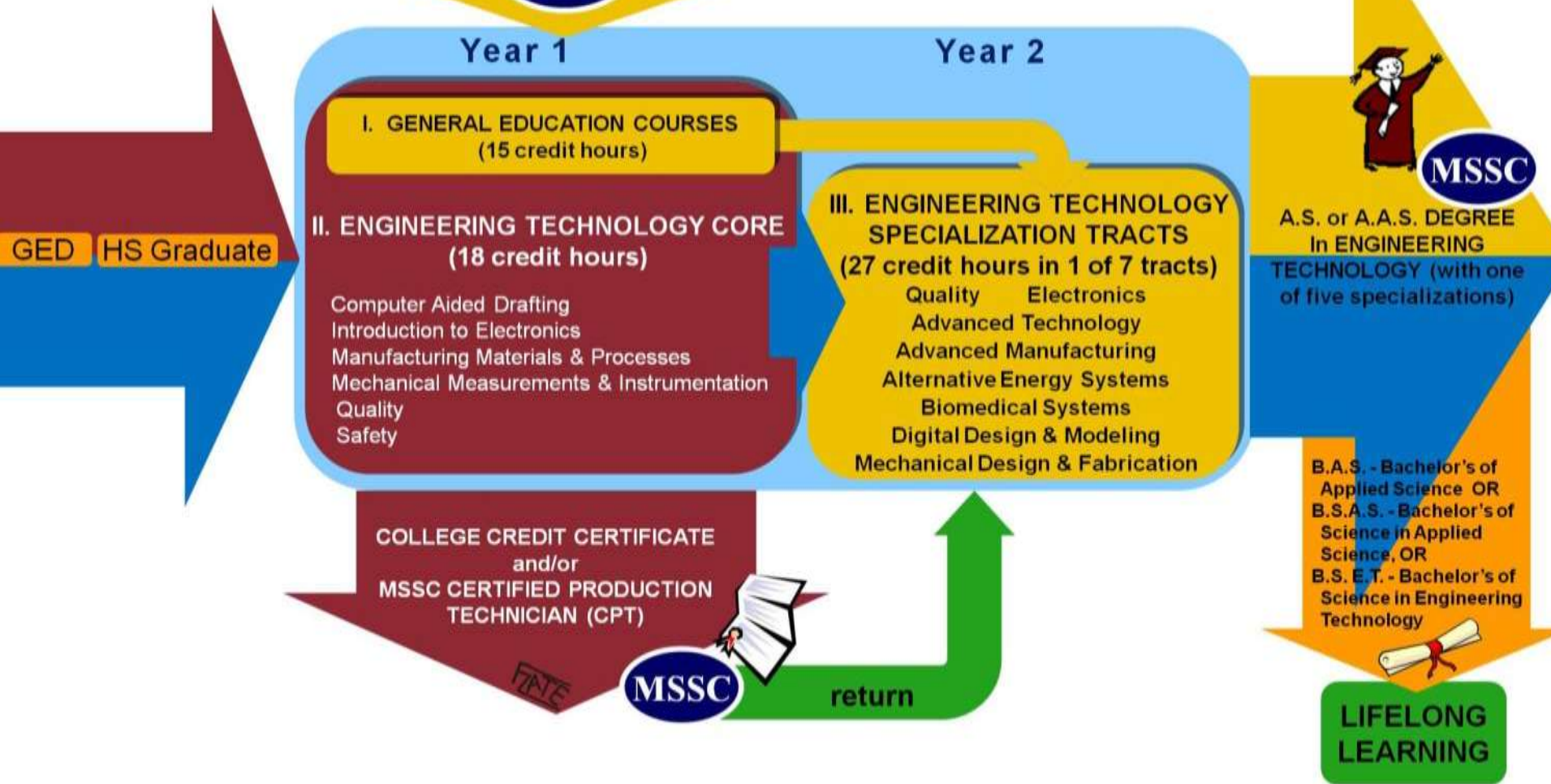
participating colleges

- **Brevard**
- **Central Florida**
- **Polk State**
- **State College of FL**



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ENGINEERING TECHNOLOGY A.S./A.A.S Degree



ET DEGREE NETWORK

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SPECIALIZATION	COLLEGES	LOCATION
Quality	CCF, FGC, SPC	Ocala, Lake City, Clearwater
Electronics	SPC, BCC, SCF, TCC	Venice, Palm Bay, Clearwater, Tallahassee
Adv. Manufacturing	FSCJ, HCC, PSC	Jacksonville, Tampa, Lakeland, Tallahassee
Fabrication & Design	FSCJ, PSC	Jacksonville, Pensacola, Tallahassee
Adv . Technology	BCC, TCC	Palm Bay, Tallahassee
Digital Design & Modeling	SPC, SCF, CF	St. Pete, Venice, Ocala
Med Systems	SPC	Clearwater
Alt Energy Sys	BCC, SCF, CF*	Palm Bay, Venice, Ocala, Tallahassee

PROFESSIONAL DEVELOPMENT

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PROFESSIONAL DEVELOPMENT

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2011 Summer professional development

JUNE - Engineering Technology Institute – Rapid Prototyping & Design

JUNE – Teacher STEM Camp for Energy

JUNE – Biotech teacher workshop (DNA Fingerprinting)

JULY -- Faculty Cohort to Spain

JUNE - JULY – Teachers summer externships (TQ)



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FLATE UPDATES – PARTNER PROJECTS



- USF ARREA - project to study career academy students transition to AS programs
- FESC – college summit in September
- BITT - professional development; support for HCC & SCF
- SFMA – outreach to South FL
- USF NANO CENTER – bring nano curriculum resources to FL
- ACADEMY of INVENTORS – Student Invention Competition
- TKNIKA (Spain) student & teacher experience
- High School MSSC testing and alignment
- SDHC – Helios Foundation-STEM Institutes



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THANK YOU!

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**Thank
you!**

**NEXT MEETING: Thursday, September 15,
2011 Location TBD**



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UPCOMING EVENTS



DATE	EVENT	LOCATION	CAMPS
June 13-15	FLATE Summer Institute	SPC, Clearwater	
June 15	MAF Education mtg	SCF, Lakewood Ranch	
June 20-23	Teacher Energy Camp	HCC, South Shore	CAMPS
July 9-16	Faculty to Spain	San Sabastian, Spain	CAMPS
Jul 24-29	Hi-TEC conference	San Francisco	CAMPS
Jul 25-28	FACTE Conference	Clearwater	
Sept 15	FLATE IAC meeting	TBD	
Oct 12-15	National Career Pathways Network Conf	Orlando	



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