Florida's Model for Industry-Technical Education Partnerships

T249·Manufacturing Partnerships ·
Manufacturing Division
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Florida's Model for Industry-Technical Education Partnerships

T249 Manufacturing Partnerships

Contributions of a Mandatory Internship Course to an Engineering Curriculum

Florida's Model for Industry-Technical Education Partnerships

Research Experiences for Undergraduate Engineering Students

Using the ASME Student Design Competition as the Culminating Design and Building Experience in a Freshman Level CAD-CAM Course.

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Resources for Outreach;

Plans

Projects

Partnerships

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Industry-Technical Education Partnerships

Background

In 2005, the FLATE, the NSF-ATE Regional Center of Excellence for Manufacturing Education in Florida developed a taskforce that included representation from;

- **the Florida Department of Education**
- **the State College system**
- **the College of Engineering at the University of South Florida**
- **Florida's regional manufacturing association**
- **FLATE industry partners**
- **Representatives from manufacturers that have partnerships with specific two year technician programs**

to design and implement a model engineering technology degree program as well as develop corresponding supporting industry/ technical education partnerships.

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Background

The inspiration for the "Florida Plan" for technician education began with the Florida Career and Professional Education (CAPE) act for Florida's high school career academies.

This 2006 legislature called for an academic structure that included industry certifications and articulations.

The driving force is the State's manufacturing sector with its span of facility sizes that range from 5 to 8,000 technical employees.

by 2010 Florida was among the top ten U.S. states in electronic components manufacturing, semiconductor manufacturing, electro-medical equipment manufacturing and consumer electronics manufacturing.

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The Creation Phases for the Florida Plan

- **The Design and Development phase blends knowledge plus skill acquisition modes for an optimal investment of manufacturers' resources, college program content, and technical program duration.**

- **The Planning phase addresses manufacturer's stated desire to integrate industry certifications with academic programs and to produce graduates who are "work ready".**

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The Planning Phase

FLATE integrated the Manufacturing Skills Standards Council-Certified Production Technician (MSSC-CPT) as its model articulated industry recognized certification.

The (MSSC-CPT) allows for:

An entry level skill certification.

Articulation directly from high school programs, which are also aligned to MSSC, directly supported by the CAPE legislation.

Definition of a best practice for integrating additional certifications into A.S. degree programs.

allows anyone from anywhere at any time who holds the MSSC-CPT to substitute that certification for the Core ET courses

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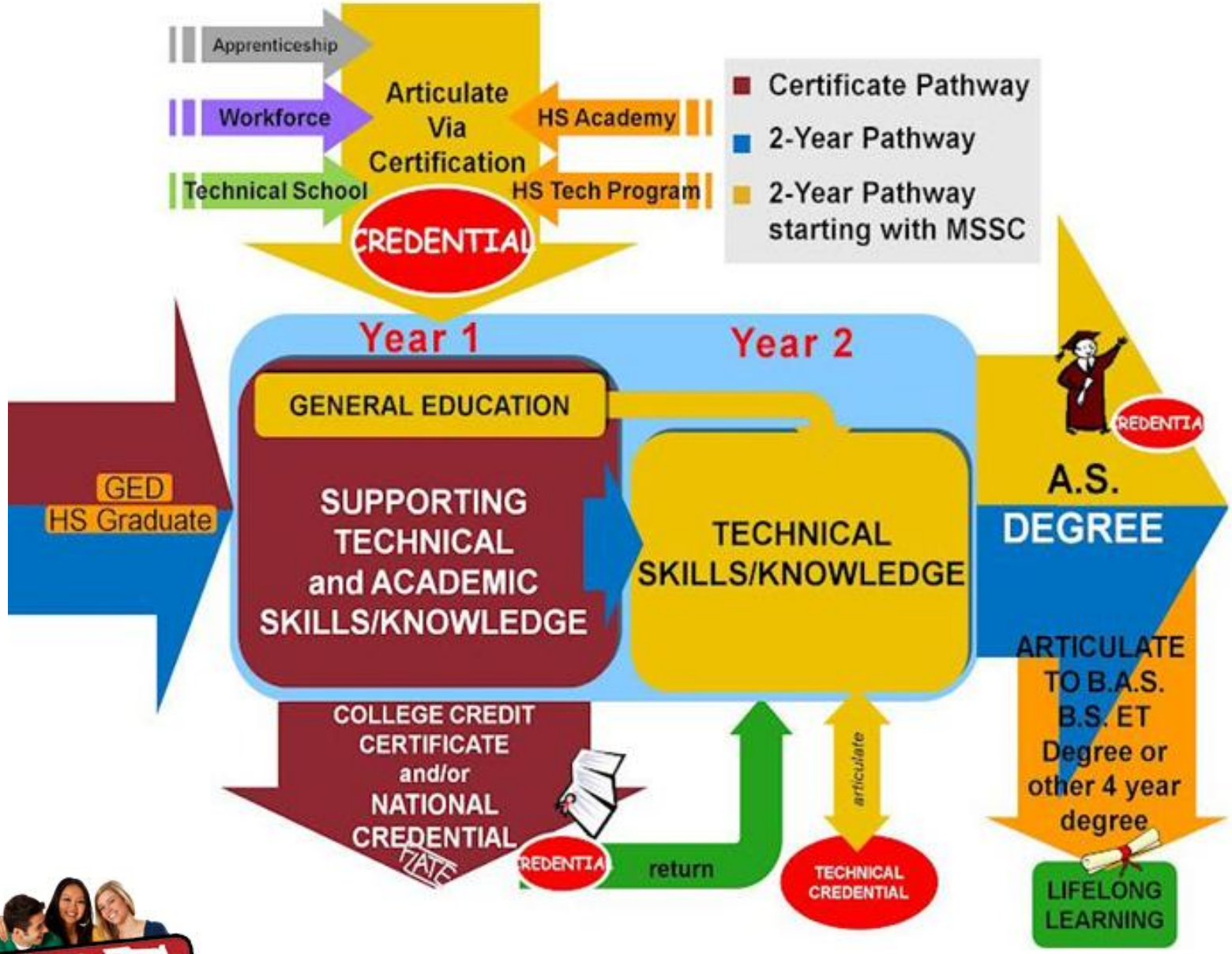

Florida's A.S. Engineering Technology Degree Pathway

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The Creation Phases for the Florida Plan

- The Design and Development phase blends knowledge plus skill acquisition modes represented for an optimal investment of manufacturers' resources, college program content, and technical program duration.

- The Planning phase addresses manufacturer's stated desire to integrate industry certifications with academic programs and to produce graduates who are "work ready".

- **The implementation phase addresses challenges associated with existing colleges program directors recognize the value in a shift to the new integrated credential approach and strengthening faculty knowledge base to deliver new content in order to satisfy specific requirements identified by industry within the college's service region.**

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The Creation Phases for the Florida Plan

- The Design and Development phase
- The Planning phase
- The implementation phase

- **Sustainability and Evaluation challenges are focused on the growth of the degree program and the success of the students within that program.**

  For the ET degree program, that success is also linked to MSSC-CPT pass rates as well as perceived value that certification and degree specialization within Florida's manufacturing community.

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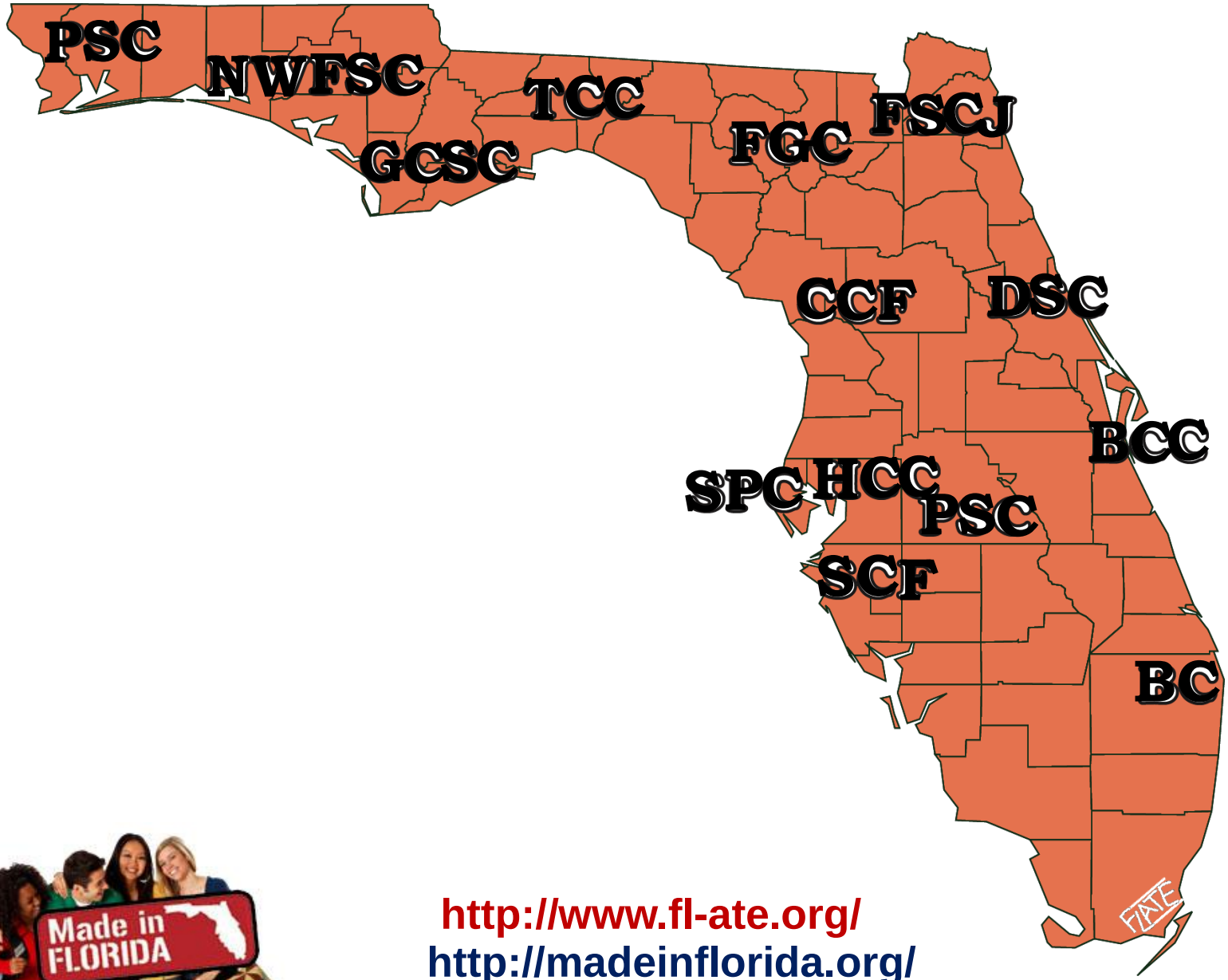

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Industry/Academic Partnership Models that Support "Florida Plan"

Partnerships can include a variety of interactions between the manufacturer and the education system.

Partnerships are created, driven, and sustained by the people within the two organizations and may engage people in various work areas at both institutions.

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Industry/Academic Partnership Models that Support "Florida Plan"

teachers,
career counselors,
educational administrators,
human resources professionals,
engineers,
plant managers,
training personnel.

Some of the shared activities will be formal and others will not.

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Industry/Academic Partnership Models that Support "Florida Plan"

This list represents interactions/activities options that might be part of an exemplary, well-established partnership between a school and a manufacturer in Florida

Scholarships/Tuition Assistance/Reimbursement
Internships/Externships/Work Experience
Student/Faculty Mentoring
Advisory Board Participation/Curriculum Development
Industry Demo Projects/Facility Access to Equipment
Adjunct Faculty and On-site Courses
Tours and Talks

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Harris Corporation

Over 5,000 technical workers in Florida

Major communications DOE contractor.

Large market share for law enforcement and emergency services communications.

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Harris “Florida Plan” Portfolio

As with many larger companies, Harris provides scholarship/ tuition/ reimbursement incentives for its workforce.

Company personnel also routinely perform outreach cooperative activities associated with the Student Mentoring and Tours/Talks.

There are also policies in place that address academic Funding/Access to Equipment project requests.

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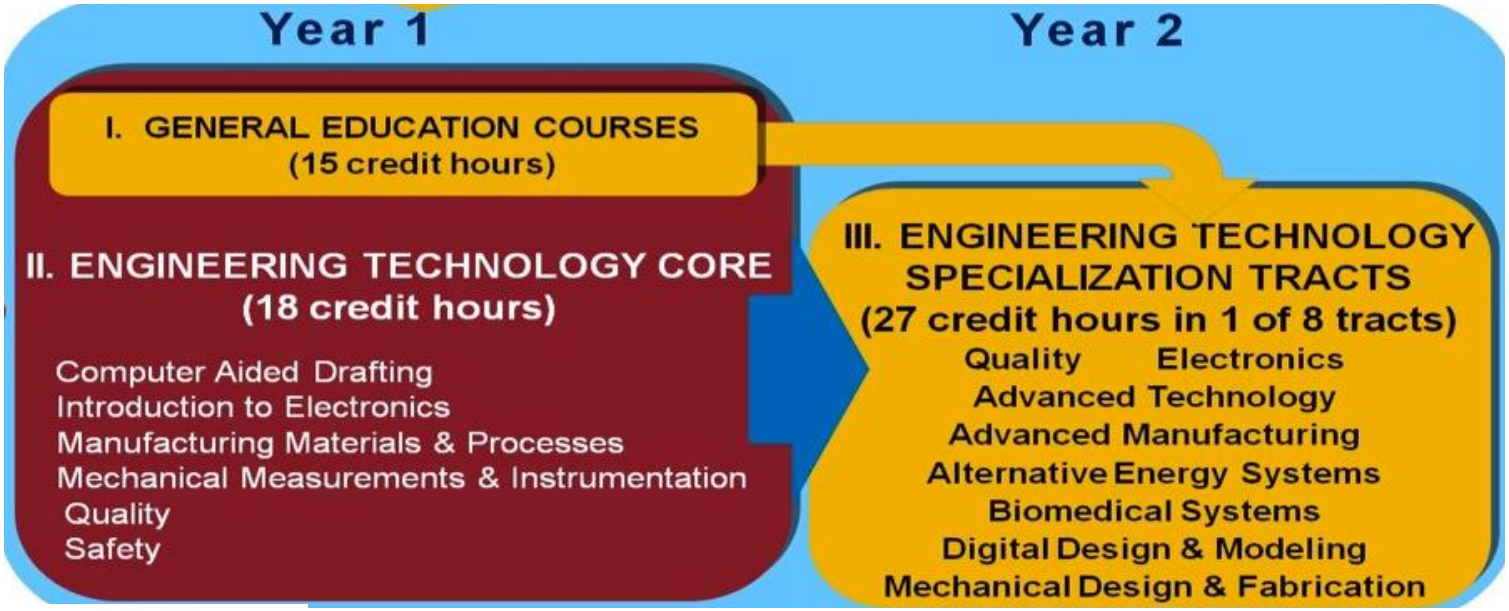
Harris "Florida Plan" Portfolio

Focused efforts to support Florida's A.S. Engineering Technology Degree Program

- **Advisory Board**
- **Curriculum Develop**



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Harris “Florida Plan” Portfolio

Focused efforts to support Florida’s A.S. Engineering Technology Degree Program

- **Advisory Board**
- **Curriculum Develop**

Focused efforts to support East Florida State College

(Brevard Community College)

- **On-Site Courses (Palm Bay)** — **expose students to current manufacturing processes.**
- **Adjunct Faculty** — **Students connect well with instructors who have hands-on, grass roots experience in their subject area.**

  instructors get to know candidates for their own workforce during the extended period of the course.

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Thank you!

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Comments? Questions?

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