

Office of Workforce and Economic Development Update



Forum on Engineering Technology
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Creating the Next Generation Occupation Standards for Career & Technical Education

Florida Department of Education
Division of Workforce Education

Creating the Next Generation Standards for Career & Technical Education Programs is Important to Florida's

- Economic Development

- #1 issue identified by business/industry seeking to relocate or expand their business in Florida:

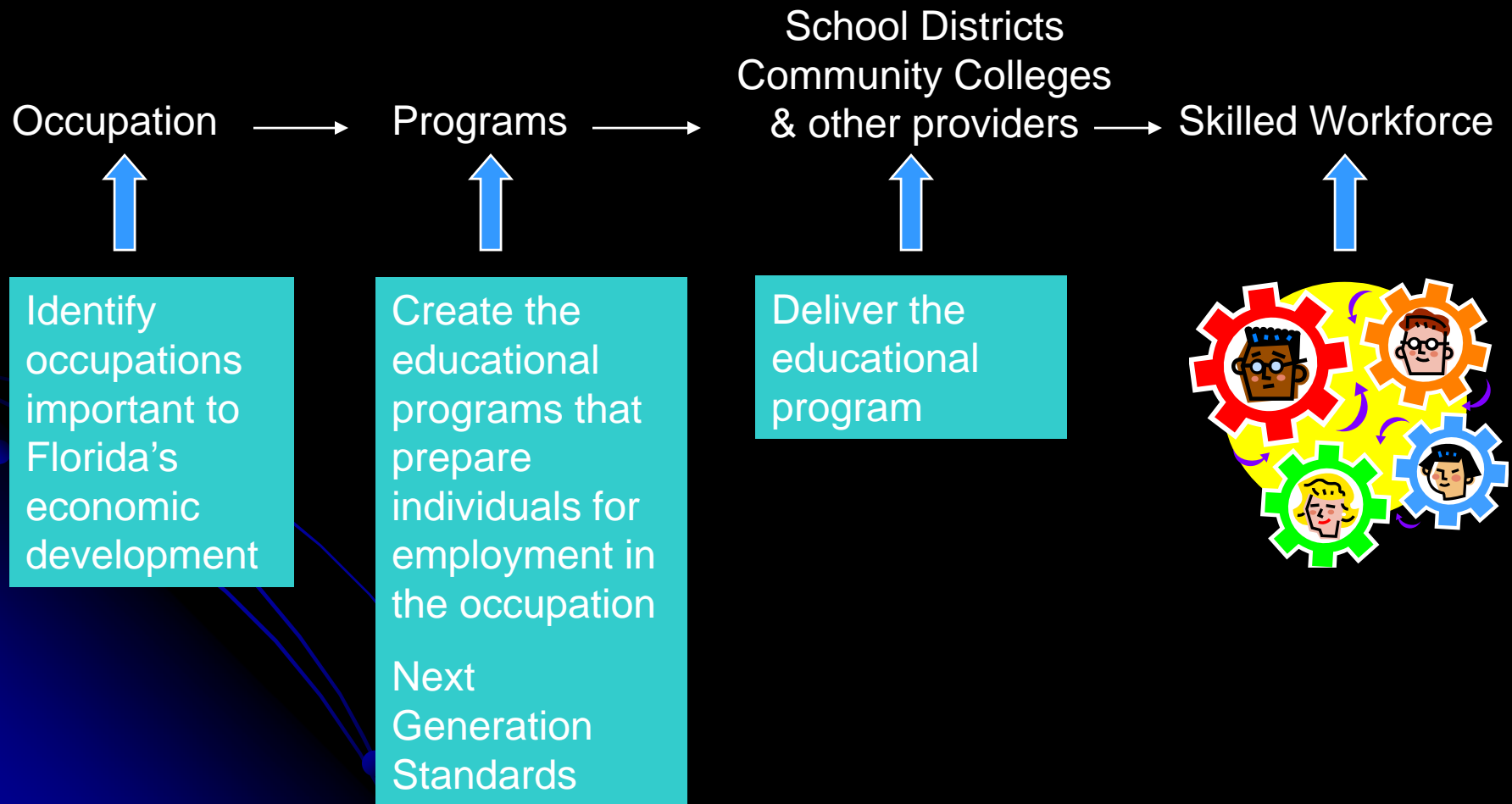
Is the skilled workforce or "talent" available

- Ensuring that Florida's career and technical education program standards are aligned with the needs of business and industry is a major component

- Citizens

- Seeking educational opportunities that will prepare them for high-skill, high-wage, high-demand occupations

In order to ensure that Florida has the skilled workforce to “grow” the economy:



The Division of Workforce Education is responsible for:

Developing the educational programs that will prepare individuals for the occupations that are important to Florida's economic development.


The Goal:

*Align Workforce Education Programs with
Skill Requirements of the New Economy*

Right Occupations Right Programs
Right Time



Division of Workforce Education

- Workforce Education has responsibility for the development of curriculum frameworks for career and technical education programs from middle school through AS degrees
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Career and Technical Education

Who We Served in 2006-07

- 323,914 – Secondary Career & Technical Education Students
- 75,216 – Postsecondary Career Certificate Students
- 15,272 – Postsecondary College Credit Certificate Students
- 83,050 – Associate in Science (A.S./A.A.S.)
- 16,322 – Apprenticeship Students
- 513,774 – Total Students Served

Career Clusters

Agriculture, Food &
Natural Resources
Curriculum Consortium

Architecture &
Construction
Curriculum Consortium

Arts, A/V Technology &
Communication
Curriculum Consortium

Business, Management &
Administration
Curriculum Consortium

Education & Training
Curriculum Consortium

Health Science
Curriculum Consortium

Hospitality & Tourism
Curriculum Consortium

Human Services
Curriculum Consortium

Information
Technology Curriculum
Consortium

**Manufacturing
Curriculum Consortium**

Marketing, Sales &
Service Curriculum
Consortium

STEM Curriculum
Consortium

Financial Services
Curriculum
Consortium

Law, Public Safety &
Security Curriculum
Consortium

Transportation,
Distribution & Logistics
Curriculum Consortium

Government & Public
Administration
Curriculum Consortium

Today's Students, Tomorrow's Workforce

Enterprise Florida Targeted Sectors for Economic Development

Life Sciences

- Nursing (CNA, LPN, RN)
- Emergency Medical Technician
- Paramedic
- Dental Hygiene
- Respiratory Care
- Surgical Technology
- Patient Care Technician
- Nursing Assistant/Long-Term Care
- Biotechnology Laboratory Technician

Manufacturing

- Drafting & Design Technology
- Manufacturing Technology
- Computer Electronics Technology
- Machining
- Sheet Metal Fabrication Technology

Information Technology

- Computer Information Administrator
- Computer Programming & Analysis
- Network Administrator
- Computer Programming
- Internet Services Technology
- Web Development Specialist
- Multimedia Design Technology

Homeland Defense/Security

- Criminal Justice Technology
- Law Enforcement Officer
- Correctional Officer
- Fire Science Technology
- Civil Engineering Technology

Financial/Professional Services

- Accounting Technology
- Business Administration
- Office Administration
- Administrative Assistant
- Medical and Legal Administrative Specialist
- Court Reporting/Voice Writing Technology

Aviation/Aerospace

- Aviation Administration
- Aerospace Technology
- Aircraft Airframe Mechanics
- Aircraft Power Plant Mechanics
- Avionics

Division of Workforce Education

- Each program curriculum framework includes the technical and academic skills that are essential to the career/occupation.

“What a student needs to know and be able to do.”

- The development of each curriculum framework must involve all stakeholders, with business and industry taking the lead in identifying the required technical and academic skills

Curriculum Development and Revision Process

- Florida law requires programs be updated at least every 3 years
- In the past, staff has worked with partners to update existing programs and develop new programs
- However, the process has not been comprehensive, consistent, inclusive or as transparent as it should be

The Process for Creating the Next Generation of Standards for Career & Technical Education Programs

Guiding Principals

The Process will be:

- Driven by business and industry
- Inclusive/all stakeholders
- Comprehensive
- Consistent
- Transparent
- On-going

Next Generation Standards for Career & Technical Education Development Process

Steering Committee

Agriculture, Food &
Natural Resources
Curriculum Consortium

Architecture &
Construction
Curriculum Consortium

Arts, A/V Technology &
Communication
Curriculum Consortium

Business, Management &
Administration
Curriculum Consortium

Education & Training
Curriculum Consortium

Health Science
Curriculum Consortium

Hospitality & Tourism
Curriculum Consortium

Human Services
Curriculum Consortium

Information
Technology Curriculum
Consortium

Manufacturing
Curriculum Consortium

Marketing, Sales &
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STEM Curriculum
Consortium

Financial Services
Curriculum
Consortium

Law, Public Safety &
Security Curriculum
Consortium

Transportation,
Distribution & Logistics
Curriculum Consortium


Government & Public
Administration
Curriculum Consortium

Steering Committee Representation

- Lucy Hadi, Chancellor, Workforce Education, Florida Department of Education
- Loretta Costin, Vice Chancellor, Workforce Education, FLDOE
- Judy Bilsky, Executive Vice Chancellor, Community Colleges, FLDOE
- Mary Jane Tappen, Deputy Chancellor, Public Schools, FLDOE
- Marsan Carr, Executive Director, FACTE
- Jeff Stevenson, Chief Economic Development Officer, Gulf Coast Community College
- Tony Carvajal, Executive Vice President, Florida Chamber of Commerce
- Dale Brill, Director, Office of Tourism, Trade, & Economic Development
- Monesia Brown, Director, Agency for Workforce Innovation
- Lynda Keever, Publisher and COO, Florida Trend
- Sena Black, Senior Vice President, Marketing & Strategic Intelligence, Enterprise Florida
- Frank Fuller, Contract Manager, Banner Center of Excellence/Career Academies
- Tom Shiner, Director of Special Projects, Workforce Florida, Inc.
- Andra Cornelius, Vice President of Business Outreach, Workforce Florida, Inc.
- Joseph Joyner, Superintendent of St. Johns County
- Barbara Sloan, Vice President of Academic Affairs, Tallahassee Community College

Next Generation Standards for Career & Technical Education Steering Committee

The role of the Steering Committee is to:

- Provide guidance to and oversight of the entire process
 - Approve the program of work for each career cluster
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Career Cluster Working Group* Representation

- Business/Industry
- Professional/Trade Association(s) representing business and industry
- Regional Workforce Board
- Banner Center (if available)
- Local/Regional Economic Development Organization
- Regulatory Agency(s)
- Secondary Sector
- Postsecondary School District Sector
- Community College Sector
- DWE Cluster State Supervisor (staff)

* Each working group will be chaired by a business/industry representative and co-chaired by an educator.

Team

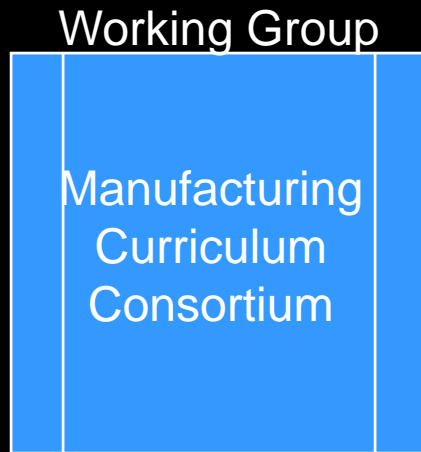
- Chairman:
 - Don Gugliuzza – Tropicana, Suncoast Workforce Board - Region 18
- Co-Chair:
 - Dr. Eric Roe – HCC, FLATE, and Banner Center for Manufacturing
- Mason Jackson - Workforce One - Region 22
- Rod Jaeger – Jaeger Corporation
- Tammy Mandell – University of Florida, Banner Center for Biotechnology
- Kathie Schmidt – St Lucie County Schools
- Stanley Sidor – Daytona State College
- Nancy Stephens – Manufacturers Association of Florida
- Eric Owens – Dept of Education

Goals for Working Committee

- Review information regarding occupations that are important to Florida's economic development
- Compare with occupations (programs) that are currently available in Florida's public educational system
- Identify "gaps"
 - Occupations we are not currently preparing for, that we should be
 - New programs must be developed
- Develop a 3-year program of work

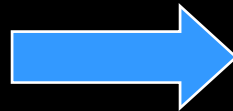
Example of Career Cluster Consortium

Working Group Process

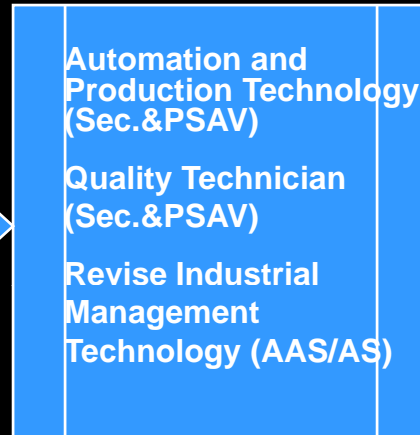


Manage/oversee the process

- Identify occupations
- Develop 3-year program of work
- Oversee implementation of program of work strategies, timeline & participants

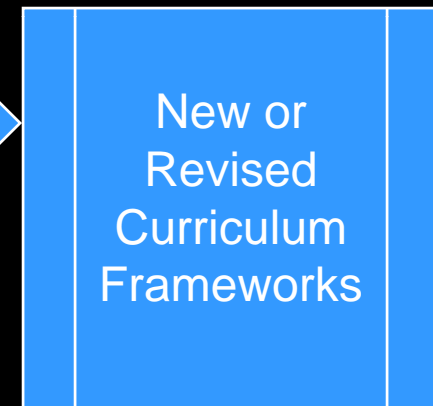


Program Committee



Membership:

- Secondary
- Technical Center
- Community College
- Business/Industry
- Workforce Board
- Banner Center
- Regulatory Agency
- . . . etc.



Next Generation Standards

What an individual needs to know and be able to do

Recommended Actions

- In addition to the process mapped out for review and prioritization of the Manufacturing frameworks, the working group decided on the following action items in the session:
 - Many of the skills and competencies required for modern manufacturing currently reside in the STEM cluster and the logistics cluster
 - The Manufacturing cluster needs to have input in these clusters to ensure that redundant frameworks are not created in more than one cluster and that relevant manufacturing competencies are included in any reform that takes place.
- Conclusion: The entire review process **MUST** contain a mechanism that allows for cross cluster collaboration

Recommended Actions (continued):

- A framework either needs to be updated or created to support the “skilled generalist” concept at the secondary level
 - This framework is needed to support the advanced manufacturing sector and provide a pathway into the postsecondary Engineering Technology degree
 - Should contain the MSSC CPT competencies and align with appropriate occupations (Productivity Improvement Technician, ...)
 - In the Manufacturing cluster, Engineering Assisting may be a candidate for update. In the STEM cluster a proposed update of the Production Technology framework was previously submitted as Automation and Robotics Technology and could serve as a basis for revision
 - This new or updated framework will feed into the Engineering Technology AS/AAS degree via the existing statewide articulation agreement
 - As the team reviews frameworks career lattices need to be considered from both a secondary and post-secondary pathway as well as a check that post-secondary frameworks contain these linkages
 - Articulation pathways are essential to ensure student success through programs that sequentially build upon a ladder or lattice of competencies

Three Year Program of Work

● 2009-'10

- Create frameworks for "Automation and Production Technology" at Secondary/PSAV level
 - Charge FLATE with the building of the curricula frameworks along with new team members
- Review and revise the Industrial Management Technology AAS/AS framework
- Review clusters in STEM for revision into Manufacturing Cluster
- Recommend elimination of AAS/AS Manufacturing Technology framework

● 2010-'11

- Add revised STEM clusters into Manufacturing Cluster
- Create frameworks for "Quality Tech" at Secondary/PSAV
 - Charge the Banner Center for Biotechnology with demonstrating industry demand and differentiating QA and QC.
 - Charge FLATE with the building of the curricula frameworks along with the Banner Centers for Biotechnology and Manufacturing and new industry team members
- Create new frameworks for emerging occupations (Green, etc)
- Consolidate and revise these Frameworks
 - Secondary/PSAV
 - Machining/Precision Metal Fabrication/Sheet Metal Fabrication Technology
 - PSAV only
 - Electrical and Instrumentation Technology/Electromechanical Technology/Engineering Related Technology
 - Mine Safety and Health/Occupational Safety and Health

● 2011-'12

- Consolidate this Framework
 - Secondary/PSAV
 - Commercial Business Machine Maintenance/Consumer Electronic Product Servicing
- Begin new three year plan

