

**Career & Technical Education**  
2012 Update

**ARCHITECTURE &  
CONSTRUCTION**

**ENERGY**

**MANUFACTURING**

**TRANSPORTATION,  
DISTRIBUTION & LOGISTICS**

Florida Association of Career & Technical Education (FACTE) Annual Conference  
Wednesday, July 25, 2012

# Presented by

***KATHRYN FREDERICK***

Architecture & Construction

Energy

***ERIC OWENS***

Manufacturing

Transportation, Distribution & Logistics

# Outline

- Academic Alignment
- Industry Credentials
- STEM Program List
- Website Updates
- Program Updates
  - Architecture & Construction
  - Energy
  - Manufacturing
  - Transportation, Distribution & Logistics

# Academic Alignment

- Identify standards within CTE programs
- Expert math / science teachers
- Expert CTE teachers

# Academic Alignment

## Fully aligned:

- Building Construction Technologies
- Drafting / Architectural Drafting
- Energy Technician
- Solar Energy Technology
- Electronic Technology
- Industrial Biotechnology
- Machining
- Automotive Service Technology
- Medium & Heavy Duty Truck & Bus Technology

# Academic Alignment

## Program Level:

### Building Construction Technologies

| Course                               | Math        |            |              | Science    |            |            |            |            |            |             |              |             |
|--------------------------------------|-------------|------------|--------------|------------|------------|------------|------------|------------|------------|-------------|--------------|-------------|
|                                      | ALG1        | ALG2       | GEO          | APH        | ASGH       | BIO1       | CHM1       | ESS        | GEN        | MS1H        | PS           | PHY1        |
| Building Construction Technologies 1 | 4/36<br>11% | 2/41<br>5% | 31/45<br>69% | 1/53<br>2% | 1/52<br>2% | 2/56<br>4% | 3/55<br>5% | 1/58<br>2% | 1/35<br>3% | 1/42<br>2%  | 4/56<br>7%   | #           |
| Building Construction Technologies 1 | 4/36<br>11% | #          | 8/45<br>18%  | 1/53<br>2% | 5/52<br>8% | 4/56<br>7% | 5/55<br>9% | 2/58<br>3% | 1/35<br>3% | 5/42<br>12% | 10/56<br>18% | 5/53<br>9%  |
| Building Construction Technologies 3 | 9/36<br>25% | 3/41<br>7% | 30/45<br>67% | 1/53<br>2% | 2/52<br>4% | 4/56<br>7% | 4/55<br>7% | 2/58<br>3% | 1/35<br>3% | 7/42<br>17% | 5/56<br>9%   | 1/53<br>2%  |
| Building Construction Technologies 4 | 3/36<br>8%  | #          | 4/45<br>9%   | #          | #          | #          | #          | 1/58<br>2% | #          | #           | #            | 1/53<br>2%  |
| Building Construction Technologies 5 | 5/36<br>14% | #          | 2/45<br>4%   | #          | 1/52<br>2% | #          | #          | 1/58<br>2% | #          | #           | #            | 1/53<br>2%  |
| Building Construction Technologies 6 | #           | #          | #            | #          | #          | #          | 1/55<br>2% | #          | #          | #           | 1/56<br>2%   | #           |
| Building Construction Technologies 7 | 2/36<br>6%  | #          | 1/45<br>2%   | #          | 1/52<br>2% | #          | 2/55<br>4% | 1/58<br>2% | #          | 1/42<br>2%  | 5/56<br>9%   | 6/53<br>11% |

\*\* Alignment pending

# Alignment attempted, but no correlation to academic course.

# Academic Alignment

Course Level:

## Building Construction Technologies 3

| Math      |              | Science     |            |                           |            |                                 |             |
|-----------|--------------|-------------|------------|---------------------------|------------|---------------------------------|-------------|
| Algebra 1 | 9/36<br>25%  | Biology 1   | 4/56<br>7% | Anatomy/Physiology Honors | 1/53<br>2% | Astronomy Solar/Galactic Honors | 2/52<br>4%  |
| Algebra 2 | 3/41<br>7%   | Chemistry 1 | 4/55<br>7% | Genetics                  | 1/35<br>3% | Marine Science 1 Honors         | 7/42<br>17% |
| Geometry  | 30/45<br>67% | Physics 1   | 1/53<br>2% | Earth-Space Science       | 2/58<br>3% | Physical Science                | 5/56<br>9%  |

\*\* Alignment pending

# Alignment attempted, but no correlation to academic course.

# Industry Credentials

## New:

- Energy Industry Fundamentals Certificate
- Residential Air Conditioning and Heating Certification
- Basic Installer, Mobile Electronics Certified Professional
- FADA Certified Technician



# Industry Credentials

**Revised:**

- ADDA is now four separate certifications:
  - Certified Apprentice Drafter- Architectural
  - Certified Drafter- Architectural
  - Certified Apprentice Drafter- Mechanical
  - Certified Drafter- Mechanical

# 'STEM' Program List

- Now includes programs from multiple clusters:
  - Agriculture
  - Architecture & Construction
  - Energy
  - Engineering & Technology Ed
  - Health Science
  - IT
  - Manufacturing
- Secondary, PSAV and Degree Programs

# Website Updates

[DOE Home](#) > [Workforce Education](#)



## Career and Adult Education

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Directories

Federal Grants

Florida Farmworker Jobs  
and Education Program

GED® Testing

Grants Administration

Industry Certification

Legislation

Next Generation

Occupational Standards

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[CareerandAdultEd@fldoe.org](mailto:CareerandAdultEd@fldoe.org)

## About Us

Workforce Education is designed to meet the needs of our customers, which include students, business and industry, school districts, community colleges, community-based organizations, and correctional institutions. This area represents a significant collaboration and partnership across both private and public sectors throughout the state of Florida to improve Florida's workforce.

## News & Current Events

The Weekly Web Update is sent out each Friday, as needed, to keep you informed of recent or planned updates and additions to the Career and Adult Education Web pages.

- Weekly Web Update
  - [June 29, 2012](#) (PDF, 109KB)
  - [June 22, 2012](#) (PDF, 110KB)
  - [June 15, 2012](#) (PDF, 138KB)
  - [June 1, 2012](#) (PDF, 159KB)
  - [May 18, 2012](#) (PDF, 244KB)

Apprenticeship  
 Articulation Agreements  
 Business Partnerships  
 Career Academies  
 Career Clusters  
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 Perkins IV Resources  
 Presentations  
 Professional Development  
 Ready to Work  
 Research  
 Staff Contacts  
 State Appropriations  
 Statewide Memorandums  
 STEM Career and Technical  
 Education Programs  
 Technical Assistance Papers

## Career Clusters and Staff Contact Information

[Eric Owens](#)

Interim Director, Career and Technical Education Programs  
 (850) 245-9020

| Career Cluster  | Staff                             | Phone          |
|---|-----------------------------------|----------------|
| <a href="#">Agriculture, Food, and Natural Resources</a>      | <a href="#">Amy McAllister</a>    | (850) 245-9017 |
| <a href="#">Architecture &amp; Construction</a>               | <a href="#">Kathryn Frederick</a> | (850) 245-9016 |
| <a href="#">Arts, A/V Technology &amp; Communication</a>      | <a href="#">John Marshall</a>     | (850) 245-9013 |
| <a href="#">Business Management &amp; Administration</a>      | <a href="#">Wendy Sikora</a>      | (850) 245-0982 |
| <a href="#">Education and Training</a>                        | <a href="#">Alicia Alexander</a>  | (850) 245-9900 |
| <a href="#">Energy</a>  | <a href="#">Kathryn Frederick</a> | (850) 245-9016 |
| <a href="#">Engineering &amp; Technology Education</a>        | <a href="#">Duane Hume</a>        | (850) 245-9003 |
| <a href="#">Financial Services</a>                            | <a href="#">Wendy Sikora</a>      | (850) 245-0982 |
| <a href="#">Government &amp; Public Administration</a>        | <a href="#">Terrence Milton</a>   | (850) 245-0663 |
| <a href="#">Health Science</a>                                | <a href="#">Narcissus Willis</a>  | (850) 245-9018 |
| <a href="#">Hospitality &amp; Tourism</a>                     | <a href="#">Alicia Alexander</a>  | (850) 245-9900 |
| <a href="#">Human Services</a>                                | <a href="#">Terrence Milton</a>   | (850) 245-0663 |
| <a href="#">Information Technology</a>                        | <a href="#">Duane Hume</a>        | (850) 245-9003 |
| <a href="#">Law, Public Safety &amp; Service</a>              | <a href="#">Terrence Milton</a>   | (850) 245-0663 |
| <a href="#">Manufacturing</a>                                 | <a href="#">Eric Owens</a>        | (850) 245-9020 |
| <a href="#">Marketing, Sales, &amp; Service</a>               | <a href="#">John Marshall</a>     | (850) 245-9013 |
| <a href="#">Transportation, Distribution, &amp; Logistics</a> | <a href="#">Eric Owens</a>        | (850) 245-9020 |
| <a href="#">Additional CTE Programs/Courses</a>               |                                   |                |
| <a href="#">Diversified Education</a>                         | <a href="#">John Marshall</a>     | (850) 245-9013 |
| <a href="#">Special Needs</a>                                 | <a href="#">Jane Silveria</a>     | (850) 245-9022 |
| <a href="#">Continuing Workforce Education</a>                | <a href="#">Eric Owens</a>        | (850) 245-9020 |
| <a href="#">Other Vocational Programs</a>                     | <a href="#">Terrence Milton</a>   | (850) 245-0663 |
| K-12 Initiatives  |                                   |                |
| <a href="#">Career Academies</a>                              | <a href="#">Gayle Manley</a>      | (850) 245-9057 |

## Energy Career Cluster

**\*\*\*Updated Home Page\*\*\***

Educational programs in the Energy Cluster prepare students for careers in planning, managing and providing support and technical services related to the generation, transmission and distribution of various types of energy along with the engineering design, construction, maintenance and repair of these systems.

### Energy Links

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- [Curriculum Frameworks - \(2012 - 2013\)](#)
- [Curriculum Frameworks - \(2011- 2012\)](#)
- [Next Generation Occupational Standards \(NGOS\)](#)

### Career and Technical Student Organizations

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- [Florida SkillsUSA](#)
- [SkillsUSA](#)

### Related Organizations and Resources

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- [Banner Center for Clean Energy \(University of Central Florida\)](#)
- [Banner Center for Energy \(Indian River State College\)](#)
- [Center for Energy Workforce Development \(CEWD\)](#)
- [Energy Kids \(U.S. Energy Information Administration\)](#)
- [Florida Energy Systems Consortium \(FESC\)](#)
- [Florida Solar Energy Center \(FSEC\)](#)
- [Florida Energy Workforce Consortium \(FEWC\)](#)
- [Get into Energy](#)
- [Get into Energy Florida](#)
- [U.S. Department of Energy](#)
- [U.S. Department of Energy: Energy Efficiency and Renewable Energy](#)
- [U.S. Department of Energy: Energy Efficiency and Renewable Energy - Energy Basics](#)
- [U.S. Environmental Protection Agency \(EPA\) Clean Energy](#)

### Industry Certification Providers

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- [Center for Energy Workforce Development - Energy Industry Fundamentals](#)
- [National Center for Construction Education and Research \(NCCER\)](#)
- [North American Board of Certified Energy Practitioners \(NABCEP\)](#)

Federal Grants

Florida Farmworker Jobs  
and Education Program

GED® Testing

Grants Administration

Industry Certification

Legislation

Next Generation

Occupational Standards

Perkins IV Resources

Presentations

Professional Development

Ready to Work

Research

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State Appropriations

Statewide Memorandums

STEM Career and Technical  
Education Programs

Technical Assistance Papers

Veteran Diploma Program

## Related Organizations and Resources

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## Enrollment Information

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- [2010-2011 Energy Program Enrollment](#) (Excel, 75KB)

For more information about the Energy Career Cluster, please contact [Kathryn Frederick](#), or at (850) 245-9016.

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For questions & comments regarding education issues: [Commissioner@fldoe.org](mailto:Commissioner@fldoe.org) | For questions & comments regarding this Web site: [E-mail Webmaster](#)

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# ***ARCHITECTURE & CONSTRUCTION***



# Architecture & Construction

New programs for 2012-2013

- Introduction to Architecture & Construction
- Introduction to Architecture & Construction and Career Planning
- Fundamentals of Architecture & Construction



# Architecture & Construction

## Programs reviewed for 2012-2013

- Building Construction Technologies
- Brick and Block Masonry
- Cabinetmaking
- Carpentry
- Civil Engineering Aide
- Electrician
- Electricity
- Painting and Decorating
- Plumbing Technology

# Architecture & Construction

Programs under review for 2013-2014

- Air-Conditioning, Refrigeration & Heating Technology
- Refrigeration Technology
- Tile Setting
- Air-Conditioning, Refrigeration & Heating Systems Technology (AAS)
- Construction Electricity Management (AAS)

# Architecture & Construction

Programs to be daggered for deletion in 2013-2014

- Concrete Masonry
- Industrial Pipefitter
- Structural Steel Work
- Surveying and Mapping Technology
- Naval Architecture and Yacht Design

# Architecture & Construction

Calling reviewers for 2014-2015

- Building Trades & Construction Design Technologies
- Drafting Programs (all Secondary & PSAV)
- Commercial & Industrial Insulation
- Plastering
- Roofing
- Building Construction Technology (AS/AAS)
- Carpentry Management (AS/AAS)
- Construction Management Technology (AS/AAS)

***ENERGY***



# Energy

## New programs for 2012-2013

- Introduction to Energy
- Introduction to Energy and Career Planning
- Fundamentals of Energy

# Energy

## Programs reviewed for 2012-2013

- Electrical Line Service & Repair
- Electrical Distribution Technology
- Electrical Power Technology

# Energy

## Programs under review for 2013-2014

- Solar Energy Technology
- Solar Thermal System Design, Installation & Maintenance



# Energy

## Calling reviewers for 2014-2015

- Energy Generation Technician
- Power Distribution Technician
- Energy Technician
- Solar Photovoltaic System Design, Installation & Maintenance

# ***MANUFACTURING***



# Manufacturing

## New programs for 2012-2013

- Fundamentals of Manufacturing (6-8)
- Introduction to Manufacturing (6-8)
- Introduction to Manufacturing and Career Planning (6-8)
- Manufacturing Directed Study (Secondary)
- Manufacturing Cooperative Study-OJT
- Mechanical Design and Programmer-CCC

# Manufacturing

## Programs reviewed for 2012-2013

- Aerospace Technology
- Appliance Repair
- Boat & Yacht Repair
- Boatbuilding – Wood & Fabricated
- Computer Integrated Technology
- Industrial Technology
- Jewelry Making & Repair
- Manufacturing Technology
- Simulation Technology

# Manufacturing

## Programs under review for 2013-2014

- Industrial Biotechnology
- Automation & Production Technology
- Industrial Machinery Maintenance & Repair
- Machining
- Precision Metal Fabrication
- Sheet Metal Fabrication Technology
- Electrical Instrumentation Technology
- Gaming Machine Repair Technology
- Chemical Technology
- Engineering Technology
- Safety Engineering Technology
- Biotechnology
- Industrial Management Technology

# Manufacturing

Calling reviewers for 2014-2015

- Engineering Assisting
- Applied Welding Technology
- Electronic System Assembly
- Electronic Technology
- Millwright
- Biomedical Engineering Technology
- Electronics Engineering Technology

***TRANSPORTATION,  
DISTRIBUTION &  
LOGISTICS***



# Transportation, Distribution & Logistics

## New programs for 2012-2013

- Fundamentals of Transportation (6-8)
- Introduction to Transportation, Distribution and Logistics (6-8)
- Introduction to Transportation, Distribution and Logistics and Career Planning (6-8)
- Transportation, Distribution and Logistics Cooperative Education – OJT
- Transportation, Distribution and Logistics Directed Study
- Avionics Technology
- Mobile Electronics Technology



# Transportation, Distribution & Logistics

## Programs reviewed for 2012-2013

- Advanced Automotive Service Technology
- Automotive Detailing
- Automotive Service Management
- Dealer Specific Automotive Technology
- Gasoline Service Technology
- Marine Service Technology

# Transportation, Distribution & Logistics

Programs under review for 2013-2014

- Automotive Service Technology
- Commercial Fishing
- Medium and Heavy Duty Truck and Bus Technician
- Motorcycle Service Technology
- Recreational Vehicle Service Technology
- Transit Technician
- Heavy Equipment Mechanics
- Heavy Equipment Operations
- Marine Engine, Management and Seamanship

# Transportation, Distribution & Logistics

Calling reviewers for 2014-2015

- Automotive Collision Repair and Refinishing
- Aviation Airframe Mechanics
- Aviation Powerplant Mechanics
- Aviation Administration
- Professional Pilot Technology
- Aviation Maintenance Management
- Aviation Operations

# Contact Information

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