



## About the Pennsylvania CTE Best Practices Initiative

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The Pennsylvania Department of Education's Bureau of Career and Technical Education (PDE-BCTE) has launched a statewide initiative to increase the quality and impact of career and technical education (CTE) programs, while ensuring that they are aligned with the commonwealth's economic and workforce development priorities. The Pennsylvania CTE Best Practices Initiative, carried out by the Meeder Consulting Group in partnership with the PDE-BCTE, is documenting the strategies used by CTE programs to create standards aligned systems and to support those systems with people, processes and partnerships. All of these strategies are aligned to the goal of increasing academic and technical achievement among students.

**Case Studies:** Researchers from Meeder Consulting conducted one-day site visits at five career and technical centers selected by PDE-BCTE, which were: Erie County Technical School (ECTS), Jefferson County-DuBois AVTS (Jeff Tech), Lehigh Career and Technical Institute (LCTI), Lenape Technical School, and Reading Muhlenberg Career and Technology Center (RMCTC). Detailed case studies have been prepared and are under official PDE review as of June 2010.

**Spotlight on Promising Practices:** The research team has also conducted phone interviews and gathered written documentation from a number of other schools to create shorter profiles of promising practices. Approximately 25 short profiles of promising practices have been drafted and are under review.

**Technical Assistance Program:** Information about these best practices is being shared through PDE-BCTE's Technical Assistance Program (TAP) through which career and technical centers (CTCs) receive assistance to help raise student performance on the PSSA (Pennsylvania System of School Assessment) and technical end-of-program assessments.

Information on the Pennsylvania CTE Best Practices Initiative can be found at:  
<http://www.pacareertech.org/>

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## Key Improvement Strategies for Pennsylvania CTE

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*Leaders and teachers in CTE programs that improve are very intentional about achieving student success. They thoughtfully develop a Standards Aligned System and support that system with people, processes and partnerships to deliver results.*

<b>Create a Standards Aligned System through Instruction, Intervention, Curriculum and Assessment</b>	
<b>Instruction</b>	<ul style="list-style-type: none"> <li>• Integrate literacy and numeracy strategies into CTE</li> <li>• Build relevance through cross-curricular linkages</li> </ul>
<b>Intervention</b>	<ul style="list-style-type: none"> <li>• Provide extra help to strengthen academic and/or technical skill performance</li> <li>• Deliver personalized student support and guidance</li> </ul>
<b>Curriculum Framework</b>	<ul style="list-style-type: none"> <li>• Develop a standardized and aligned curriculum</li> </ul>
<b>Fair Assessment</b>	<ul style="list-style-type: none"> <li>• Use assessment results to target instructional strategies</li> </ul>
<b>Clear Standards</b>	<ul style="list-style-type: none"> <li>• Create standards for all CTE Majors (established by PDE-BCTE)</li> </ul>
<b>Materials and Resources</b>	<ul style="list-style-type: none"> <li>• Offer materials and resources to CTC's (provided by PDE-BCTE through the Technical Assistance Project and Best Practices Initiative)</li> </ul>
<b>Support a Standards Aligned System through People, Processes and Partnerships</b>	
<b>People</b>	<ul style="list-style-type: none"> <li>• Build a culture of targeted and ongoing professional growth</li> <li>• Center teacher evaluation within a culture of professional growth</li> <li>• Develop a cohesive team</li> </ul>
<b>Processes</b>	<ul style="list-style-type: none"> <li>• Be intentional and systemic about change</li> <li>• Make program and instructional decisions based on data</li> </ul>
<b>Partnerships</b>	<ul style="list-style-type: none"> <li>• Cultivate relationships with community, business and industry partners</li> <li>• Strengthen relationships with education partners</li> </ul>



## Erie County Technical School (ECTS)

ECTS is a part-time career and technical center that serves 720 students in grades 10-12 during two half-day sessions (morning and afternoon). ECTS currently offers 18 CTE majors. The school has 21 technical educators, a literacy coach, a math coach, a math instructor and a professional skills instructor. Professional support staff members include an admissions coordinator, a guidance services coordinator, and a business partnerships coordinator. ECTS is located in Erie, Pennsylvania, and serves 11 rural and suburban school districts: Fairview, Fort LeBoeuf, General McLane, Girard, Harbor Creek, Iroquois, Millcreek Township, Northeast, Northwestern, Union City and Wattsburg.

### ECTS's Key Strategies At-A-Glance

- CTE teachers collaborate with math and reading coaches to make academic subjects more relatable to CTE content
- "Reader Response" days and a "Word Wall" give literacy a prominent presence
- Professional skills program helps students to establish and build employability skills
- Strong relationships with sending school counselors lead to cohesive support and guidance for students
- Plans of Study, Program Guides, and Course Sequences provide valuable tools for students, parents and partners
- Focus on quality and use of data through ISO-9000 registration permeates the school

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## **Jefferson County-DuBois AVTS (Jeff Tech)**

Jeff Tech is a full-time, comprehensive career and technical center that serves 460 students in grades nine through 12. Admittance of ninth-grade students began in 2008. As a "comprehensive" CTC, students who attend Jeff Tech take academic courses (math, science, English, social studies, health, physical education) as well as a CTE program. The school currently offers 15 CTE majors. Jeff Tech is located in Reynoldsville, Pennsylvania, and provides service for four area school districts: Brockway Area School District, Brookville Area School District, DuBois Area School District and Punxsutawney Area School District.

### **Jeff Tech's Key Strategies At-A-Glance**

- STAR (Stop Everything and Read) used on a school-wide basis
- Math teachers work with CTE teachers to create linkages between their courses
- CTE and academic colleagues collaborate to create a link between academic math and its technical applications
- "Integration Day" incorporates academic and technical skills while engaging the entire school and all disciplines around a central theme
- School leaders meet regularly with each teacher to review students scores on PSSA and end-of-program occupational assessments
- Eight special education teachers provide on-site support to students

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## Lehigh Career and Technical Institute (LCTI)

Located in Schnecksville, Pennsylvania, LCTI provides CTE to approximately 3,000 secondary students in Lehigh County. This number represents almost 25 percent of the eligible high school students in the county. The school currently offers 50 secondary CTE majors in its expansive 450,000 square foot facility. LCTI serves students from nine school districts: Allentown, Catasauqua, East Penn, Northern Lehigh, Northwestern Lehigh, Parkland, Salisbury, Southern Lehigh and Whitehall-Coplay.

### LCTI's Key Strategies At-A-Glance

- Teachers integrate academic and CTE instruction to create rigorous learning experiences
- Service Occupations Cluster labs help special education students with more significant disabilities develop technical skills
- The Career Academy Program focuses on personalized learning experiences to help at-risk students graduate
- The “curriculum development, delivery and evaluation process” emphasizes integrated curriculum that aligns to college-readiness skills and industry certifications
- Instructional coaches conduct job-embedded professional development
- “Educator Academies” encourage teachers to share instructional strategies with colleagues
- Data analysis provides critical information to support student achievement
- The “CTE Improvement Plan” will examine the effect of interventions on student achievement
- Ongoing communication and outreach efforts strengthen relationships with key stakeholders

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## **Lenape Technical School**

Lenape Tech is a full-time, comprehensive career and technical center that serves 500 students in grades 11-12. As a "comprehensive" CTC, students who attend Lenape Tech take academic courses (math, science, English, social studies, health, physical education) as well as CTE programs on site. The school currently offers 16 CTE majors. Lenape Tech is located in Ford City, Armstrong County, Pennsylvania, and serves four school districts: Apollo-Ridge, Armstrong, Freeport and Leechburg. The area served spans more than 500 square miles. The school was opened in 1964 and was the first comprehensive CTC in Pennsylvania.

### **Lenape Tech's Key Strategies At-A-Glance**

- Literacy strategies emphasize comprehension and engage students in interactive learning
- "Integrated Thematic Instruction" links CTE and academic disciplines together through special projects like the prototype partnership with a local company
- Co-teaching strategies give extra help to students with disabilities in the regular classroom
- "Teachers as Advisors" program gives every student connection to a teacher advisor/advocate during 11th and 12th grades
- Diagnostic assessments help target academic supports and tutoring
- Regional Accountability Team coordinates services with sending school districts
- "Multiple Client Feedback" model uses data for planning and improvement

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## **Reading Muhlenberg Career and Technology Center (RMCTC)**

Founded in 1968, RMCTC in Reading, Pennsylvania, provides CTE to students from the Reading and Muhlenberg school districts. Reading is an urban district and Muhlenberg includes both suburban and rural areas. Students in grades 10, 11 and 12 spend half of their day at RMCTC and the other half at their home high school. RMCTC offers 31 CTE majors.

### **Reading Muhlenberg's Key Strategies At-A-Glance**

- "Teaching smarter" by integrating literacy and numeracy lessons in a targeted and ongoing manner
- Complete revision of the school-wide curriculum to align with end-of-program occupational assessments and Pennsylvania standards.
- Program learning guides provide program consistency and enable teachers to individualize instruction for students
- Literacy strategies emphasize comprehension and engaging interactive learning
- Development of a proactive and goal-oriented teacher evaluation system
- Applying three key principles to implementing change: map it out, challenge without overwhelming and provide support
- Establishing strategies and goals based on performance data

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