

## Resources Used for Programs of Study (POS) Development

- 1. Laws and Policies** - Perkins, CATS.  
The purpose of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 is to develop more fully the academic, and career and technical skills of secondary education students and postsecondary education students who elect to enroll in career and technical education programs. CATS is an acronym for the Career and Technical Education Information System, which is utilized for secondary career and technical education program approvals.
- 2. Course Sequences** – secondary and postsecondary alignment.  
Secondary POS include coherent and rigorous academic content aligned with Pennsylvania Core Standards, and relevant career and technical education content integrated in a coordinated, non-duplicative progression of courses that align secondary and postsecondary education to adequately prepare students to succeed in careers. Scope and sequence of courses in a secondary school must be approved by the Pennsylvania Department of Education's (PDE) Bureau of Career and Technical Education, through the requirements of Chapter 339, Vocational Education Standards. The focus of PDE is to ensure that every graduating student is prepared for college and a career.
- 3. Partnerships** - educators, administrators, institutions.  
Ongoing relationships among education, business, industry, and other community stakeholders are central to POS design, implementation, and maintenance. Elementary, middle and high school teachers, guidance counselors, principals and curriculum directors, business owners, craftsmen, and industrial personnel have forged positive working relationships, as educational partners, in order to develop an understanding of diverse career options and workplace competencies.
- 4. Guidance Counseling** - career pathways.  
In Pennsylvania, school counselors are integral in the academic, career and personal/social development of all pre-Kindergarten -12 students in the commonwealth. Guidance counselors are able to provide resources for 16 nationally defined career clusters. The 16 career clusters link academic student achievement with the knowledge and skills they need for success in college and careers. Career clusters identify pathways from secondary school to two- and four-year colleges, graduate school, and the workplace, so students can learn in school and identify careers of interest in the future. This connection to future goals motivates students to work harder and enroll in more rigorous courses.
- 5. Credit Transfer Agreements** - statewide.  
A Perkins statewide articulation agreement exists between Perkins funded postsecondary institutions and secondary schools with PDE approved Career and Technical Education POS. Under the Pennsylvania five-year plan and, in accordance with the Carl D. Perkins Career and Technical Education Improvement Act of 2006, all postsecondary institutions receiving funds under the Act are required to award college-level credit or equivalent clock hours to a matriculated student and apply that credit toward the completion of the approved PDE POS, leading to an industry recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.
- 6. College and Career Readiness** - rigorous courses, industry certifications.  
Research shows that career success requires the same level of college preparatory courses as postsecondary success requires. PDE's focus is to ensure that every secondary student who graduates is prepared for college and a career. In order to be successful in this program, students should follow the academic sequence as determined by Pennsylvania's

high school reform efforts. The industry certification link provides more detailed information about the certifications, including cost, available resources, and certification requirements.

7. **Accountability and Evaluation Systems** - PIMS, CATS, TIMS.  
PDE's statewide longitudinal data system, known as the Pennsylvania Information Management System (PIMS), is improving data capabilities by enhancing school districts' capacities to meet student-level data reporting requirements and provide robust decision support tools. The primary objectives of PIMS are to establish enterprise-wide systems and processes to streamline data management and utilization, provide multi-year longitudinal data to help teachers and administrators address individual student needs, and empower teachers with state-of-the-art data analysis tools to improve individual student achievement. CATS is an acronym for the Career and Technical Education Information System, which is utilized for secondary career and technical education program approvals. The Teacher Information Management System (TIMS) allows the exchange of data among several existing applications currently used by PDE to collect and manage data related to professional educators. TIMS also incorporates an online certification process that will replace the current teacher certification system.
8. **Professional Development** - PDE, centers for career and technical education teacher preparation.  
Professional development must be based on sound research and promising practices, and it must be part of an approved plan for building educators' skills over the long term. Professional development decisions are based on student needs and evaluated using student data. Professional development activities should contain content that will increase student learning. Professional development is provided through a process that is most likely to result in sustained school improvement. The three centers for career and technical education teacher preparation that have been established in Pennsylvania are: Indiana University of Pennsylvania, Temple University, and The Pennsylvania State University.
9. **Teaching and Learning Strategies** - integration of academics into career and technical education.  
Integration is the process of blending academic, and career and technical education content. Integrated learning is a process to assist schools and teachers to evolve into a new world of teaching and learning. It is a way to change the concepts that are taught, the manner in which students are taught, the expectations of students within the classroom, the way in which teachers relate to each other, the way in which students relate to each other, and the manner in which students and teachers interact. Integration should occur at both the secondary and postsecondary levels.
10. **Technical Skills Assessment** - student attainment.  
PDE's Bureau of Career and Technical Education developed Pennsylvania-specific performance levels and cut scores in conjunction with the Student Occupational Competency Testing program. The performance levels for career and technical education within the program testing are basic, competent, and advanced. Those students who achieve the advanced level will receive a Pennsylvania Skills Certificate.