



Department of
EDUCATION

Office of Educational Improvement and Innovation

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**Oregon Department of
Community Colleges and
Workforce Development**

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**Career and Technical Education
Program of Study Application (Perkins Eligible)
2011 Version**

Directions—please enter information into ALL the fields in this application. (If you have technical problems with this application, contact Ron Dodge—503-947-5653, ron.dodge@ode.state.or.us.)

Secondary School District:	Hillsboro
Secondary School ID Number:	Glencoe
Secondary School Name:	1200
Community College Name:	Portland Community College
Additional/Alternate College Name:	

CTE POS—Title:	MANUFACTURING TECHNOLOGY	
Career Area:	Industrial Engineering Systems--IE	
Cluster Area:	IE--Manufacturing	
Focus Area:		
Secondary CIP Code & Title:	4800 (4 digit)	4800 PRECISION PRODUCTION
Community College CIP & Title:	15.0613 (6 digit)	Manufacturing Engineering Technology/Technician.
Secondary Program Title:	MANUFACTURING TECHNOLOGY	
Community College Program Title:	Machine Manufacturing Technology	
Community College Award:	Associate of Applied Science	
Secondary School/District Administrator:	Dave Parker	davep@hsd.k12.or.us
Secondary Curriculum Coordinator:	Chris Steiner	<steinerc@hsd.k12.or.us
Regional Coordinator/Contact:	2A--Lynn Wilson-Dean	Lynn.wilsondean@pcc.edu
Community College Contact:	Kendra Cawley	KCawley@pcc.edu
Secondary Lead teacher:	Robert Kressin Brauer, Jr	brauerr@hsd.k12.or.us
Teacher CTE Endorsement:	IES--Manufacturing	9/29/2012
		Enter email
		Enter email
College Lead or Department Chair:	Huddleston, Joe C	joe.huddleston@pcc.edu
		Enter email
Secondary CTE POS Visual Hyperlink: (or include a hardcopy of visual in Addendum B)	http://spot.pcc.edu/pavtec/HS%20POS%20Roadmap%20Templates/	<input type="checkbox"/> No link, but included in Addendum B
CC CTE POS/Pathway Visual Hyperlink: (or include a hardcopy of visual in Addendum B)	http://www.pcc.edu/programs/machine-manufacturing/	<input type="checkbox"/> No link, but included in Addendum B

Submit complete application materials by email to your CTE Regional Coordinator.
(Regional Coordinator: Email application and addenda to this mailbox-- POS.Application@state.or.us)

CTE POS Course Lists—Secondary

Please list the CTE Program of Study Secondary Courses below. “Core Courses” are those in which the CTE teacher will:

- Teach with intent and purpose the CTE POS knowledge and skills identified in the CTE POS’ Skill Set
- Assess and record student achievement of those standards
- If your secondary school does not have course numbers, contact [Ilene Spencer](#)
- It is expected that it will take at least 2 credits to complete a skill set and prepare the student for the technical skill assessment.)

Secondary Core CTE Courses

TSA* Required	School Course #	Secondary Course Name	# of Credits	5-digit NCES Code	Course Description (brief) (boxes below will expand)	Teacher Name	**CN?	Articulating College	College Course #	College Course Name
x	1305311	MACHINE WELDING I	0.5	13053	This course is designed to give students the basic understanding of machine tool operations such as lathes, mills and drill presses. CNC operations will also be covered. Heavy emphasis is placed on wire feed welding, and large fabrication projects (such as trailers and aluminum driftboats) will be constructed.	Brauer	<input type="checkbox"/>	pcc	-->	multiple ones MCH 100 Machine Tool Basics MCH 105 Blueprint Reading I MCH 110 Blueprint Reading II
x	1305312	MACHINE WELDING I	0.5	13053	This course is designed to give students the basic understanding of machine tool operations such as lathes, mills and drill presses. CNC operations will also be covered. Heavy emphasis is placed on wire feed welding, and large fabrication projects (such as trailers and aluminum driftboats) will be constructed.	Brauer	<input type="checkbox"/>	pcc	-->	multiple ones: MCH 120 Machine Shop Math MCH 125 Speeds and Feeds
x	130532	MACHINE	0.5	13053	MACHINE WELDING II	Brauer	<input checked="" type="checkbox"/>	pcc	-->	multiple ones:

CTE Program Of Study (Perkins Eligible)....2011 Application (continued)

	1	WELDING II			This is an advanced course giving students a greater understanding of CNC/CAM operations with heavy emphasis on the applications of machine tools. Wire feed welding and machining processes will be linked with PCCs articulation credits. Students will be required to submit a welding project of their own design to a national welding contest held each year. Community college credit may be granted for completion of this course.					MCH 145 Layout Tools MCH 150 Precision Measuring Tools MCH 160 Drilling Machines & Operations MCH 180 Turning Machines & Operations MCH 205 Vertical Mill Mach & Operation
x	130532 2	MACHINE WELDING II	0.5	13053	MACHINE WELDING II This is an advanced course giving students a greater understanding of CNC/CAM operations with heavy emphasis on the applications of machine tools. Wire feed welding and machining processes will be linked with PCCs articulation credits. Students will be required to submit a welding project of their own design to a national welding contest held each year. Community college credit may be granted for completion of this course.	Brauer	<input checked="" type="checkbox"/>	pcc	-->	multiple ones: MCH 145 Layout Tools MCH 150 Precision Measuring Tools MCH 160 Drilling Machines & Operations MCH 180 Turning Machines & Operations MCH 205 Vertical Mill Mach & Operation

*TSA required—Technical Skill Assessment required course—required courses that, when completed, trigger TSA assessment eligibility for the student

** CN = College Now—course identification as College Now or articulated courses

CTE POS Course Lists—Post-Secondary

Post-secondary Core CTE Courses: List all courses that complete delivery of the identified Skill Set—those included in the Course/Skill Set crosswalk matrix

Name of Certificate or Degree Program		Enter name of college program		Degree or Certificate:	Select certificate or degree
College Course #	Post-Secondary Course Name	Number of Credits	*College Now?	Course Description (brief) (boxes below will expand)	
MCH100	MCH100 Machine Tool Basics	1	<input checked="" type="checkbox"/>	Covers using the Machinery's Handbook and Machine Tool Safety. An overview in utilizing the Machinery's Handbook, safe work practices, safe clothing for personal safety, fire prevention in the shop, and hand tool safety.	
MCH105	MCH105 Blueprint Reading	1.5	<input checked="" type="checkbox"/>	Covers blueprints using multi-view projection, sectional & auxiliary views and title blocks & drawing format which are the basis for all graphical communication in industry today. Knowledge of the techniques used on blueprints is necessary in industry whenever descriptions of size, shape, and arrangement are used to produce, service, or sell a product. Introduces blueprints and drawing techniques which will be built upon with further modules in the program.	
MCH135	MCH135 Basic Measuring Tools	1.5	<input checked="" type="checkbox"/>	Covers use and applications associated with basic measuring tools including: the machinist's scale, dividers, telescoping gage, combination square, hermaphrodite caliper, surface gage, surface finish gage. Introduces the proper techniques and applications of the basic transfer measurement and comparison tools in measuring holes accurately, scribing parallel lines, finding the center of round stock, determining the factors which contribute to the quality of surface finish, and practice in identifying surface finishes. Prerequisite: MCH 100.	
MCH145	MCH145 Layout Tools	1.5	<input checked="" type="checkbox"/>	Covers instruction and practice in cutting, filing, layout, scribing, use of gage blocks, and utilizing the height gage to accurately layout lines, angles and the location of part features. Introduces the proper use and applications of the hacksaw, scribe, dividers, prick punch, ballpeen hammer, combination square set, and height gage to produce the accurate layout of part features. Prerequisite: MCH 100	
MCH150	MCH150 Precision Measuring Tools	1.5	<input checked="" type="checkbox"/>	Covers instruction and practice of precision measurement with tools commonly used by the machinist to produce and measure part features. This course introduces the proper use, applications and parts of the outside, inside, and depth micrometers; the vernier caliper; dial indicators; and the dial bore gage commonly used by the machinist to verify and	

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				manufacture part features to print specifications. Prerequisite: MCH 100.
MCH160	MCH160 Drilling Machines & Operations	2.0	<input checked="" type="checkbox"/>	Covers setup, applications, parts and operation of the sensitive, upright and radial arm drill presses. This course introduces the commonly performed operations of drilling, reaming, counterboring, countersinking, spotfacing and tapping on the various types of drilling machines used to produce part features to print specifications. Prerequisites: MCH 100, 125, 135
MCH180	MCH180 Turning Machines & Operations	4.0	<input checked="" type="checkbox"/>	Covers setup, applications, parts and operation of the various types of lathes. Introduces the commonly performed operations of drilling, reaming, counterboring, countersinking, spotfacing, tapping, maintaining/aligning, parallel turning, facing, filing, knurling, grooving, cutting radii, cutting tapers, and parting on the various types of turning machines used to produce part features to print specifications.
MCH205	MCH205 Vertical Mill Mach & Operation	3.5	<input checked="" type="checkbox"/>	Covers setup, applications and operation of the vertical milling machine. Introduces the commonly performed operations and uses of a variety of cutters, accessories, indicators, center/edge finder, clamping methods, squaring a block of material on all 6 sides, find the edge of a workpiece, drilling/threading a hole, performing circular cutting operations, using the boring head to bore holes on manufactured parts to print specifications.

* CN = College Now—course identification as College Now (or articulated courses)

Please use the Excel spreadsheet posted online at (<http://www.ode.state.or.us/search/results/?id=225>), or use one you've created locally to crosswalk the identified Skill Set against the listed courses.
(See Addendum A under Element 1 below)

DIRECTIONS:

- The lists of “Required elements for evaluation” at the end of each section below are documents expected to be included as addenda with this application.
- The Oregon Benchmarks (in the Accountability & Assessment section below) represent statewide goals that Oregon has set to ensure progress towards federal and state requirements.
- Expandable space is provided for comments. This can be filled from the “Strengths” and “Challenges” sections of the [POS Application Guide](#) found on the website.
- Attach appropriate documentation as described in the Addendum part of each Element section.

Element 1: Standards & Content

- ☐ A. Relevant, rigorous standards-based content aligned with challenging academic standards;
- ☐ B. Shared secondary and post-secondary technical content which incorporates the knowledge and skills identified in the Oregon Skill Sets or other industry-based standards, which are validated through national and state employer input;

CTE Program Of Study (Perkins Eligible)...2011 Application (continued)

- ☐ C. The program is of sufficient size, scope and sequence to include curriculum and instruction leading to student attainment of academic and technical knowledge and skills for high school graduation, college entry, and careers within **high wage, high demand fields**.
- ☐ D. Systemic approach to CTE using industry-based academic and technical knowledge and skills where student performance is demonstrated through valid and reliable assessments aligned to industry standards; and
- ☐ E. Assure secondary and post-secondary students are prepared for **high demand and high wage careers and occupations** that are responsive to regional, state or global employment trends.
- ☐ F. Safety and drug-free workplace expectations are an integral, explicit and mandatory part of the CTE instructional program. Laboratory spaces with power equipment model a safe and clean learning environment. Available safety certification is required for students, as appropriate.
- ☐ G. Based on the Program Design and instructional plan where each student will:
- ☒ Recognize connections between academic and technical content;
 - ☐ Meet diploma requirements, post-secondary entry requirements, and certificate/degree requirements;
 - ☐ Demonstrate mastery of academic and technical content that is aligned with industry standards;
 - ☐ Apply learning through authentic experiences, and
 - ☐ Build confidence to compete in high wage, and/or high demand occupations.

Comments and additional information: Please address the questions for both the Secondary Partner and the Post-Secondary Partner found in the "Areas of Strength" and Priority Concerns" worksheet at the end of this section of the ***Readiness and Sustainability Tool***.

A-Strengths

- Articulation with local community college: PCC
- Entry level job connections with local businesses.
- Real world projects that students can learn skills from: boat building, community job shop
- Perkins funds are spent on updated equipment that students will see at the community college and on the job.
- Meetings annually with PCC staff to ensure alignment with their courses is up to date.

A-Priority concerns:

- Those students have a smooth transition to the workforce or post-secondary training.
- Being able to keep up the high level of training with shrinking district budgets.

The academic community at Portland Community College (PCC) has developed and approved PCC Core Outcomes that are common to graduates of all PCC programs and aligned with general education goals. Core outcomes cover six areas—communication, community and environmental responsibility, critical thinking and problem solving, cultural awareness, professional competence and self-reflection.

CTE students at PCC are assessed on their ability to demonstrate certificate and AAS degree outcomes for their program area of concentration. The current methods of assessment may include one or more of the following: oral or written examinations, quizzes, written assignments, visual inspection techniques, safe work habits, task performance, and work relations.

PCC's Curriculum Support Office is in the process of gathering all current CTE Program Outcomes and publishing them to a website under their respective certificates and AAS degrees (<http://www.pcc.edu/resources/academic/degree-outcome/index.html>).

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In the PAVTEC Work Sessions that included both PCC and secondary school staff, academic (reading, writing and math) entrance expectations of PCC and specifically PCC CTE programs were discussed and cross walked with high school course curricula. The curricula of the high school's CTE Programs of Study, combined with the school's diploma requirements, are designed to prepare students to meet or exceed those expectations.

In PCC's **Welding** program, there is a growing appreciation among students for core soft skills in communications, following oral directions, understanding the criteria of acceptance for their completed work, reading a tape measure, and doing the math required to fabricate a project and follow a blueprint precisely. Students are recognizing that to be competitive and successful in this field, these skills are as important as elsewhere. Being a good welder and laying down a perfect bead does not always completely satisfy an employer.

Addendum A: Skill Standards/Content/Course Crosswalk

Directions: Create an Addendum A folder for properly identified examples of the items listed below:

Required documentation for Element 1:

- Identify industry validated technical skill standards/skill sets; list all Knowledge and Skill Statements for the Cluster, and include Focus Area KS statements if appropriate (Performance Indicators are not necessary for this documentation)
- Standards-to-course crosswalk/mapping—Please use the Excel spreadsheet posted online at (<http://www.ode.state.or.us/teachlearn/pte/posexampleskillmatrixfield.xls>), or use one you've created locally to crosswalk the identified Skill Set against the listed courses. All courses identified in the secondary and postsecondary course lists on pages 2 and 3 should be included.

Element 2: Alignment & Articulation

- ☒ A. An expectation that the elements defined in the Perkins Act will ensure a greater depth and breadth of student learning through the alignment and integration of challenging academic and technical standards in curriculum, instruction and assessment.
[Sec.122(c)(1) & Sec. 134(b)(3)]
- ☒ B. A unified, cohesive sequence of content among secondary and post-secondary partners; a non-duplicative sequence of courses or learning experiences; students receive credit for prior learning whenever possible.
- ☒ C. Alignment of content between secondary and post-secondary education may include course articulation or other ways to acquire Post-secondary education credits (e.g. Oregon's Credit for Proficiency, Dual Credit, etc.).
- ☒ D. Articulation agreements are developed, implemented and supported at the institutional level to ensure long-term sustainability and cross-sector cooperation.
- ☒ E. Based on the program design and instructional plan, each student will:
- ☒ Not need to take a remedial course;
 - ☒ Continually progress in knowledge and skills when ready;
 - ☒ Earn high school or college credit based on performance; and
 - ☒ Make the connection between educational preparation and entry into a career.

Comments and additional information: Please address the questions for both the Secondary Partner and the Post-Secondary Partner found in the "Areas of Strength" and Priority Concerns" worksheet at the end of this section of the **Readiness and Sustainability Tool**:

- Alignment with community college courses so that students can make the transition to post secondary training.
- Field trips to local industries.
- Student visits to the local community college to view their programs first hand.
- Over 60 students in the program received articulation credit with PCC

B – Concerns

- ☒ Struggling with time constraints to meet regularly with PCC staff in order to keep up to date on all of the changes at the community college and industry.

CTE students count on their secondary academics and exposure to possible careers to help shape their futures. In this unstable economic climate, it is more important than ever to match secondary Programs of Study with post-secondary certificates or degrees that lead to high-wage, high-skill, and high-demand jobs based on updated regional or state labor market information.

Dual credit classes provide an opportunity for high school CTE students to transition smoothly from high school to college, in a non-duplicative program of study. Articulated courses also help in shortening time-to-completion of a degree or certificate. Having dual credit available to high school programs is a motivator for students to not only stay in school, but it also motivates students to do well in their classes as articulated courses are directly tied to a college transcript. Dual credit courses offer a broader, stronger high school curriculum and assists with increasing student readiness for college level work.

Dual credit facilitates productive interaction between high schools and the college for curriculum development while enhancing college-school-community relations. In addition, articulation agreements reduce the redundancy of courses between high school and college. Coordinated curriculum helps to assure students meet college standards.

CTE Program Of Study (Perkins Eligible)...2011 Application (continued)

The college's dual credit staff continues to work with high school CTE teachers to make sure students are properly registered for dual credit, and that grades are recorded for dual credit offerings. Dual credit registration is now on-line at the college so this will help facilitate the process for student's to register and participate.

Allowing high school students to receive college credit for CTE high school courses that meet college standards is an important part of students' successful transition to either post-secondary education or higher starting salaries. By providing specific guidance to meet college-level requirements, credit articulation agreements also help support higher quality secondary CTE courses and more qualified CTE teachers. It is important to acknowledge that a lot of barriers still exist that apply to awarding college credit for high school courses. Even when curriculum is aligned, there are issues relating to course delivery and/or instructor qualifications that are "deal-breakers" for dual credit. For Portland Community College, adherence to the faculty-defined Instructor Qualifications is tremendously important for maintaining accreditation standards. On the other hand, when students take a high school course that is substantially the same as a college course, there is reasonable concern that student effort may be duplicative.

In addition to the Institutional Articulation Agreements described above, course-to-course credit articulation agreements are in place for many courses, and will continue to be developed. Updated agreements are prepared annually in the fall by the college's dual credit staff and signed by appropriate secondary and post-secondary staff.

For several years the **Machine Manufacturing Technology** (MMT) program has hosted visiting high school students from around the district for a half day activity. This includes campus tours, a project to make on the machine, and a chance for students to check out master cam. They have a lunch and then visit engineering technology labs. This year 12 schools participated.

Every summer the program hosts at least two students from each high school's robotics program to attend workshops in PCC's **MMT** labs.

Addendum B: Alignment/Articulation Documentation

Directions: Create an Addendum B folder for properly identified examples of: 1) Evidence of partnerships and/or institutional collaboration, 2) alignment or articulation documentation, 3) POS visuals, including documentation created by any CTE POS partners, especially those created jointly.

Required documentation for Element 2:

- Provide evidence of institutional partnerships and collaboration
- Articulation agreement between secondary and post-secondary institutions, showing alignment of standards
- **Provide a CTE POS visual (road map, diagram, chart of courses through college) showing courses and activities available at secondary, multiple entry points at post-secondary, multiple exit points and bridged pathway options, as appropriate; CTE POS visual should illustrate clearly for student, the pathway focus of CTE POS, as well as options related to the CTE POS—(Note: If you have included a hyperlink to these visuals on Page 1 of this application, you do not need to include a copy in this Addendum)**

Element 3: Accountability & Assessment

- ☒ A. Business, community and education partners, such as an Advisory Committee, participate in evaluating program vision, goals and priorities such as:
 - ☒ Assist in CTE program of study development and validation of industry skill standards for curriculum content and technical skill assessment, where appropriate,
 - ☒ Play an active role in curriculum development, implementation and program evaluation,
 - ☒ Participate in the CTE teacher recruitment, instructor appraisal process and ongoing faculty professional development.
- ☒ B. Each Perkins-eligible CTE program of study's performance shall be measured against the set of Perkins-required performance measures as described in Perkins IV Measurement Definitions. [Perkins Section 113 (2)(A-B)].
- ☒ C. Perkins performance data is used for data-driven, CTE program of study improvement decisions (See page 12 of this document)
- ☒ D. Based on the Program Design and instructional plan each where each student:
 - ☒ Monitors their own progress through their demonstration of attaining standards
 - ☒ Demonstrates their technical and academic proficiency in meaningful ways
 - ☒ Adapts their program to meet their personal goals based on industry requirements and performance outcomes

Comments and additional information: Please address the questions for both the Secondary Partner and the Post-Secondary Partner found in the "Areas of Strength" and Priority Concerns" worksheet at the end of this section of the **Readiness and Sustainability Tool**:

- Strengths
 - Goals for the program are to increase student interest and involvement in the program while providing college credit opportunities and incorporating core class concepts in a real-world application. By building on concepts learned in the core classes (mathematics, reading, writing) students will become more successful and capable of high order thinking and application of their knowledge.
 - Classes are graded on a proficiency system so that students must demonstrate their ability to get to proficiency level. Students can take the elective machine/welding and drafting classes to meet their personal goals through more advanced classes and also through completion of a technical skill assessment.
 - Student data is collected and analyzed each semester to determine where students need additional support
 - Technical Skill Assessment will be completed Spring 2011 and piloted Fall 2011
 - Increasing the number of students completing the Technical Skill Assessment each semester will show growth, success, and will be a challenge.
 - Concerns: Getting more students to complete and pass the technical Skills Assessment

CHALLENGE:

We are currently in the process of developing a technical skills assessment with Sherwood and Aloha high schools. It is completed and will be sent in for approval. Targeted date for use is the April of 2011

CTE Program Of Study (Perkins Eligible)...2011 Application (continued)

Instituting “valid and reliable” Technical Skills Assessments across a broad range of Programs of Study is a challenge that continues to need evaluation, development and implementation. In order to meet the ambitious Technical Skills Assessment reporting deadlines, all Perkins-eligible CTE programs at Portland Community College have begun collecting and sharing information about what each CTE program is currently doing for skills assessment, discussing technical challenges that interfere with other comprehensive assessment, reviewing existing and new assessment tools, selecting appropriate tools, matching technical skills assessment with useful industry standards, and sharing strategies about how to address academic deficiencies revealed by skills assessment. Many CTE departments are using current licensure or industry certification exams as their TSA, some are using nationally developed standardized tests, and others are creating their own assessments.

PRIOR CTE STUDENT PERFORMANCE DATA ANALYSIS

Secondary Student Data Analysis—part 1

An analysis of prior CTE concentrator performance will help identify any performance measures that may need to be addressed to increase concentrator academic and technical skill attainment, as well as the other performance indicators. The analysis of prior CTE concentrator performance data may guide you toward identifying appropriate priority goals and strategies for CTE program improvement.

Prior CTE Concentrator Performance Reports with student performance targets are available at [CTE Student Data Reports](#)

In the fields below, enter the student data you have for prior year student data for up to 3 prior years. Also, enter this year's Target Performance goals, as well as actual Current Year School Wide Performance Data.

CTE Performance Indicator	Prior Year CTE Performance Year: 2008-2009	Most Recent School Wide Performance Year: 2008-2009	Most Recent State Wide Performance Year: 2008-2009	Target School Wide Performance Year: 2009-2010	Final Perkins IV Target Performance Year: 2013-2014
1S1—Academic Attainment (<i>Reading</i>) *	82.50%	75%	72.26%	60%	100%
1S2—Academic Attainment (<i>Mathematics</i>) *	76.62%	72%	66.38%	59%	100%
1S3—Academic Attainment (<i>Writing</i>) *	63.96%	69%	58.79%	n/a	100%
2S1—Technical Skill Attainment	96.67%	n/a	95.21%		Enter 2S1 Data
3S1—High School Completion	100%	n/a	97.49%		Enter 3S1 Data
4S1—High School Graduation	97.14%	94.8%	97.05%	68.1%	Enter 4S1 Data
5S1—Secondary Placement	64.12%	n/a	75.51%		Enter 5S1 Data
6S1—Nontraditional Participation	33.06%	n/a	43.07%		Enter 6S1 Data
6S2—Nontraditional Completion	25.00%	n/a	28.17%		Enter 6S2 Data

*Annual Statewide Academic Targets for All Schools and Districts

School Year	Reading	Mathematics	Writing
2008- 2009			
2009- 2010	60%	59%	60%
2010- 2011	70%	70%	70%
2011- 2012	80%	80%	80%
2012- 2013	90%	90%	90%
2013- 2014	100%	100%	100%

No Data Available for 2009 – 2010
using 2008 – 2009 where possible

No “Target School Wide
Performance” Data for 2010 – 2011
Using 2009 - 2010

Secondary Student Data Analysis—part 2

Element 3 (continued: Student Data)

Please address the following Guiding Questions for analysis of your CTE performance data listed on the previous page:

1. How does your CTE concentrator performance compare to statewide performance on the CTE performance indicators?

Glencoe CTE students outperformed the statewide average in most areas.

2. What might be the cause of your current performance if it lags behind statewide academic or CTE indicator performance?

Glencoe CTE students did not lag behind the statewide indicators

3. How does your program's CTE concentrator performance data compare with school-wide student performance data?

For the most part, the CTE students outperformed their school peers other than in writing.

4. Do you have indications that your CTE concentrators continue with their CTE program of study at the post-secondary level? Do any of these students require remediation before they continue with their program?

Most students who leave Glencoe and go to PCC in manufacturing or welding continue with the program. After discussion with one of the PCC staff, he said most students do not need remediation unless they have been out of the program for awhile.

5. What questions does your student performance data raise?

Why the writing performance indicator fell below the school wide performance?

6. **Key Question:** What action steps will you take through this CTE POS design and implementation to assist students in improving performance?

We are currently working as a school to raise reading and writing scores. We are meeting in professional learning communities to try and analyze data to help raise student scores. I plan on implementing some of these strategies and best practices in my CTE courses.

CTE Program Of Study (Perkins Eligible)...2011 Application (continued)

Element 3 (continued: Student Data)

Post-Secondary Student Data Analysis—part 1

An analysis of prior CTE concentrator performance will help identify any performance measures that may need to be addressed to increase concentrator academic and technical skill attainment, as well as the other performance indicators. The analysis of prior CTE concentrator performance data may guide you toward identifying appropriate priority goals and strategies for CTE program improvement.

Prior CTE Concentrator Performance Reports with student performance targets are available at [CTE Student Data Reports](#)

In the fields below, enter the student data you have for prior year student data for up to 3 prior years. Also, enter this year's Target Performance goals, as well as actual Current Year School Wide Performance Data.

CTE Performance Indicator	Year 1 Prior CTE Performance	Year 2 Prior CTE Performance	Year 3 <u>Most Recent</u> CTE Performance	Year 4 <u>Next Target</u> CTE Performance	Year 5 <u>Final Target</u> CTE Performance
	Year: 2007-2008	Year: 2008-2009	<div>Data Not Available</div> Year: 2009-2010	Year: 2010-2011	Year: 2013-2014
1P1(a)—Technical Skill Attainment (Locally Approved)	97.97%	97.71%			
1P1(b)—Technical Skill Attainment (State Approved)			n/a	Enter 1P1(b) Data	Enter 1P1(b) Data
1P2—Academic Attainment	95.53%	95.92%	n/a	Enter 1P2 Data	Enter 1P2 Data
2P1(a)—Credential, Certificate, or Degree Completion	54.85%	60.45%			
2P1(b)—Credential, Certificate, or Degree Completion			n/a	Enter 2P1(b) Data	Enter 2P1(b) Data
3P1(a)—Student Retention or Transfer	71.08%				
3P1(b)—Student Retention or Transfer		67.96%	n/a	Enter 3P1(b) Data	Enter 3P1(b) Data
4P1(a)—Student Placement	78.95%				
4P1(b)—Student Placement		76.51%	n/a	Enter 4P1(b) Data	Enter 4P1(b) Data
5P1—Nontraditional Participation	22.99%	20.62%	n/a	Enter 5P1 Data	Enter 5P1 Data
5P2(a)—Nontraditional Completion	19.26%				
5P2(b)—Nontraditional Completion		15.18%	n/a	Enter 5P2(b) Data	Enter 5P2(b) Data

Element 3 (continued: Student Data

Post-Secondary Student Data Analysis—part 2

Please address the following guiding questions for analysis of your institution's CTE performance data listed on the previous page. These questions are intended for you to address how your program influences, or is effected by, your institution's CTE performance data:

1. What, if any, questions does your institution's performance data raise in regard to your program?

Portland Community College met the targets for five of the seven performance measures. On performance measure 3P1, Student Retention or Transfer, we met the target at the 90% threshold. On one performance measure, 5P2, Nontraditional Completion, we did not meet the target or the 90% threshold; however, because the formula was in the process of being evaluated and would be rewritten so that the details of the definition, and the numerator and denominator better aligned with program efforts, we were told not to be concerned with this performance measure until the update was made.

2. Describe any strategies that your program uses to influence CTE performance data at your institution (e.g. tutoring, professional development for educators, etc.).

Given that it can be difficult to track all of the CTE secondary students to all potential post-secondary sites, PCC measures performance by tracking the estimated percentage of students who meet the entry requirements of the aligned post-secondary program at high school graduation.

Portland Community College does measure on a term by term basis the number of entering students who test into developmental education courses. The college can disaggregate this data in many ways (i.e. age, zip code, high school (if provided)) but we are not yet able to link the data to the specific CTE programs that are POS. We are working on a way to mark these programs in our data system. The plan is for this to take place during the 2010-2011 academic year.

Addressed in answer to question 3.

3. Are there strategies/activities that you would like to incorporate, particularly in performance areas that may be below satisfactory level, in your program?

Every summer PCC's director of Institutional Effectiveness, two members of the data collection and research staff, and the college's Perkins Title I coordinator meet to review the Perkins performance measures, targets, and data results. The purpose of this meeting is to make sure that we know where we stand to date in regards to Perkins data collection, reporting and outcomes, and what our plans are for following academic year. Even though the college overall was successful in meeting the targets for the performance measures, we continue to develop strategies to better serve students of any particular category (gender, ethnicity, or special populations) who are not meeting the performance measure targets. This way we can make sure that the CTE Perkins-funded advisors and faculty are aware of the groups of participants and concentrators who are not meeting one or more performance measure(s) and make sure that we are providing them additional time, services and resources to improve our overall data results.

4. What actions will you take in your program to positively influence your institution's CTE student performance?

During fall 2009 through spring 2010 Portland Community College (PCC) and its Institutional Effectiveness Office (research) began looking at how we might improve our in-house data reports regarding the impact of Perkins funds at the college in Perkins-eligible CTE programs. We chose to expend efforts in this direction so that we could make more informative and strategic decisions regarding our use of the Perkins funds and their alignment with the purpose(s) of the grant. We also rewrote in-house data retrieval programs so that they better align with the Perkins' definitions for CTE students who are enrolled, served or a concentrator in CTE programs at the college. Most important, we have begun the process with the new in-house data reports to have a clearer idea of who we serve in our CTE programs, who is impacted by the Perkins funds, who should we be serving that we are not, and, finally, what is happening longer term to students who enroll in CTE programs (2008-2010 Perkins Student Longitudinal Progress Report). We were also interested in how long it is taking students at the college to make reasonable progress in our CTE programs. The conversations have only begun but the new in-house data is helping us focus on how we utilize and distribute the Perkins funds, what are the demographics and psychographics of the students we serve, what types of shifts do we need to make in our use of the Perkins funds, and are we using the funds at the college most effectively to assure the long term success of Programs of Study and our work with our regional high schools.

Element 4: Student Support Services

- ☒ A. Student organizations are an available program component and integrated into CTE programs of study instruction. The student organization structure provides leadership development opportunities that meet the following expectations:
- ☒ Instruction, Career Development and Assessment
 - ☒ Community-Based Experiences
 - ☒ Organizational Management and Administrative Experiences
- ☒ B. All CTE students will have informational guidance support and advising to assist them in progressing through a CTE program of study in an efficient and seamless manner (e.g. Pathway Templates, Education Plan and Profile, Career Information System).
- ☒ C. Programs comply with Title VI- Civil Rights Act of 1964; Title IX – Education Amendments of 1972; Section 504 of the Rehabilitation Act of 1973; Vocational Education Programs Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, Sex, Religion, National Origin, Age or Disability; Title II of the Americans with Disabilities Acts of 1990.
- ☒ Appropriate access is provided for all students, including non-traditional and special populations.
 - ☒ Program provides a non-biased and non-discriminating learning environment (race, color, national origin, gender and disability status).
 - ☒ Program facilities provide physical access and instruction that accommodates students with disabilities including various learning styles (e.g. the use of visual, auditory, tactile, and kinesthetic teaching methods, and other appropriate forms of instruction).
 - ☒ Program meets the needs of students for whom English is a second language.
- ☒ D. Based on the Program Design and instructional plan, each student will be able to:
- ☒ Identify the career path options he/she can follow to a chosen career;
 - ☒ Receive consistent and informed messages about career and possible financial options for post-secondary education;
 - ☒ Take ownership of their education through maintaining a current education plan and profile and/or portfolio, and
 - ☒ Apply skills and traits in a variety of settings including student organizations.

Comments and additional information: Please address the questions for both the Secondary Partner and the Post-Secondary Partner found in the "Areas of Strength" and Priority Concerns" worksheet at the end of this section of the **Readiness and Sustainability Tool**.

Strengths:

1. Hillsboro School District has worked in partnership with the Hillsboro Chamber of Commerce and other community resources to provide career exploration planning services and resources that:

- demonstrate connections between careers and application of core academic skills.
- include opportunities to participate in student leadership organizations and career related learning experiences.
- increase awareness among high school students of the need for post secondary education in today's work force, and the variety of post secondary options available.
- emphasize that all careers are open to all genders.

2. Building-level CTE Advisors, in partnership with the counseling staff, are the cornerstone to facilitate dissemination and promotion of CTE career information. They will be responsible for:

- The use of Program of Study Roadmaps and PAVTEC Career Pathways website to explore careers.
- Investigation of postsecondary CTE education options.
- Sharing information on high demand, high skill, high wage opportunities in CTE and their requisite academic requirements.
- Connecting students to CRLE opportunities.
- Arranging visits to PCC CTE programs.
- Helping students fulfill Educational Plan & Profile requirements.

3. District CTE leaders will train CTE Advisors, counselors and teachers in the use of:

- Roadway Templates
- Business Education Compact Links database
- CIS plan and profile software
- PAVTEC Career Pathways website
- ODE website to assist students in progressing through a CTE program of study in a non-duplicative manner.

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4. Appropriate access is provided for all students, including non-traditional and special populations. The program provides a non-biased and non-discriminating learning environment (race, color, national origin, gender and disability status). Program facilities provide physical access and instruction that accommodates students with disabilities including various learning styles (e.g. the use of visual, auditory, tactile, and kinesthetic teaching methods, and other appropriate forms of instruction). HSD's CTE program also meets the needs of students for whom English is a second language.

- CTE Advisors will introduce CTE teachers to instructional strategies appropriate for Level 4 and 5 ELL students.
- Provide focused support to ELL and Special Education students for completing Senior Projects and graduation requirements, including the development of Spanish language materials.
- Reduce need for remediation by more closely aligning high school CTE programs with PCC. (Sample activity: participation in PAVTEC Connections Meetings).
- Encourage students to explore nontraditional occupations.
- Provide in-school and after-school tutoring for ELL students

Student Support Services Post-secondary Partners:

How will you work with recruiting and providing services for non-traditional, displaced homemakers, and other special population students for this specific POS?

As a standard for all CTE Programs, Portland Community College (PCC) is committed to providing equal access to all students through the removal of architectural and attitudinal barriers. All CTE programs at the college comply with a number of state and federal guidelines and Acts that require equal opportunities and access for all students. The Americans with Disabilities Act of 1990 (ADA) and the Amendments Act of 2008 is the primary driver of a lot of the decisions and policies with regard to the Disabilities Services Office.

The College's Disabilities Services Office ensures that students enrolled in CTE programs are provided specialized assistive technology services to accommodate disabilities in their CTE programs. Disability Access Services (DAS) is the district-wide department that provides the accommodations and services. Examples include adaptive equipment and computer technology, alternate media formatting (audio and electronic texts), in-class aides, media captioning, sign language interpreting and transcribing, and test accommodations.

All Career and Technical Education (CTE) programs at Portland Community College (PCC) recognize that promoting the successful participation and preparation of students in CTE programs that meet the non-traditional (NT) criteria is a priority. At the entry point of all CTE programs, students who fit the NT criteria are identified so that all levels of college resources (Perkins Student Resource Specialists, Tutoring Centers, Multicultural Centers, Women's Resource Centers, etc.) are aware that these students may need additional support in order to be successful in their chosen CTE program. Some of the students encounter few, if any, issues while others require a great deal of support to work through the academic, technical and social barriers. The greatest resources we have found are to align the students with others (mentors) in both the academic setting and workplace who, at one time, had chosen the same path and are now gainfully employed. These individuals are invaluable resources and offer a tremendous amount of support and encouragement on a personal, academic and technical skill level. PCC still struggles in successfully recruiting students for NT CTE fields. Aside from utilizing a number of the available resources available on a local, state and national level, we will also be doing more targeted recruitment from specific programs college-wide that are providing enhanced opportunities to targeted populations: Sylvania ROOTS Program, CAMP (College Assistance Migrant Program), Workforce Network, Talent Search, Gateway to College, MOTT (Moving On Toward Tomorrow), etc. Perkins funding is utilized to identify students who show interest in NT CTE programs at all levels of academic preparation to make sure they are able to quickly access CTE program personnel and other college resources to guarantee that the connections are made early enough to improve chances of CTE program success.

The Women's Resource Centers at Portland Community College are also an additional avenue for special population students (single parents and displaced homemakers) interested in CTE programs to seek resource information and support both on campus and in the community.

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Single parents, displaced homemakers, and women returning to college can take advantage of four programs offered through the college's Women's Resource Centers: Project Independence, New Directions, Career Transitions and Life Tracks. The programs are tuition free and provide a variety of skills needed to becoming employed in a family-wage job. The primary goals of the programs are self sufficiency through college preparedness. Students gain access to a variety of educational and training opportunities on the road to becoming economically self sufficient. On-going support is offered after completion of the class. This is the aspect of the program that receives Perkins funding. On-going activities provided might include academic advising, placement assistance, student support services, and community resource referrals. Students are continuously helped with identifying and removing barriers, which impede their success. Classes are offered fall, winter and spring terms.

How will you provide advising and tutoring services to students in this POS?

Portland Community College uses the majority of its Perkins funding on 19 staff who serve as advisors and employment specialists in the college's CTE programs. Students entering CTE at the college are able to access these highly trained and specialized advisors for all aspects of their advising needs. Aside from general advising needs, the staff helps students maneuver the financial aid process, resolve child care and housing issues, seek professional services through college or outside resources for medical and mental health needs, and arrange for group or individual tutoring.

Welding has become a more comfortable area of growth for women through PCC's welding department's expansion of individualized course offerings and the sculpture welding course. These courses get women in the door, and once they get in the shop and try welding, they realize that they can do "this welding stuff," and many of them decide to make it a career and not just an art form or a hobby.

Welding also has a career female welder instructor who has done the job in much more difficult circumstances than in present times, and she serves as a resource and an inspiration to our female students.

There are women in all three AAS degrees of Building Construction Technology. However, the physical nature of the hands-on construction somewhat limits how many women enter that field while many women are more comfortable in the design/build/remodel area. The Construction Management degree is drawing a number of women into a career that tends to be more lucrative and less physically taxing. Students have opportunities through the student organizations they've formed to do volunteer team projects out in the community with professionals, providing female students a great opportunity taking a turn at being a project manager at a site. This is also a great way for students to make professional contacts in their field.

Element 5: Professional Development

- ☐ A. Professional development helps teachers and administrators develop and improve standards-based curriculum and learning experiences that address All Aspects of the Industry.
- ☐ B. Research and training is provided to help develop appropriate and useful assessment tools and strategies.
- ☐ C. Training and guidance is provided to help improve instructional delivery methodology that helps improve student performance and skill acquisition.
- ☐ D. Secondary teacher licensure is appropriately aligned with the CTE Program of Study and courses in the CTE POS fall within the appropriate NCES codes for that licensure.

Comments and additional information: Please address the questions for both the Secondary Partner and the Post-Secondary Partner found in the "Areas of Strength" and Priority Concerns" worksheet at the end of this section of the **Readiness and Sustainability Tool**.

POS Development:

The process for upgrading to Programs of Study includes working closely with PAVTEC to train teachers to Perkins IV requirements. HSD has provided each teacher 20 hours of professional development time to train and develop the new programs and continues to support teachers by coordinating the application and approval process working closely with PAVTEC and ODE. Regional discussions among PCC and HSD high school instructors will be held to continue to analyze the application of the Oregon Skill Sets and/or other skill set standards.

In the 2009-2010 PAVTEC Work Sessions that included both PCC and high school staff, academic (reading, writing and math) entrance expectations of PCC and specifically PCC CTE programs were discussed and coordinated with high school course curricula. The curricula of the high school's CTE Programs of Study combined with the school's diploma requirements are designed to prepare students to meet or exceed those expectations. The Roadmap indicates how the CTE POS and high school diploma requirements provide a unified, cohesive sequence of content between this high school POS and the related PCC CTE program(s).

Instructional Delivery:

In 2010-2011 an increased emphasis was placed on CTE instructors participating in professional development opportunities related to the integration of academics into CTE Programs of Study. Job-alike groups of CTE instructors meet monthly or quarterly in Professional Learning Communities to exchange examples of successful instructional practice intended to improve student academic performance. Math in CTE and Literacy in CTE are two important support programs involving Hillsboro teachers. Additionally, GLAD and SIOP trainings are giving Hillsboro CTE teachers better ideas about how to present new concepts to students of all backgrounds, especially English Language Learners. (As a sample document see the attached *Math in CTE* training presentation document. See the attached agendas and minutes as samples of the graduation requirements professional development planning process.)

More CTE teachers will be trained in the District's literacy articulation plan implementation so as to better cooperate with academic instructors and teach students with common objectives, vocabulary, and assessments.

Supervisors will review individual CTE Professional Development plans to inform Professional development activities that are high quality, sustained, and intensive.

Budget:

District Perkins funds supporting these activities directly largely through release time and event costs are budgeted at \$30,291. Non-Perkins funds addressing this goal include general budget salaries used during weekly Academic Seminar sessions addressing the literacy and mathematics goals of the District. 22 teachers meeting for 1.0 hr weekly 17 relevant meetings) at an average rate of \$45/hr costs the District \$16,830

Since 2009-2010, there has been a continued and increased emphasis on CTE staff and instructors participating in professional development opportunities related to the integration of academics and technical skills into CTE Programs of Study. Appropriate professional development opportunities have been identified and provided to CTE staff and instructors related to their professional development

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plans and aligned with the professional development needs and opportunities provided by our secondary partners.

PCC supports and promotes its mission, goals and values by continually developing the professional and personal capacity of all members of the community through the efforts of the Office for Staff and Organizational Development. The District Staff Development Office supports PCC's Staff Development Mission by:

- Advocating, promoting, communicating, and coordinating college-wide staff development opportunities
- Funding specific strategic staff development initiatives and programs
- Providing opportunity for professional and career growth to employees

Certification of Assurance

Directions: After filling in all the appropriate fields in this form, print out a copy of this Certification of Assurance page and acquire all the appropriate signatures. All signatures must be on one form, demonstrating the collaboration between all institutions participating in this CTE Program of Study. Mail complete, signed Assurance form to Ilene Spencer at: ODE, 255 Capitol St. NE, Salem, OR 97310

Name of CTE POS	Enter Name of CTE POS
Name of Secondary School	Enter Name of Secondary School
Name of Community College	Select Community College

SECONDARY LOCAL SUPPORT and CERTIFICATE OF ASSURANCE	I have reviewed this program application document for clarity, completeness and adherence to program quality standards, and support its approval. I agree that the CTE program area requirements for secondary CTE programs, including appropriate CTE certification for teachers, the rules and regulations for Public Law 101-392, and the requirements contained in the Oregon State Plan for Career and Technical Education will be complied with in the operation of the CTE programs and services offered by the district or through contract between the district and other agencies, institutions, or individuals. I agree to furnish CTE program data as requested by the Oregon Department of Education.	
School District Administrator Signature		Date:
Administrator's Name	Enter Local Administrator's Name	

LOCAL SUPPORT and CERTIFICATE OF ASSURANCE	The program advisory committee has been involved in the design and development of this program.	
Advisory Committee Signature		Date:
Advisory Committee Member's name	Enter Advisory Committee Member's Name	

POST-SECONDARY LOCAL SUPPORT AND CERTIFICATE OF ASSURANCE	This community college has been involved in the design and development of this CTE program of study and agrees to continue collaboration meeting all 4 Core including alignment and articulation and reliable and valid technical skills assessment.	
Community College Administrator's Signature		Date:
CC Administrator's Name	Enter CC Administrator's Name	

For Regional Coordinator Use Only

Recommended Status:	
<input type="checkbox"/> RECOMMENDED FOR STATE APPROVAL (Perkins Eligible)	Expiration Date: ____
<input type="checkbox"/> DISAPPROVED (and returned for revision)	
Regional Coordinator Signature	Date: ____

For ODE/OCCWD Use Only

Approval Status:	
<input type="checkbox"/> FINAL ODE APPROVAL (Perkins Eligible)	Expiration Date: ____
<input type="checkbox"/> FINAL CCWD APPROVAL	
EII Education Specialist Signature	Date: ____
OCCWD Education Specialist Signature	Date: ____