



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:	Beaverton School District
Secondary School ID Number:	2783
Secondary School Name:	Southridge High School
Community College Name:	Portland Community College
Additional/Alternate College Name:	

CTE POS—Title:	INFORMATION TECHNOLOGY	
Career Area:	Industrial Engineering Systems--IE	
Cluster Area:	IE--Information and Communication Technology	
Focus Area:	Programming and Software Engineering	
Secondary CIP Code & Title:	1512 (4 digit)	Information Technology 1512
Community College CIP & Title:	11.0202 (6 digit)	Computer Programming, Specific Applications.
Secondary Program Title:	INFORMATION TECHNOLOGY	
Community College Program Title:	Computer Programming, Specific Applications.	
Community College Award:	Associate of Applied Science	
Secondary School/District Administrator:	Sue Irwin	Sue_irwin@beavton.k12.or.us
Secondary Curriculum Coordinator:	Vicki Lukich	Victoria_Lukich@beavton.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:	Daniel Velasquez	daniel_velasquez@beavton.k12.or.us
Teacher CTE Endorsement:	IES--Information Communications Technology	9/4/2013 Daniel_Velasquez@beavton.k12.or.us Enter email
College Lead or Department Chair:	Quinn, Scott P	squinn@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/computer-info/	<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
<input type="checkbox"/>	A445	Computer Game Design I (Intro. to Programming)	0.5	10152	In this class, you will explore some of the fundamental concepts of computer programming. Students will learn about sprites, events, sounds, MIDI files, and even object-oriented programming concepts. We will explore elements of computer programming through the following game genres: scrolling, maze, platform, and even 3D.	Daniel Velasquez	<input type="checkbox"/>	PCC	CS 133G	Introduction to Computer Games

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<input type="checkbox"/>	A456	Intermediate Programming I: (VB1)	0.5	10153	Here is your opportunity to learn the fundamental principles of computer programming using the computer language Visual Basic .NET. VB.NET is an easy-to-use, yet very powerful, object-oriented programming language. We discuss principles of software design and problem solving. Programming topics that are covered in this course include controls, events, math and string functions, input and output, procedures, decisions, loops, and arrays.	Daniel Velasquez	<input type="checkbox"/>	PCC	CIS 133B	Introduction to Visual Basic.NET Programming
<input checked="" type="checkbox"/>	A457	Intermediate Programming II: (VB2)	0.5	10153	This course builds upon the foundation laid down by VB 1 and serves as the next step in the exploration of software engineering. This course uses the object-oriented computer language Visual Basic .NET. Many programming topics are covered in the course including arrays, sorting and searching algorithms, sequential files, databases, and object-oriented programming techniques. Students will participate in a large-scale group	Daniel Velasquez	<input type="checkbox"/>	PCC	CIS 233B	Intermediate Visual Basic.NET Programming

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					project similar as projects in the industry.					
<input checked="" type="checkbox"/>	A480	IB Comp. Sci	1.5	10159	This is designed for IB students and advanced programming students alike. The Java language is the primary language we will use in our exploration of advanced computer science concepts. The concepts include the software development life cycle, system analysis, software design, program construction, and array and string operations. Additionally, all students will design and construct a large-scale programming project that will be the TSA for this focus area.	Daniel Velasquez	<input type="checkbox"/>	PCC	CIS 133J	Java Programming I

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<input type="checkbox"/>		Web Design I	0.5	10201	This course can help you to learn basic web Design skills and tools. You will learn to read and write the basic language of the web, HTML, and to create impressive web pages using tools such as Adobe Dreamweaver.	Daniel Velasquez	<input type="checkbox"/>	PCC	CAS 206, and CAS 211D	Principals of X/HTML, Intermediate Dreamweaver
<input checked="" type="checkbox"/>		Web Design II	0.5		Now that you can build simple web pages using tools like Adobe Dreamweaver, it's time to take the next step. This class will add depth to your basic knowledge. You will learn how to add interactivity to your pages using a web scripting language called JavaScript. This course is a requirement for those students pursuing the Web Design pathway of the Information Technology Career Academy endorsement.	Daniel Velasquez	<input type="checkbox"/>	PCC	CAS 213	Enhancing Web Pages with JavaScript

*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	Post-Secondary Course Name	Number of	*College Now?	Course Description (brief)	

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

Course #		Credits		(boxes below will expand)
CIS 233J	Java Programming II	4	<input type="checkbox"/>	Continues the introduction of Java Programming and Web based programming. Introduces advanced graphics, advanced event handling, advanced graphical user interfaces, input/output to files, networking, multi-processing, database access and internationalization in Java.
CIS 233B	Intermediate Visual Basic.NET Programming	4	<input type="checkbox"/>	Continues Visual Basic.NET programming sequence utilizing arrays, sorting, relational database access and data structures. Structured design techniques emphasized throughout.
CIS 122	Software Design	4	<input type="checkbox"/>	Illustrates the importance of software design as part of the software development life cycle. Prepares student to take programming courses, by giving examples of well-designed software projects. Student is expected to design small programming projects, and code the projects to prove the design. Basic logic constructs, modularity and an introduction to object design are included.
CAS 206	Principals of X/HTML	4	<input type="checkbox"/>	Thorough exploration of X/HTML using an HTML editor. Includes web terminology, basic X/HTML, uploading pages to a server (FTP), site management, link, lists, tables, forms, working with web graphics, accessibility, and introduction to style sheets (CSS). Students will create a multi-page web site using these technologies.
CAS 211D	Intermediate Dreamweaver	3	<input type="checkbox"/>	Plan and publish professional web sites using the intermediate/advanced features of Dreamweaver. Includes behaviors, templates, inserting audio and video, Spry tools, advanced form features and Extensions.
CAS 213	Enhancing Pages with Javascript	4	<input type="checkbox"/>	Thorough introduction to the JavaScript language. Add interactivity to web pages and perform a variety of techniques such as validating form input, manipulating browser windows and page content, security issues, and event handling such as mouse-overs and click events.

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

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;
- 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**.

- What's working well that is worth keeping? The state standards focus on the software development life cycle. The VB2 and the IB Computer Science courses have the same focus. Students must develop and guide a large-scale project through the entire software life cycle (excluding the maintenance phase).
- What goals do you have to sustain and improve your program? I strive to keep my curriculum focused on current technologies and the essential technical skills students will need to best utilize these technologies. My goal is to teach students so that they are at least a year ahead of the peers, both in the workplace and in college. My program focuses on the fundamental skills students need to know to succeed as programmers, software engineers, and web designers. Since I spent 15 years as software engineer in the industry, I can develop in my students the practical and essential skills they will need to be successful in these fields.
- What strategies will you use to reach your goals? I rework my curriculum every year to keep up with the ever-changing field of computers and computer science. In order to fully engage students, I develop projects that not only teach them valuable technical skills, but also provide an enjoyable learning experience. I offer computer game design courses and I focus on computer science fundamentals, yet the students think they are just creating games. Only later do they realize that I was teaching them object-oriented programming.
- How will you know if you are successful? As in the past, students who leave my program succeed as programmers, software engineers, and web designers. (I have been here at Southridge High School 9 years and have witnessed my former students' continued successes. My hope is that this trend continues.) The Oregon chapter of the Computer Science Teachers Association (CSTA) is currently considering the creation of a standardized test focused on the ODE skill sets for Information Technology along with standards identified by the National CSTA organization. With this new test, we will be able to assess whether students have acquired the essential skill to be successful in the field.
- What will be new or needs to be revised? Currently, the state standards address only the Software Engineering skills needed by I.T. students. What are missing are the Computer Science (CS) specific skills that can be looked at as the other side of the same coin. I intend on asking the state to add these missing skill sets to the state standards. Surprisingly, I have not found any suitable standardized TSA that assesses students against relevant industry standards.

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- What strategies will you use to address identified priority concerns? I am proposing to OCSTA that we should adopt the CS standards put forward by the national CSTA organization to fill in these missing standards. With these completed standards, I will spearhead an effort by CSTA to create a TSA that assesses whether a student has acquired the skills necessary to meet these standards and is predictive of a student's future success in the field.
- What are the indicators you will use to measure your improvement? Improvement will be evident when the missing standards are identified and added to the ODE skill sets.
- How will you know if you are successful? And when? I will know we are successful when we develop a standardized test that covers both the state and the CSTA standards specific to Information Technology.

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>).

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.

The **CAS and CIS departments** at PCC continually upgrade their Microsoft and Adobe courses to match the upgrades in these industry applications. The departments moved to Windows 7 in fall 2010 for all classes, Adobe CS5 in winter 2011 for our Adobe Dreamweaver, Photoshop, Flash and Fireworks classes, and Microsoft network administration classes are now using the latest Server Exchange Operating System. This academic year, CAS added courses in Search Engine Optimization, Introduction to PHP, and Microsoft Outlook. CIS added courses in web administration technician, web server administration, and data modeling in the healthcare industry to help our students be more marketable upon graduation.

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**:

- What's working well that is worth keeping?
My program's courses align well with the expected coursework at the community college level.
- What goals do you have to sustain and improve your program?
I will stay current with the curriculum demands for CS at the college level. By doing this, I will be able to more accurately prepare students for post-secondary study. Additionally, I will attend industry trade conferences germane to Programming and Software Engineering.
- What strategies will you use to reach your goals?
I will consult with colleagues still working as software engineers to identify trends in the industry that I need to address in my curriculum.
- How will you know if you are successful?
I will be successful if students leave my program adept at using current technology instead of processes and technology years out of date.
- What will be new or needs to be revised?
I must find a way to allow for specific articulation (college credit) availability for students in my high school programs.
- What strategies will you use to address identified priority concerns?
I should meet regularly with the department heads of computer related departments at PCC. I wish to explore with dual-credit opportunities for my students.
- What are the indicators you will use to measure your improvement?
This measure will be the number of college credits my students will have earned in high school as they move into college.

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- How will you know if you are successful? And when?
I will know that my program is successful when students, upon leaving my program, are allowed to skip many of the introductory college CS or CIS courses and jump right into the more specialized classes.

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.

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.

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**:

<p>What's working well that is worth keeping?</p> <ul style="list-style-type: none"> • The TechStart Education Foundation of the Software Association of Oregon acts as our advisory board for CS in the state. My hope is that this partnership continues <p>What goals do you have to sustain and improve your program?</p> <ul style="list-style-type: none"> • I plan to attend industry conferences to stay current with the ever-changing field of software development to keep my instruction relevant. <p>What strategies will you use to reach your goals?</p> <ul style="list-style-type: none"> • I will make sure that the software development tools found in my lab are the same as what is used in industry. <p>How will you know if you are successful?</p> <ul style="list-style-type: none"> • Success will be measured by the number of students leaving my classes that are going straight into industry. 	<p>What will be new or needs to be revised?</p> <ul style="list-style-type: none"> • We do not have a statewide assessment developed for Computer Science. We need to create one. <p>What strategies will you use to address identified priority concerns?</p> <ul style="list-style-type: none"> • I plan to write the first draft of this assessment for review and approval by both the membership of OCSTA and the TechStart Board. <p>What are the indicators you will use to measure your improvement?</p> <ul style="list-style-type: none"> • By the start of the next school year, we have a statewide assessment in place. <p>How will you know if you are successful? And when?</p> <ul style="list-style-type: none"> • We will know we are successful when those students who do well on the assessment, also do well in industry after leaving high school.
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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	Most Recent School Wide Performance	Most Recent State Wide Performance	Target School Wide Performance	Final Perkins IV Target Performance
	Year: <input type="text" value="2008-2009"/>	Year: <input type="text" value="2008-2009"/>	Year: <input type="text" value="2008-2009"/>	Year: <input type="text" value="2009-2010"/>	Year: 2013-2014
1S1—Academic Attainment (<i>Reading</i>) *	77.61%	64%	72.26%	60%	100%
1S2—Academic Attainment (<i>Mathematics</i>) *	78.95%	66%	66.38%	59%	100%
1S3—Academic Attainment (<i>Writing</i>) *	62.70%	68%	58.79%	n/a	100%
2S1—Technical Skill Attainment	100%	Enter 2S1 Data	95.21%		Enter 2S1 Data
3S1—High School Completion	100%	Enter 3S1 Data	97.49%		Enter 3S1 Data
4S1—High School Graduation	98.50%	92.3%	97.05%	68.1%	Enter 4S1 Data
5S1—Secondary Placement	76.32%	Enter 5S1 Data	75.51%		Enter 5S1 Data
6S1—Nontraditional Participation	26.39%	Enter 6S1 Data	43.07%		Enter 6S1 Data
6S2—Nontraditional Completion	n/a	Enter 6S2 Data	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?

Student data from my district supercedes, when compared to overall state performance data, all categories save one. Our non-trad participation numbers are lacking.

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

We are failing to reach our non-trad students when advertising the opportunities that are available.

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

For all the performance data we have available, the CTE program performance indicators outperform all school-wide performance indicators.

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?

All my indicators post-secondary are anecdotal in nature. Students "graduating" from my programs have found remarkable successes in industry. One student has completed his CS studies at West Point. Another won the "Google Gadgets Prize" as a freshman in college. Another went straight from high school into a career as a network administrator at the VA hospital. Finally, another was accepted into the Electronic Engineering dept. up at Univ. of Wa. as a freshman, which is very unusual since most have to wait until the junior year to even apply.

I am not aware of any of my students who continue their studies in I.T. require any remediation at the post-secondary level. Most are about 1-year ahead of their peers as freshmen.

5. What questions does your student performance data raise?

Why do our non-trad participation numbers lag when compared statewide? Do we need a specific plan on how we reach this underserved population?

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

1. Create a non-trad action plan to boost our non-trad numbers.
2. Personally create a TSA that addresses industry-specific skill sets and see if it can be adopted statewide. This way student's performance can be measured for year-to-year comparisons.
3. Evaluate the TSA developed so that it accurately predicts, having met our criteria, which students succeed in industry. (I recognize that this is going to be very hard to do.)

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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 style="border: 1px solid black; padding: 2px;">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)			Enter 1P1(b) Data	Enter 1P1(b) Data	Enter 1P1(b) Data
1P2—Academic Attainment	95.53%	95.92%	Enter 1P2 Data	Enter 1P2 Data	Enter 1P2 Data
2P1(a)—Credential, Certificate, or Degree Completion	54.85%	60.45%			
2P1(b)—Credential, Certificate, or Degree Completion			Enter 2P1(b) Data	Enter 2P1(b) Data	Enter 2P1(b) Data
3P1(a)—Student Retention or Transfer	71.08%				
3P1(b)—Student Retention or Transfer		67.96%	Enter 3P1(b) Data	Enter 3P1(b) Data	Enter 3P1(b) Data
4P1(a)—Student Placement	78.95%				
4P1(b)—Student Placement		76.51%	Enter 4P1(b) Data	Enter 4P1(b) Data	Enter 4P1(b) Data
5P1—Nontraditional Participation	22.99%	20.62%	Enter 5P1 Data	Enter 5P1 Data	Enter 5P1 Data
5P2(a)—Nontraditional Completion	19.26%				
5P2(b)—Nontraditional Completion		15.18%	Enter 5P2(b) Data	Enter 5P2(b) Data	Enter 5P2(b) Data

Post-Secondary Student Data Analysis—part 2

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

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**.

<p>Student Support Services</p> <ul style="list-style-type: none"> ▪ What's working well that is worth keeping? ▪ What goals do you have to sustain and improve your program? ▪ What strategies will you use to reach your goals? ▪ How will you know if you are successful? <p>Secondary: Many I.T. educational opportunities are available as actual classes during the school day rather than just as after school clubs. However, clubs are available to utilize what was learned in class to compete in statewide technical skills competitions. We typically participate in the Willamette - TechStart High School Programming Competition, the Oregon Game Programming Competition, and plan to compete in the First Tech Challenge competition starting next year.</p> <p>With the addition of the robotics competition, using lessons learned from the robotics classes, we finally complete the multifaceted approach to technology; namely, the integration of electronics, computer programming, mechanical engineering, and mathematics.</p> <p>Success will be measured by seeing how effectively we compete with other high schools across the state.</p>	<p>Student Support Services</p> <ul style="list-style-type: none"> ▪ What will be new or needs to be revised? ▪ What strategies will you use to address identified priority concerns? ▪ What are the indicators you will use to measure your improvement? ▪ How will you know if you are successful? And when? <p>Secondary: As stated earlier in this application form, we need a sustained outreach program for non-traditional and underrepresented groups within our student population. I plan to start a chapter of MESA at Southridge H.S. Additionally, I hope to promote and pilot a "girls-only" engineering course modeled after the program over at Sherwood H.S.</p> <p>Success will be measured by comparing the number of non-trad students in my classes compared to prior year's participation rates. We would like to see steady improvement from year-to-year.</p> <p>With the addition of a statewide TSA for Information Technology – Computer Programming, we will now be able to assess the effectiveness of our instruction and the proficiency of our students.</p>
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PCC 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.

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**.

Secondary – Areas of Strength	Secondary – Priority Concerns
<p>Currently, I am co-president of the Oregon chapter of Computer Science Teachers Association. Each year we partner with the TechStart Education Foundation of the Software Association of Oregon to create a series on computer-related training opportunities for all the teachers in the state. We call these trainings SuperQuest and they occur in the spring, and the fall, and with weeklong trainings the summer. Topics are very diverse, evidenced by the agenda of our most recent spring conference. I have included in Addendum E. I moderated a discussion about the CS TSA and also presented practical tips for those of us that will be completing this POS application document itself.</p>	<p>My main concern is about the TechStart foundation. They have recently had to let go their executive director due to the prolonged economic downturn. The president of the TechStart board has assured me that, even without a dedicated executive director, TechStart's support of SuperQuest trainings will not wane.</p> <p>My other main concern is that CS teacher training opportunities will diminish as district's cut their CS offerings due to funding shortfalls. Put simply, if there are no CS programs left, who will then come to the trainings. Perhaps Perkins role needs to move from a supporting role to a sustaining roll when it comes to funding CS programs throughout the state.</p>

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 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:

RECOMMENDED FOR STATE APPROVAL (Perkins Eligible) Expiration Date: _____

DISAPPROVED (and returned for revision)

_____ **Date:** _____

Regional Coordinator Signature

For ODE/OCCWD Use Only

Approval Status:

FINAL ODE APPROVAL (Perkins Eligible) Expiration Date: _____

FINAL CCWD APPROVAL

_____ **Date:** _____

EII Education Specialist Signature _____ **Date:** _____

OCCWD Education Specialist Signature _____ **Date:** _____

