

## Career and Technical Education Program of Study Application 2017 Version (Full Application)

**Directions—please enter information into ALL the fields in this application.** If you have technical problems with this application, contact Ron Dodge [POS.Application@state.or.us](mailto:POS.Application@state.or.us).  
(For detailed information on how to complete this application consult the [Guide to Using the Oregon CTE Program of Study Application 2017](#).) **DEADLINE for submission: June 30, 2017; (Early Bird: April 28, 2017)**

<b>CTE POS—Title:</b>	<b>Computer Science POS</b>
Career Area:	Arts, Information Communication--AIC
Cluster Area (& appropriate secondary CTE licensure):	AIC--Info Communication Tech (ICT)
Focus Area (if applicable):	Computer Science
Secondary CIP Code: ( <a href="#">Link to CIP website</a> )	15.1202 (6 digit)
Community College CIP Code: ( <a href="#">Link to CIP website</a> )	11.0101 (6 digit)

Secondary School Name:		Hillsboro High School
Secondary School District:		Hillsboro School District
Secondary School ID Number:		1201
Secondary Teacher Name	Email	Current CTE License
Theresa Alexander (Lead Teacher)	alexandt@hsd.k12.or.us	AIC--Information Communications Technology

<b>Secondary Technical Skill Assessment (TSA):</b> Use the code from <a href="#">this table</a> for your selected TSA.	Software Engineering Design 2AREG038
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<b>CC Technical Skill Assessment (TSA):</b> Use the code from <a href="#">this table</a> for your selected TSA.	2AREG054
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<b>Primary Oregon Community College Name:</b> (Contact <a href="mailto:POS.Application@state.or.us">POS.Application@state.or.us</a> to add multiple colleges)	Portland Community College
College Point of Contact:	PCC Sally Earll sally.earll@pcc.edu
Community College CTE Program Title(s):	Computer Information Systems
Community College Award:	Associate of Applied Science

<b>Visual/Roadmap:</b> (Insert link, or identify location where sample of visual can be found)	<a href="https://docs.google.com/spreadsheets/d/1zztp6UR7Hq_RLcSJkG15GZKtTWgTrTf96-AKn4DWRAQ/edit?usp=sharing">https://docs.google.com/spreadsheets/d/1zztp6UR7Hq_RLcSJkG15GZKtTWgTrTf96-AKn4DWRAQ/edit?usp=sharing</a>
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<b>Regional Coordinator/Contact:</b>	2A--Beth Molenkamp elizabeth.molenkamp@pcc.edu
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CTE Teacher: Submit complete electronic application materials to your CTE Regional Coordinator.

Regional Coordinator: Email application and addenda to this mailbox-- [POS.Application@state.or.us](mailto:POS.Application@state.or.us) , or follow an alternative process described in Step 8 of the **Submission Process** on the last page of this application.

**DEADLINE for submission: June 30, 2017**

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## **CTE POS Course Lists—Secondary**

**Directions:**

1) Please list below the CTE Program of Study Secondary Courses in which the instructor will:

- Teach with intent and purpose the CTE POS knowledge and skills identified in the CTE POS Skill Set, and
- Assess and record student achievement of those standards

2) Mark as “TSA” those courses that are necessary for students to take before they are required to take the Technical Skill Assessment for this POS.

*Note: Additional CTE courses may be listed (and supported with Perkins funds) if they support the identified skill set; but do not mark those as “TSA” Required”*

**Secondary Core CTE Courses** (Please be complete; this information will be entered into the CTE Program Update database and all fields are required)

TSA* Required	School Course #	Secondary Course Name	# of Credits	5-digit NCES Code	Course Description (brief) (boxes below will expand)	Articulating College (if applicable)	College Course #	College Course Name
<input type="checkbox"/>	10001 0x	Introduction to Digital Technology	0.5	10001	This course introduces students to all the opportunities offered within the digital technologies department. Topics covered include laser cutting, 3-D printing, programming, and computer-aided drafting and design, GPS, and web design.	Select College		
<input type="checkbox"/>	10152 1x	Programming 1	0.5	10152	This course begins with developing understanding of concepts and skills. No programming experience is required. Students are encouraged to develop a professional approach to programming, which involves solving a problem through careful designing, coding, and documenting of programs. Topics will include variables, expressions, statements, functions, conditionals, recursion, loops, and sequences.	Select College		
<input type="checkbox"/>	10152 2x	Programming 2	0.5	10152	Programming 2 is an introduction to objectoriented program design. Students will learn to solve problems and explore game development by learning to process standard data structures with standard algorithms. Students will use the skills learned in Programming 1 to attack more	Select College		

**CTE Program Of Study .... 2017 Application** (continued)

					advanced programming applications using an industry-standard language			
<input type="checkbox"/>	10152 41 and 10152 42	Introduction to Computer Science	1.0	10152	This two-semester class introduces the concepts of Computer Science. In this projectbased class, students will explore all aspects of the software development cycle including design, implementation, and testing. Students will learn how to work in a software team using project management strategies such as agile development to plan, track, and manage team projects. Students will develop programs in a high level programming language such as Java or C++, and will explore data types, control structures, and algorithms. This course is designed to be able to be offered with dual credit from PCC for PCC Computer Science 161: Computer Science 1. Skills and concepts learned in this class contribute towards careers such as computer engineering, software engineering, quality assurance engineer, database administration, system administration, system analyst, customer support, web design and other fields.	Portland Community Co	CS 161	Computer Science 1
<input checked="" type="checkbox"/>	21003 0x	Engineering Prep	0.5	21003	Engineering Prep introduces career in various areas of engineering coordinated with course work that may include electronics, microelectronics, and civil engineering topics. Students are expected to design and complete required projects, and to participate in a variety of design challenge activities that may lead to competitions. Senior Seminar project will be completed in this course.	Select College		
<input type="checkbox"/>		Robotics 1	0.5		Students work with robotics and sensors using the LEGO® Mindstorms robotics systems. Various robotic challenges are presented. Students solve problems in teams as well as individually. Inputs, decisions, and	Select College		

# CTE Program Of Study .... 2017 Application (continued)

					outputs are explored with a heavy emphasis on problem solving from a systems approach.			
<input type="checkbox"/>		Robotics 2	0.5		This course expands students' understanding of robotics by improving programming and mechanical skills. More activities and complex tasks requiring critical problem-solving are provided. Students learn how to build NXT LEGO® Mindstorms Robots as well as program them to accomplish various challenges and learn to use C-type programming.	Select College		
<input type="checkbox"/>						Select College		
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<input type="checkbox"/>						Select College		

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

## CTE POS Course Lists—Post-Secondary

### Post-secondary Core CTE Courses:

- Enter the name of the college program that is the postsecondary component of this POS
- Select the highest level of this component offered by the college
- List only the courses included in the Course/Skill Set crosswalk matrix

Name of Certificate or Degree Program		Computer Information Systems	
Highest award available in Program:		AAS	
College Course #	Post-Secondary Course Name	Number of Credits	Accelerated College Credit/College Now?
CIS120	Computer Concepts I	4	<input type="checkbox"/>
CIS121	Computer Concepts II	4	<input type="checkbox"/>
CIS122	Introduction to Programming Logic	4	<input type="checkbox"/>
CIS140M	Operating Systems I: Microsoft	4	<input type="checkbox"/>
CIS179	Data Communication Concepts !	4	<input type="checkbox"/>
CIS225	End User Support	4	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
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## Course-to-Skill Set Crosswalk/Matrix

Please use one of the Excel spreadsheets posted online at (<http://www.ode.state.or.us/search/page/?=3584>) (or use one you've created locally) to crosswalk the identified skill set to the listed secondary and post-secondary courses.

- You should use the same matrix for both secondary and post-secondary courses.
- It is only required to map courses to the standards (Knowledge and Skill Statements); it is not necessary to map the performance indicators, duties, or tasks.
- Be sure to identify the selected skill set in your matrix, the secondary and postsecondary components.
- If your selected skill set is not from the [Oregon Skill Sets](#) website, please identify its origin and how it was industry validated.

☒ **Secondary:** (check this box to indicate secondary course-to-skills crosswalk is complete and attached)

☒ **Post-secondary:** (check this box to indicate post-secondary course-to-skills crosswalk is complete and attached)

## CTE POS Design Elements

*There are five Elements necessary for a robust Career and Technical Education Program of Study—all are critical to being State approved in Oregon*

### GENERAL DIRECTIONS FOR COMPLETING THE ELEMENTS SECTIONS:

- In the first part of each Element section, click on each checkbox for criteria that applies to your Program of Study
- For those criteria that don't apply at this time, explain in the Comments box at the end of the section why those criteria are not met and how you will address them before the program is up for revision (POSs are usually approved for four years) Programs that do not meet all elements at the time of application may be temporarily approved as a "State Recognized Program" (SRP) until missing elements are completed; SRP's can convert to POS anytime and be immediately eligible for Perkins funds, per local grant administrator's budget.
- In the second part of each Element section, there is the expandable space provided for Comments, as mentioned above. Use this box to explain missing check marks in the criteria statements above, point out strengths of your program, or identify special circumstances you need to have considered during ODE review of this application
- If you already have documents or files that help demonstrate the strength or potential of each Element, simply attach those documents or files in the appropriate Addendum folder, or provide links to online documents, when submitting this application, rather than write lengthy responses in the Comment box. (Consult the [Guide to Using the Oregon CTE Program of Study Application 2017](#) for details about how to use Addenda if submitting supporting documents or files.)

## Element 1: Standards & Content

*Standards and Content are the foundational elements for designing and improving Perkins-eligible Programs of Study*

This POS design includes:

- ☒ A. Relevant, rigorous technical skill standards-based content, including or 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. 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. A systemic approach to instructional delivery of academic and technical knowledge and skills where student performance is demonstrated through valid and reliable technical skill assessments (TSA) aligned to industry standards
- ☒ E. A plan for continuous improvement of program design and instructional delivery that provides the opportunity for each CTE POS student to:
  - ☒ Meet diploma requirements, post-secondary entry requirements, and/or certificate/degree requirements
  - ☒ Demonstrate mastery of academic and technical content that is aligned with industry standards
  - ☒ Apply learning through authentic experiences
  - ☒ Develop skills and build confidence to compete in high wage, high skill, and/or high demand occupations.

- **Directions for using the Comment box**—Expandable space is provided for comments. This Box is intended for explanations for missing checks above, or notes regarding program strengths worth consideration during POS review. If you already have documents or files that do this more quickly, simply attach those documents or files (or links to them) to this application in an appropriate Addendum folder. (Consult the [Guide to Using the Oregon CTE Program of Study Application 2017](#), for more details.)

Please address these questions through your comments in **Element 1 Comment Box** below (or attach documentation in an appropriately identified file/folder):

- Address any unchecked box above
- Explain how this POS is aligned with challenging academic standards at the HS and CC levels
- Identify those who participated in the decision of which skill set to use for this POS
- Who participated in the crosswalk of the skill sets to HS and CC courses

### Element 1 Comment Box:

This pathway was created with input, advise, and training from my PLA, a group including professionals in Information Technology businesses as well as in secondary and post-secondary education. Each class in this pathway supports the K-12 Computer Science Standards published by

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CSTA (Computer Science Teachers Association). These standards are also aligned with the NGSS (Next Generation Science Standards) for science and engineering.

Authentic learning experiences and industry standards are met with support from my own training as a software engineer with 10 + years of industry experience as well as advice from industry advisors. These classes are project based with each project selected to support these experiences and standards including the selection of tools used to develop software, processes followed for software design, content developed in the classroom, and direct input and advice to students from visiting industry partners. This pathway leads to many student outcomes as shown in this roadmap, [https://docs.google.com/spreadsheets/d/1zztp6UR7Hq\\_RLcSJkG15GZKttWgTrTf96-AKn4DWRAQ/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1zztp6UR7Hq_RLcSJkG15GZKttWgTrTf96-AKn4DWRAQ/edit?usp=sharing).

The technical skills assessment (TSA) for this pathway includes a project based assessment which includes all aspects of delivering a software product from concept to delivery and support. This project is assessed using the Software Engineering Design rubric developed locally by Chris Winnika, Computer Science teacher at Century High School and a member of my PLA. This TSA as well as student success against standards based learning objectives in all classes provide feedback on student success that will influence continuing course corrections and training.



## Element 2: Alignment and Articulation

*Alignment and Articulation are key to getting Program of Study partners working together to build career pathways for CTE students*

The alignment of this POS includes:

- ☒ A. A unified, cohesive sequence of content among secondary and post-secondary partners contained in a non-duplicative sequence of courses or learning experiences.
- ☒ B. Alignment of content between secondary and post-secondary education partners may include course articulation or other ways to acquire post-secondary education credits (e.g. Oregon's Credit for Proficiency, Dual Credit, Oregon Transfer credit, etc.).
- ☐ C. Articulation agreements are developed, implemented and supported at the institutional level to ensure long-term sustainability and cross-sector cooperation.
- ☒ D. Based on the program design and instructional plan, each student will:
  - ☒ 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.

➤ **Directions for using the Comment box**—Expandable space is provided for comments. This Box is intended for explanations for missing checks above, or notes regarding program strengths worth consideration during POS review. If you already have documents or files that do this more quickly, simply attach those documents or files (or links to them) to this application in an appropriate Addendum folder. (Consult the [Guide to Using the Oregon CTE Program of Study Application 2017](#), for more details.)

Please address these questions through your comments in **Element 2 Comment Box** below (or attach documentation in an appropriately identified file/folder):

- Address any unchecked box above
- Briefly describe the level of alignment and/or articulation that exists for this POS (you may also identify non-Perkins eligible alignments that exist with private schools, universities, etc.)
- Briefly describe the alignment and/or articulation activities that have occurred, and who participated from HS and CC levels

**Element 2 Comment Box:** Unchecked box - Articulation agreements are in progress. As of 5/11/2017 I am in communication with PCC for articulation of Introduction to Computer Science, aligned with CS 161 Computer Science 1. This process is on track to begin articulation in the next school year for 2017-2018. Support is in place for this articulation through administration at Hillsboro High School and Hillsboro School District. When I connect with my counterpart at PCC for the CS 161 course, they will become a key member of my advisory group.

The sequence of content begins at an introductory level that is designed to encourage students of different demographics with content that is meaningful and culturally relevant. It is also designed to give students the computer literacy that they need to be successful in the rest of the pathway. The pathway includes the opportunity for 1.0 articulated credit with PCC. The capstone class includes projects designed using industry standard tools and challenges. It includes a large project where students experience the challenges of working on a small software team using tools to aid project tracking and team collaboration. The full roadmap from high school to career with many available student outcomes with high wage, high demand jobs can be found here, [https://docs.google.com/spreadsheets/d/1zztp6UR7Hq\\_RLcSJkG15GZKttWgTrTf96-AKn4DWRAQ/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1zztp6UR7Hq_RLcSJkG15GZKttWgTrTf96-AKn4DWRAQ/edit?usp=sharing).



## Element 3: Accountability & Evaluation

*Accountability and Evaluation are core elements for Perkins eligibility—they provide data illustrating the value of CTE to students' future plans*

In this POS design:

- ☒ A. Performance will be measured against the Perkins-required performance measures as described in Perkins IV Measurement Definitions identified in Oregon's State Plan (re: Data Collection)
- ☒ B. Business, community and education partners (specifically, an Advisory Committee) participate in CTE Program of Study design and development, including:
  - ☒ Assistance in evaluating program vision, goals and priorities
  - ☒ Validation of industry skill standards for curriculum content and technical skill assessment, where appropriate
  - ☒ Participation in the CTE teacher recruitment, instructor appraisal process, and ongoing faculty professional development
- ☒ C. Perkins performance data is used for data-driven, CTE program of study design and improvement decisions
- ☒ D. Students have the opportunity to learn in a contextual career related environment that allows them to:
  - ☒ Monitor their own progress through their demonstration of attaining technical and academic skill standards
  - ☒ Demonstrate their technical and academic proficiency in meaningful ways, e.g., Technical Skill Assessment, etc.
  - ☒ Adapt their program to meet personal goals based on industry requirements and performance outcomes

➤ **Directions for using the Comment box**—Expandable space is provided for comments. This Box is intended for explanations for missing checks above, or notes regarding program strengths worth consideration during POS review. If you already have documents or files that do this more quickly, simply attach those documents or files (or links to them) to this application in an appropriate Addendum folder. (Consult the [Guide to Using the Oregon CTE Program of Study Application 2017](#), for more details.)

Please address these questions through your comments in **Element 3 Comment Box** below (or attach documentation in an appropriately identified file/folder):

- Address any unchecked box above
- Identify the data used in designing this POS, and the effect that the data had on the design
- Identify the members of the Business Advisory Committee
- How will the POS be evaluated, and by whom?
- How will you know if the POS is successful?
- What process will you use to decide any changes that need to occur because of the POS evaluation?
- **Required:** List the TSA(s) code used for this POS on Page 1 ([ODE approved list](#))

**Element 3 Comment Box:** POS evaluation using rubric from ODE performed by myself and administration as part of performance evaluation process. Advisory committee is an active participant of the planning of this pathway and specific tools and content, committee members and other industry guests will visit the classroom on a regular basis and will provide assessment and recommendations for changes necessary to continue to meet industry standards.

Self-assessment will include a break down of student performance compared to different demographics. One change already identified is to add a Computer Science Principles class in order to bring students who enter the program with low computer literacy up to a level where they can be more successful at the capstone level. This change will be planned in the 2017-2018 school year for implementation in 2018-2019.

The classes in this path were designed with input from industry, community, and education partners from the initial design effort and continuing with future changes and improvements to ensure students are ready for current jobs at with industry standard content. Member of this advisory group include

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Jason Galbraith, Programming teacher at Sunset High school, Chris Winnika - Programming teacher at Century High School, Pete Steinfeld - Software Engineer from IBM, Ed Bunch, software engineer from Intel, Bill Alexander - Computer Engineer at NVIDIA, as well as the school district wide Arts, Information and Communication PLA with other participants from local industry.

Career related learning environment is provided with classroom projects chosen to be representative of problems found in industry as identified by my own industry experience and that from my advisory committee. Job shadow and intern opportunities are provided through the counseling center. Students monitor their progress against learning goals via google classroom and Synergy. The project based Technical Skills Assessment measures overall student proficiency in the full POS.

## Element 4: Student Support Services

*Student Support Services include the ways that all students are made aware of the career and education opportunities available in the CTE career Pathway that is the focus of this POS.*

In this POS design:

- ☒ A. 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. Career Pathway Templates, Education Plan and Profile, POS visual guides, Career Information System, etc.).
- ☒ B. 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;
- ☒ C. Compliance is evident with Federal regulations, including 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; therefore, this POS provides:
- ☒ Appropriate access for all students, including non-traditional and special populations.
  - ☒ A non-biased and non-discriminating learning environment (with respect to race, color, national origin, gender and disability status).
  - ☒ Program facilities with 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).
  - ☒ Responsiveness to the needs of students for whom English is a second language.
- ☒ D. Opportunities for structured student leadership are a program component and integrated into CTE POS instruction. This POS integrates either:
- ☐ 1) One of the state chartered CTSO's: ☐ DECA, ☐ FBLA, ☐ FCCLA, ☐ FFA, ☐ FNRL, ☐ HOSA, or ☐ SkillsUSA **or**
  - ☒ 2) Another local or national organization that meets the criteria listed in the ODE [Student Leadership criteria](#) document.
    - The locally developed student organization or experience provides leadership development opportunities that meet the following expectations (see details in linked document above):
      - ☒ Context related instruction, career development , and practical assessment
      - ☒ Community-based learning experiences
      - ☒ Organizational management and administrative experiences

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Please address these questions through your comments in **Element 4 Comment Box** below (or attach documentation in an appropriately identified file/folder):

- Address any unchecked box above
- Briefly describe the POS-specific student support services that HS and CC students will receive in this POS that will support their success in the courses
- How will those student support services help inform and prepare HS and CC students for their next educational and career steps?
- Briefly describe the specific efforts that will be made to recruit all types of students into this POS (both HS and CC levels)
- Briefly describe any student leadership opportunities that will be available for both HS and CC

### Element 4 Comment Box:

#### Guidance and Counseling

Students receive information, guidance, and counseling for this program of study during forecasting with a counselor. Students also create an academic and career plan with their counselor, please see pages 2,6-27 [http://www.hsd.k12.or.us/Portals/0/schools/handbooks/2017-18%20HS%20Course%20Catalog\\_web.pdf?ver=2017-02-16-111245-720](http://www.hsd.k12.or.us/Portals/0/schools/handbooks/2017-18%20HS%20Course%20Catalog_web.pdf?ver=2017-02-16-111245-720)

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A 4 year academic and career Education Plan and Profile is created with the counselor using pathway roadmap, Naviance system is used in partnership with career counseling to do college and career searches and evaluating personal and professional qualifications <https://connection.naviance.com/family-connection/auth/login/?hsid=hillsborohs>

Students participate in an extended application career related learning experience that allows them to see and evaluate different careers in the computer industry. They are able to evaluate if Computer Science or other Information Systems fields are career areas they would like to pursue. Opportunities include Si Se Puede summer camp, Girls Get IT summer camp, competitive robotics club, Computer Game Development Club, presentations from speakers from industry, field trips to different industries. Industry opportunities are also made available to students via the Career and College website for Hilhi as well as the Hillsboro Chamber of Commerce School to Work website to look get more information about Career Related learning experiences in this field. <http://hilhicounseling.weebly.com/career.html> <https://www.hillsborochamberor.com/stc.html>

In addition we work on resume and cover letter writing for summer internships and other opportunities.

In the capstone class, students perform an extended application in Computer Science or related field, [https://docs.google.com/a/hsd.k12.or.us/document/d/12exTAXHPJfGoWxgkPdakhSbAFP\\_JC8txeJ8ogNI2iOE/edit?usp=sharing](https://docs.google.com/a/hsd.k12.or.us/document/d/12exTAXHPJfGoWxgkPdakhSbAFP_JC8txeJ8ogNI2iOE/edit?usp=sharing)

We have a dual credit coordinator at Hillsboro High School that comes in to assist students with applying and registering for dual credit. I also go over local and national scholarships, I help students apply online for FAFSA, encourage them to sign up for college visitation days and bring in guest speakers who have gone into education in order to answer questions my students have.

Girls Get IT Technology summer camp is a source of recruitment for girls in my program. This camp is taught by high school girls for middle school girls and projects are chosen to be attractive to girls. Further recruitment is ongoing, using female students as envoys to speak to other female students as well as direct encouragement for female students from myself.

Entry level course such as Introduction to Digital Technologies and Programming 1 are available to all students without prior experience. Introduction to Digital Technologies is an entry level course intending to build computer skills, such that all students will be ready to be successful in further classes in the pathway.

All laws are followed to ensure access of opportunity and materials to all students. Appropriate modifications are made for students on a modified diplomas, IEP's are followed, the classes are all differentiated according to student IEPs, 504s and individual needs.

Students with special needs as well as English Language Learners (ELL) will be given equal opportunities to succeed in this class. Adaptations will vary lesson to lesson due to content and students' individual needs, interests and abilities. Regular and authentic assessments will provide a meaningful measure of the level of learning and growth of each student. The authentic assessments will also provide information in regards to how well the students' needs are being met.

I connect with ELL students case managers to ensure that the needs are met for each individual EL student. Sheltered instruction techniques are used to scaffold instruction in order to increase domain specific vocabulary and student understanding.

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Students on Individual Education Plans (IEPs) will have the opportunity to work in cooperative groups with diverse learners. This will encourage and allow every student to be an active member of the classroom. We will use audio, visual, and tactile methods in the classroom to insure that all students have an opportunity to learn in the method that best suits their learning abilities. I will not hesitate to make inflight changes to modify assignments to match students' individual needs and strengths.

Taking part in learning experiences that match their cognitive level will challenge Talented and Gifted Students. This does not mean tacked-on work or additional assignments, but instead they will use their higher level thinking skills in cooperative and individual work.

Please refer to the Student Services Continuous Improvement Plan,  
[http://www.hsd.k12.or.us/Portals/0/district/departments/student\\_services/Student%20Services%202016%20CIP\\_ENGSPA.pdf](http://www.hsd.k12.or.us/Portals/0/district/departments/student_services/Student%20Services%202016%20CIP_ENGSPA.pdf)

## Element 5: Professional Development

*Professional Development for POS teachers should be designed on the needs identified by data, and should focus on continuous improvement of student opportunities within this POS.*

The planned professional development for this POS will:

- ☒ A. Connect to teacher effectiveness evaluations.
- ☒ B. Help teachers and administrators develop and improve standards-based curriculum and learning experiences that promote the integration of coherent and challenging academic content and industry-based technical standards, including opportunities for the appropriate academic and CTE instructors to jointly develop and implement classroom-based curriculum and instructional strategies.
- ☒ C. Include professional development that is high quality, sustained, intensive, and focused on instruction designed to increase the academic knowledge and understanding of industry standards
- ☒ D. Encourage applied learning methodology that contributes to the academic and CTE knowledge of the student
- ☒ E. Provide research and training opportunities that help teachers develop appropriate and useful assessment tools and strategies.
- ☒ F. Provide training and guidance geared to help improve instructional delivery methodology that helps improve student performance and skill acquisition, particularly skills needed to work with and improve instruction for special populations.
- ☒ G. Assist teachers in accessing and utilizing CTE accountability data, student achievement data, and data from assessments

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Please address these questions through your comments in **Element 5 Comment Box** below (or attach documentation in an appropriately identified file/folder):

- Address any unchecked box above
- Briefly describe how PD will be planned and implemented, based on the needs of the POS
- Briefly describe any planned joint PD ventures for HS and CC teachers, as well as regional trainings

### Element 5 Comment Box:

Annual Student Learning and Growth Goals will be set as part of the performance review process between myself and the Assistant Principal, John Matsuo. Growth goals will be measured with pre and post assessments addressing student performance in identified learning targets in the pathway. Results are broken down by different demographics, including under represented minorities, EL students, students on IEPs, and other measurements. As part of this process, resources are identified to help teacher growth in order to continually strengthen teacher effectiveness in these areas resulting in higher student performance.

I receive continuing support from learning communities as a member of several Oregon-wide PLCs run through Oregon Computer Science Teacher's Association (OCSTA), <http://oregoncsta.org/>. These PLCs are formed with computer science teachers across Oregon where teachers meet, discuss topics for development, share resources and lessons, participate in evaluating standards being developed as well as methods to implement existing standards. The PLCs I am a member of include "Computer Science Curriculum and Program Development" as well as "Advance Programming Topics." <http://oregoncsta.org/wrapping-up-csedweek-2016-and-starting-our-plcs/>

As a member of OCSTA, I regularly attend professional development courses through SuperQuest, a series of courses for teachers ranging from 90 minutes to 18 hours with college credit. SuperQuest is offered several times each year with current topics that offer support for growth in program development, curriculum development, club support. OCSTA also offers direct support to students by providing access to mentors in industry as well as hosting events for students such as the Oregon

## CTE Program Of Study .... 2017 Application (continued)

Game Project Challenge which our Game Development Club attends annually.

<http://www.ogpc.info/about/>

Portland Community College is also a source of valuable professional development. This information is provided by the Hillsboro School District Office for School Performance. PCC offered professional development through the STEM Equity and Inclusion Workshop for High School teachers.

Industry partners are a regular participant in both classes and clubs, providing students with in person training on industry tools brought into the classroom such as Agile Software Development taught by Pete Steinfeld from IBM. This type of partnership serves a dual purpose, both of teaching students and giving access to the experiences of the mentors as well as providing me with in classroom training to teach these new tools and concepts in the future.

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CTE Teacher: Submit complete electronic application materials to your CTE Regional Coordinator.

Regional Coordinator: Email application and addenda to this mailbox-- [POS.Application@state.or.us](mailto:POS.Application@state.or.us), or follow an alternative process described in Step 8 of the **Submission Process** on the last page of this application. **DEADLINE for submission: June 30, 2017**



## 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.** Email completed COA with ALL signatures to [POS.Application@ode.state.or.us](mailto:POS.Application@ode.state.or.us).

Name of CTE POS	Computer Science POS
Name of Secondary School	Hillsboro High School
Name of Community College	Portland Community College

<b>SECONDARY LOCAL SUPPORT and CERTIFICATE OF ASSURANCE</b>	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 109-270, 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.	
	Secondary School District Administrator Signature	Date:
	Administrator's Name	John Matsuo

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

<b>POST-SECONDARY LOCAL SUPPORT AND CERTIFICATE OF ASSURANCE</b>	This community college has been involved in the design and development of this CTE program of study and agrees to continue collaboration meeting all 5 Core Elements, especially alignment and articulation and reliable and valid technical skills assessment.	
Community College Administrator's Signature		Date:
CC Administrator's Name		

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

<b>For ODE Use Only</b>	
<b>Approval Status:</b> <input type="checkbox"/> FINAL STATE APPROVAL (Perkins Eligible)	
Education Specialist Signature	Expiration Date: _____ Date: _____

The CTE brand logo, brand-positioning, theme, and brand extensions are the property of NASDCTEc.

## Submission Process

### Instructions

Submit complete electronic copies of the application materials by following this procedure:

1. **Do not send PDF applications.** Please send in original Word format.
2. Be sure you are using the correct year's application from [ODE's website](#).
3. Create a file (main folder) for storing all documents to be submitted
4. Title the folder using the name of the secondary school, the name of the Program of Study, and the year of submission, e.g., "OregonTownHSAccounting2016."
5. Create subfolders clearly named for each Element's Addendum that you are including with the application, e.g., "OregonTownHSAccounting2016Addendum1," "OregonTownHSAccounting2016Element1," or "OregonTownHSAccounting2016StandardsContent."
6. If submitting unique documents for individual schools in a Regional Application, create subfolders for each school within the appropriate Element's Addendum folder, e.g., "OregonTownHSAAddendum1."
7. Place the completed POS Application and a scanned copy of the completed Assurance document in the main folder; put any other documents included with the application in their appropriate subfolders. (Please name documents and folders so that they are clearly identified.)
8. Each application needs to include a completed Assurance page with all signatures included on one page—please, no duplicate Assurance pages with partial signatures.  
(For Regional Programs of Study, however, each secondary institution will need to have its own Assurance page; for those Regional applications, please secure Community College signatures first, then photocopy for each secondary partner and acquire secondary signatures; then scan and place all originals in the main POS folder with the application.)
9. Please be sure all required documents, links, and examples are in their appropriate folders before performing Step 8.
10. Prepare files for submission:
  - a. Submit each POS application main folder with its subfolders one POS at a time.
  - b. Use the electronic download process using ODE's FTP portal. Go to the ODE Secure File Transfer site (<https://district.ode.state.or.us/apps/xfers/>) and follow the online directions for sending your POS folder to [POS.Application@state.or.us](mailto:POS.Application@state.or.us). For technical help with this procedure, call Kenzie Mozejko—503-947-5636.
  - c. Alternatively, you may save folders on a Jump Drive or CD-ROM and send to ODE, in care of: Kenzie Mozejko, Oregon Department of Education, PSB 2<sup>nd</sup> Floor, 255 Capitol St. NE, Salem, OR 97310.

CTE Teacher: Submit complete electronic application materials to your CTE Regional Coordinator.

Regional Coordinator: Submit application and addenda using the FTP process described in 10 above, to this mailbox:

[POS.Application@state.or.us](mailto:POS.Application@state.or.us) ). (Alternatively, using Step 10(c) above, a jump drive or CD ROM can be used to send files to ODE.)

***DEADLINE for submission: June 30, 2017***

***Early Bird deadline (assures feedback before teachers leave for summer): April 28, 2017***

**(You may delete this page before submitting this application.)**