

# Career and Technical Education Program of Study Application 2018 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 2018](#).) **DEADLINE for submission: June 29, 2018; (Early Bird: April 30, 2018)**

<b>CTE POS—Title:</b>	<b>Engineering Design</b>
Career Area:	Industrial Engineering Systems--IE
Cluster Area (& appropriate secondary CTE licensure):	IE--Engineering Technology
Focus Area (if applicable):	
Secondary CIP Code: ( <a href="#">Link to CIP website</a> )	14.0101 (6 digit)
Community College CIP Code: ( <a href="#">Link to CIP website</a> )	15.1303 (6 digit)

Secondary School Name:		Glencoe High School
Secondary School District:		Hillsboro School District
Secondary School ID Number: ( <a href="#">Link to ID lookup</a> )		1200
Secondary Teacher Name	Email	Current CTE License
Chris Steiner (Lead Teacher)	steinerc@hsd.k12.or.us	IES--Engineering Technology

<b>Secondary Technical Skill Assessment (TSA):</b> Use the code from <a href="#">this table</a> for your selected TSA.	3REG006
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<b>CC Technical Skill Assessment (TSA):</b> Use the code from <a href="#">this table</a> for your selected TSA.	2AREG019
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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 EarlI sally.earlI@pcc.edu
Community College CTE Program Title(s):	Electronic Engineering Technology
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://drive.google.com/file/d/1Ck3xToWCao_FOZoSCSWZmBYVwARcTWd/view?usp=sharing">https://drive.google.com/file/d/1Ck3xToWCao_FOZoSCSWZmBYVwARcTWd/view?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 29, 2018**

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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"/>	21005 01	Intro to Engineering Design	1	21005	This course teaches problem-solving skills using a design development process. Models of product solutions are created, analyzed, and communicated using solid modeling computer design software. This course is part of the Project Lead the Way engineering program at Glencoe.	Portland Community Co	ENGR10 0	Exploring Engineering
<input type="checkbox"/>	21005 02	Intro to Engineering Design	1	21005	This course teaches problem-solving skills using a design development process. Models of product solutions are created, analyzed, and communicated using solid modeling computer design software. This course is part of the Project Lead the Way engineering program at Glencoe.	Portland Community Co	ENGR10 0	Exploring Engineering
<input type="checkbox"/>	21004 01	Principles of Engineering	1	21004	This course helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science, and technology in an engineering problemsolving process to benefit people. The course also includes concerns about social and political consequences of technological	Select College		

**CTE Program Of Study .... 2018 Application** (continued)

					change. This course is part of the Project Lead the Way engineering program at Glencoe.			
<input checked="" type="checkbox"/>	21004 02	Principles of Engineering	1	21004	This course helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science, and technology in an engineering problemsolving process to benefit people. The course also includes concerns about social and political consequences of technological change. This course is part of the Project Lead the Way engineering program at Glencoe.	Select College		
<input type="checkbox"/>	21008 01	Digital Electronics	1	21008	This course applies logic to the design and construction of electrical circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. This course is part of the Project Lead the Way engineering program at Glencoe.	Select College		
<input type="checkbox"/>	21008 02	Digital Electronics	1	21008	This course applies logic to the design and construction of electrical circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. This course is part of the Project Lead the Way engineering program at Glencoe.	Select College		
<input checked="" type="checkbox"/>	21007 01	Engineering Design and Development	1	21007	This in an engineering research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in preceding engineering courses and are guided by a community mentor. They must present progress reports, submit a final written report and defend their solutions to a	Select College		

**CTE Program Of Study .... 2018 Application** (continued)

					panel of outside reviewers at the end of the school year. This course also fulfills the Senior Project graduation requirement. This course is part of the Project Lead the Way engineering program at Glencoe.			
<input checked="" type="checkbox"/>	21007 02	Engineering Design and Development	1	21007	This is an engineering research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in preceding engineering courses and are guided by a community mentor. They must present progress reports, submit a final written report and defend their solutions to a panel of outside reviewers at the end of the school year. This course also fulfills the Senior Project graduation requirement. This course is part of the Project Lead the Way engineering program at Glencoe.	Select College		
<input type="checkbox"/>	21009 1x	Robotics 1	0.5	21009	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 outputs are explored with a heavy emphasis on problemsolving from a systems approach.	Select College		
<input type="checkbox"/>	21009 2x	Robotics 2	0.5	21009	This course expands students' understanding of robotics by improving programming and mechanical skills. More activities and complex tasks requiring critical problemsolving 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. Students participate in or help with a robotics contest.	Select College		
<input type="checkbox"/>						Select College		

# CTE Program Of Study .... 2018 Application (continued)

<input type="checkbox"/>						Select College		
<input type="checkbox"/>						Select College		
<input type="checkbox"/>						Select College		
<input type="checkbox"/>						Select College		
<input type="checkbox"/>						Select College		
<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		Electronic Engineering Technology	
Highest award available in Program:		AAS	
College Course #	Post-Secondary Course Name	Number of Credits	Accelerated College Credit/College Now?
WR 121	English Composition	4	<input checked="" type="checkbox"/>
EET 101	Introduction to Electronic Testing Equipment/Soldering/Tool	1	<input checked="" type="checkbox"/>
EET 111	Electrical Circuit Analysis I	5	<input checked="" type="checkbox"/>
EET 121	Digital Systems 1	4	<input checked="" type="checkbox"/>
MTH 112	Elementary Functions	5	<input checked="" type="checkbox"/>
EET 113	Electrical Power	5	<input checked="" type="checkbox"/>
EET 123	Digital Systems 3: Mixed-Signal Systems	5	<input checked="" type="checkbox"/>
EET 178	Computing Environments for Technicians	5	<input checked="" type="checkbox"/>
EET 188	Industrial Safety	1	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

## Course-to-Skill Set Crosswalk/Matrix

Please use one of the Excel spreadsheets posted online at ([Skill Set Matrices Page](#)) (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 2018](#) 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 2018](#), 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:

- A. No unchecked boxes
- B. For this program of study we will be using the Oregon Skill Sets for Engineering Design. Kelly Purdy, the Career and College Pathway TOSA helped decide on which skill sets to use for this

## **CTE Program Of Study .... 2018 Application** (continued)

program of study. PCC instructors with whom we're articulating also advised on the selection of skill sets. <https://drive.google.com/file/d/1Yq4uWPgdqVZr5lkymyG21f4k4VshHLqf/view?usp=sharing>  
This engineering program of study is also rigorous and based on a Project Lead the Way curriculum that is standardized across the nation. Business and academic professionals have contributed to the design and delivery at the high school level. Many courses in PLTW align and articulate with post-secondary courses at PCC.

C. The instructors at the high school and PCC along with the CLA and the Career and College Pathway TOSA participated in the decision on which skill set(s) to use for this POS

Through the school district Career Learning Advisory teams (CLAs), high wage high demand data was examined when creating this pathway. Please see the attached Roadmap.

D. Those people mentioned above participated in the determining the crosswalk at the high school level and the PAVTEC Specialist, using the CCRGs created by PCC instructors created the post secondary crosswalk.

An advisory committee for this program will meet annually to ensure the program design and instructional delivery is continuously improving and meeting industry standards. This committee will also help build internship opportunities.



## 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 2018](#), 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:

A. No unchecked boxes.

B. Currently two courses in our program of study (Intro to Engineering Design and Digital Electronics) articulate with three of PCC's courses (ENGR100, EET 101a and EET 121). This program of study was created to align with industry and post secondary requirements; when creating the program of study it was aligned with Project Lead the Way and PCC's Electronic Engineering Technology program. <http://catalog.pcc.edu/programsanddisciplines/electronicengineeringtechnology/>

C. Continuous improvement is crucial. The advisory committee is made up of post secondary partners as well as industry professionals and will provide valuable input regarding program design and instructional plans to ensure a connection between educational preparation for entry to career and college programs. To ensure alignment I have worked with our Career and College Pathway TOSA, various industry partners, and community college instructors.

## 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 2018](#), 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:

A. No unchecked boxes.

B. As a school district we use the Performance Measurement data collection from ODE to help us evaluate our CTE programs of study. This data assists us in developing Professional Development opportunities for our teachers as well as helps us make decisions regarding what our focus needs to be for the programming. The Performance Measurement data in addition to our local data around high wage high demand careers, student enrollment data, forecasting numbers, and student interest along with feedback guides the advisory teams and the district level decision making around programs of study and pathway work/development. School and advisory teams meet to discuss the data, identify trends and to problem solve.

C. The advisory committee, which includes secondary, post-secondary and industry people, helps us validate curriculum and industrial skills as well as helps us recruit CTE teachers when we have openings. For the Engineering Program of study the members include: Intel Corp (Bret Toll) and Synopsys (Alex Tenca). An area that we are focusing much more purposeful attention around is our CTE advisory committees. We found that as we grow our programming, our industry partners and community college faculty feel stretched and advisory committee attendance declined. We now are working on having shared advisory committees between similar programs at our 4 comprehensive and

## **CTE Program Of Study .... 2018 Application** (continued)

one alternative school to eliminate this issue. Please see the attached Advisory Committee handout that we give to our prospective committee members. [https://docs.google.com/document/d/1ZUcy\\_-h671\\_l2OFct2ccdk7VyJLOPsWv8plt\\_ihFXI4/edit?usp=sharing](https://docs.google.com/document/d/1ZUcy_-h671_l2OFct2ccdk7VyJLOPsWv8plt_ihFXI4/edit?usp=sharing)

D. Student enrollment and completion of the POS, along with TSA scores and its alignment with post secondary and business standards will be used to evaluate this POS. This will be done by the instructor, school and district administrators, PCC instructors, and members of the Business Advisory Committee.

E. If the number of participating students increase to an optimal level and it is determined that they are provided with a program that is in alignment with post secondary and industry standards. The students will also pass the TSA with a 70% or above.

F. The instructor, Business Advisory Committee, PCC instructors, and the Career College Pathway TOSA will work together to improve this POS.

The TSA that will be used for this program of study at the high school level is 3REG006. This TSA is a locally developed assessment Developed for use in Project Lead the Way (PLTW) Engineering programs in CTE Region 3. The assessment involves completion of a portfolio of several projects. We have decided to use this TSA as it fits with the structure and programming of the Glencoe Engineering Program of Study.

Postsecondary TSA: 2AREG019

Students have the opportunity to monitor their own progress on technical skills attainment through formative assessments that occur daily in the classes. Student also have project based learning opportunities in which they can see first hand how they are doing and how what they are learning connects to the real world. Advisory Committee members also come in to give students feedback and act as guest speakers.

## 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

➤ **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 2018](#), for more details.)

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:

A. No unchecked boxes

B. All students create a 4 year plan in Naviance with their guidance counselor. This includes guidance in picking program of study courses. <https://www.hsd.k12.or.us/Page/220> Student begin their career and college guidance beginning in kindergarten, please refer to the CCP roadmap linked here [https://www.hsd.k12.or.us/cms/lib/OR02216643/Centricity/Domain/95/Documents/CCP%20Roadmap\\_0516.pdf](https://www.hsd.k12.or.us/cms/lib/OR02216643/Centricity/Domain/95/Documents/CCP%20Roadmap_0516.pdf)  
[https://www.hsd.k12.or.us/cms/lib/OR02216643/Centricity/Domain/95/Documents/CCP\\_Timeline\\_enl](https://www.hsd.k12.or.us/cms/lib/OR02216643/Centricity/Domain/95/Documents/CCP_Timeline_enl).

## CTE Program Of Study .... 2018 Application (continued)

pdf. In addition, we recruit new students every fall inviting all students in the school to join us for weekly robotics club meetings with a chance to join the team in January.

C. "It is the policy of the Board that equal educational opportunity and treatment be provided to all students. No student legally enrolled in the District shall, on the basis of race, color, religion, sex, sexual orientation, parental status, national origin, marital status, disability, or age be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity administered or authorized by the Board."

[www.hsd.k12.or.us/Portals/0/District/board/hsd%20policies/J%20Students/JB%2004-09.pdf](http://www.hsd.k12.or.us/Portals/0/District/board/hsd%20policies/J%20Students/JB%2004-09.pdf)

### Adaptations for Students with Special Needs & English Language Learners

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.

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.

All students have opportunities to participate in all programs of study no matter learning or physical disability. Teachers work with case managers to accommodate special needs as per board and state policy.

[www.hsd.k12.or.us/Portals/0/District/board/hsd%20policies/I%20Instruction/IGBAF-AR.pdf](http://www.hsd.k12.or.us/Portals/0/District/board/hsd%20policies/I%20Instruction/IGBAF-AR.pdf)

ELL students are provided support through many different methods in classes; for example, interpreters, differentiation and sentence frames, ect. In addition, students receive support from case managers and after school tutoring. In addition, we have instructional coaches at our schools that support implementation of SIOP, Constructing Meaning, and other sheltered instruction practices.

D. Students will be recruited through the 8<sup>th</sup> grade visitations and curriculum night along with visibility in assemblies (the Robotics Club).

E. Engineering students are provided leadership opportunities with FIRST Robotics Competition Team 4488 Shockwave. The leadership structure consists of specialty work groups such as programming, welding, business, and manufacturing each led by a student leader and guided by an adult community mentor. All of our mentors work in engineering and business firms in the Hillsboro area and help maintain a realistic sense of order identical to that of real engineering firms. The leadership and organizational structure provide a contextual learning experience that replicates the environment found in local high wage high demand occupations in Washington County's technology economy.

### 1. Relevant Links:

PCC WEBSITES OF PROGRAMS <http://www.pcc.edu/programs/>



ELECTRONIC ENGINEERING TECHNOLOGY WEBSITE <http://www.pcc.edu/programs/electronic-engineering/>

ELECTRONIC ENGINEERING TECHNOLOGY COOPERATIVE EDUCATION

<http://www.pcc.edu/resources/careers/internships/documents/coop-student-handbook.pdf>

ELECTRONIC ENGINEERING TECHNOLOGY CATALOG

<http://catalog.pcc.edu/programsanddisciplines/electronicengineeringtechnology>

ELECTRONIC ENGINEERING TECHNOLOGY ADVISING GUIDE

<http://www.pcc.edu/programs/electronic-engineering/documents/advising-guide-eet-certificate.pdf>

ELECTRONIC ENGINEERING TECHNOLOGY ADVISING SPECIALIST

<http://spot.pcc.edu/~lbrownin/> & <http://www.pcc.edu/programs/electronic-engineering/documents/advising-guide-eet-degree.pdf>

GRAD PLAN <http://www.pcc.edu/resources/advising/grad-plan/>

ADVISING SERVICES <http://www.pcc.edu/resources/advising/>

COUNSELING SERVICES <http://www.pcc.edu/resources/counseling/>

CAREER COUNSELING <http://www.pcc.edu/resources/careers/resource-centers/career-exploration.html>

CAREER CENTER <http://www.pcc.edu/resources/careers/resource-centers/>

START LAB <https://www.pcc.edu/resources/orientation/documents/orientation-schedule.pdf>

ESOL PROGRAM ADVISORS <http://www.pcc.edu/prepare/esol/sylvania/>

ESOL PROGRAM <http://www.pcc.edu/prepare/esol/>

INTERNATIONAL ADVISORS <http://www.pcc.edu/about/international/>

DISABILITY SERVICES <http://www.pcc.edu/resources/disability/>

OFFICE OF AFFIRMATIVE ACTION AND EQUITY <http://www.pcc.edu/about/affirmative-action/>

DIVERSITY TRAINING <http://www.pcc.edu/about/affirmative-action/training.html>

TRANSFER INFORMATION <http://www.pcc.edu/programs/university-transfer/>

SOU BAS BUSINESS MANAGEMENT TRANSFER INFORMATION

<http://www.pcc.edu/programs/university-transfer/transfer-guides/SOUBAS.html>

OIT BAS TECHNOLOGY AND MANAGMENT TRANSFER INFORMATION

<http://www.oit.edu/distance-education/programs/technology-management>

OREGON TRANSFER GUIDES <http://www.pcc.edu/programs/university-transfer/transfer-guides/>

OUT OF STATE TRANSFER GUIDES <http://www.pcc.edu/programs/university-transfer/transfer-guides/out-of-state.html>

2. Technical Skill Assessment: <http://www.ode.state.or.us/search/page/?id=3230>

3. All expectations have been met. The following information provides supporting evidence for the Expectations: Student Support Services per each original statement.

A. Students receive information, guidance, and/or counseling specific to this CTE Program of Study, including career and job market information, and college program information. Evidence: Students in the Electronic Engineering Tech program at PCC have a specialized advisor who is knowledgeable about PCC systems as well the nuances of the field and the program. The PCC website shows the many diverse CTE programs available as well as how to get started in one, a career center as well as offers advising and career counseling services.

B. Students participate in CTE POS specific career related learning experiences or related work experience. Evidence: Students are required to take EET 256 (Capstone Project) or EET 280A

## **CTE Program Of Study .... 2018 Application** (continued)

Cooperative Education: electronic Engineering Technology (2-5 cr.) to meet their required degree elective requirements. This is an internship experience that is offered in a real world setting.

C. Students' education planning is developed around information specific to this CTE Program of Study. Evidence: Students and advisors work with the GRAD PLAN program to create a personalized degree plan based on the students' level of entry at PCC and the program requirements. In addition, the catalog of programs and degrees offers guidance on educational planning.

D. Extended application projects or capstone experiences are developed within the context of this CTE Program of Study. Evidence: Students complete a series of extensive applied projects throughout the program starting in their first year. They will experiment and understand a variety of materials as well as complete projects from the preplanning phase through completion.

E. Written information is provided to all students in this CTE Program of Study informing them of available articulated college (or university) credits, dual credit, expanded options, scholarships, and other postsecondary opportunities. Evidence: PCC has extensive and detailed information available in their transfer website and in the transfer guides that are available showing the paths of articulation from PCC CTE programs to university programs. The program advising specialist reaches out to students through email, class visits and one-on-one meetings about transfer options, scholarships, extra-curricular opportunities, and available college resources. .

F. Efforts are made to provide information to students who are considered non-traditional by gender to the occupations resulting from this CTE Program of Study. Evidence: PCC is committed to reaching out to all students regardless of their gender. The CTE program advisors are empowered to reach out to high school students through high school visits, annual student preview day, and career fairs. In addition, the program participates biennially in the NW Career Youth expo and participates in the event "Girls in Technology," which is aimed solely at high school girls and CTE/technology programs.

G. Access and recruitment to courses in this CTE POS are provided for all students including, but not limited to all Oregon and federal protected classes. Evidence: PCC is firmly committed to creating a diverse student body through continued and regular education of staff and faculty as well as by offering ongoing support to students and staff through the Office of Affirmative Action and Equity.

H. Accommodations are made to assure students with special needs can participate in this CTE POS. Evidence: The Disability Services office at PCC is able to help accommodate students with documented disabilities receive services they may qualify for.

I. Assistance is provided for students wishing to participate in this CTE POS for whom English is not their native language. Evidence: Most CTE programs require an English and Reading level minimum placement of WR 115 and/or RD 115. PCC offers ESOL courses for students who wish to improve their English language proficiency prior to entering into their CTE program of choice. For students who are studying on an international visa, international advisors that specialize in helping non-native speakers enter into the ESOL program are available.

## 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

➤ **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 2018](#), for more details.)

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:

A. No unchecked boxes.

B/G. As we work on our Perkins Plan for each year, the district works to align the Perkins Plan SMART goals to what the teachers are being evaluated on and the 5 Dimensions of Teaching and Learning, which is our Instructional Framework. In addition we use the Performance Measurement Data to help us see which areas teachers are in most need of professional development in order to help their students better succeed. Teachers also identify what professional development opportunities they are desiring especially around keeping up to date with industry and community college standards and practices. For the 2018-19 school year teachers will be involved in National Conferences such as ACTE, CTE and Math integration, PLC work around data driven decision making, language scaffolds, dual credit work shops and equity trainings to name a few. In addition I intend to take PLTW training this summer and would like to attend the ACTE conferences as often as possible.

**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 29, 2018**



# 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).

<b>Name of CTE POS</b>	Engineering
<b>Name of Secondary School</b>	Glencoe High School
<b>Name of Community College</b>	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.	
<b>Secondary School District Administrator Signature</b>		<b>Date:</b>
<b>Administrator's Name</b>	Claudia Ruf	

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

<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.	
<b>Community College Administrator's Signature</b>		<b>Date:</b>
<b>CC Administrator's Name</b>	Kendra Cawley	

<b>For Regional Coordinator Use Only</b>	
<b>Recommended Status:</b> <input type="checkbox"/> <b>RECOMMENDED FOR STATE APPROVAL (Perkins Eligible)</b> <input type="checkbox"/> <b>DISAPPROVED (and returned for revision)</b>	
<b>Regional Coordinator Signature</b> 2A--Beth Molenkamp elizabeth.molenkamp@pcc.edu	<b>Date:</b> _____

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

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## 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., "OregonTownHSAccounting2018."
5. Create subfolders clearly named for each Element's Addendum that you are including with the application, e.g., "OregonTownHSAccounting2018Addendum1," "OregonTownHSAccounting2018Element1," or "OregonTownHSAccounting2018StandardsContent."
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 ([ODE FTP Site](#)) 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 29, 2018***

***Early Bird deadline (assures feedback before teachers leave for summer): April 30, 2018***

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