Career and Technical Education
Program of Study Application
2016 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—503-947-5653, ron.dodge@ode.state.or.us. (For detailed information on how to complete this application consult the Guide to Using the Oregon CTE Program of Study Application 2016.) DEADLINE for submission: June 30, 2016

<table>
<thead>
<tr>
<th>CTE POS—Title:</th>
<th>Engineering Pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Area:</td>
<td>Industrial Engineering Systems—IE</td>
</tr>
<tr>
<td>Cluster Area (&amp; appropriate secondary CTE licensure):</td>
<td>IE—Engineering (Engineering Tech)</td>
</tr>
<tr>
<td>Focus Area (if applicable):</td>
<td></td>
</tr>
<tr>
<td>Secondary CIP Code:</td>
<td>Link to CIP website</td>
</tr>
<tr>
<td>Community College CIP Code:</td>
<td>Link to CIP website</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary School Name:</th>
<th>Sunset High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary School ID Number:</td>
<td>48J</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Teacher Name</th>
<th>Email</th>
<th>Current CTE License</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jason Galbraith (Lead Teacher)</td>
<td><a href="mailto:jason_galbraith@beaverton.k12.or.us">jason_galbraith@beaverton.k12.or.us</a></td>
<td>IES—Information Communications Technology</td>
</tr>
<tr>
<td>Cady (Catherine) Geer</td>
<td><a href="mailto:catherine_geer@beaverton.k12.or.us">catherine_geer@beaverton.k12.or.us</a></td>
<td>IES—Information Communications Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CC Technical Skill Assessment (TSA):</th>
<th>Use the code from this table for your selected TSA.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2AREG019</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Technical Skill Assessment (TSA):</th>
<th>Use the code from this table for your selected TSA.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2AREG027</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary Oregon Community College Name:</th>
<th>Portland Community College</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Contact Nakiea Daniels or Ron Dodge)</td>
<td></td>
</tr>
<tr>
<td>College Point of Contact:</td>
<td>PCC Sally Earll <a href="mailto:sally.earll@pcc.edu">sally.earll@pcc.edu</a></td>
</tr>
<tr>
<td>Community College CTE Program Title(s):</td>
<td>Computer Aided Design and Drafting (CADD), Electronic Engineering Technology, Machine Manufacturing Technology</td>
</tr>
<tr>
<td>Community College Award:</td>
<td>Associate of Applied Science</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Visual/Roadmap:</th>
<th>(Insert link, or identify location where sample of visual can be found)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><a href="https://drive.google.com/file/d/0B66NBSyb2LU8TIBCdmpyWHNWUJU/view?usp=sharing">https://drive.google.com/file/d/0B66NBSyb2LU8TIBCdmpyWHNWUJU/view?usp=sharing</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Regional Coordinator/Contact:</th>
<th>2A—Beth Molenkamp <a href="mailto:elizabeth.molenkamp@pcc.edu">elizabeth.molenkamp@pcc.edu</a></th>
</tr>
</thead>
</table>

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, 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, 2016
CTE Program Of Study …. 2016 Application (continued)
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)

<table>
<thead>
<tr>
<th>TSA Required</th>
<th>School Course #</th>
<th>Secondary Course Name</th>
<th># of Credits</th>
<th>5-digit NCES Code</th>
<th>Course Description (brief) (boxes below will expand)</th>
<th>Articulating College (if applicable)</th>
<th>College Course #</th>
<th>College Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>A521X</td>
<td>3D CAD</td>
<td>.5</td>
<td>21107</td>
<td>Design objects using CAD software.</td>
<td>Portland Community College</td>
<td>CADD126</td>
<td>Introduction to AutoCAD</td>
</tr>
<tr>
<td>✔</td>
<td>A560X</td>
<td>Engineering 1 (Electronics)</td>
<td>.5</td>
<td>21006</td>
<td>Learn and create analog and digital circuits</td>
<td>Portland Community College</td>
<td>EET101, ENGR100</td>
<td>Introduction to Electronic Testing Equipment/Soldering/Tools, Exploring Engineering</td>
</tr>
<tr>
<td>✔</td>
<td>A561X</td>
<td>Engineering 2 (Mechatronics)</td>
<td>.5</td>
<td>21006</td>
<td>Create physical objects incorporating mechanical and electrical engineering principals</td>
<td>Select College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔</td>
<td>A567X</td>
<td>Engineering 3 (Engineering Design)</td>
<td>.5</td>
<td>21006</td>
<td>Create a complete project through the entire engineering design cycle</td>
<td>Select College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔</td>
<td>A445X</td>
<td>Computer Game Design 1</td>
<td>.5</td>
<td>10160</td>
<td>Learn basic programming for video game design</td>
<td>Portland Community College</td>
<td>CS133G</td>
<td>Introduction to Computer Games</td>
</tr>
<tr>
<td>✔</td>
<td>A446X</td>
<td>Computer Game Design 2</td>
<td>.5</td>
<td>10160</td>
<td>Learn advanced programming techniques for video game design</td>
<td>Portland Community College</td>
<td>CS233G</td>
<td>Game Programming</td>
</tr>
<tr>
<td>✔</td>
<td>A423X</td>
<td>Computer Hardware 1</td>
<td>.5</td>
<td>10251</td>
<td>Learn the basics of computer hardware, operating systems, and networks</td>
<td>Select College</td>
<td>CIS120</td>
<td>Computer Concepts 1</td>
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<tr>
<td>✔</td>
<td>A424X</td>
<td>Computer Hardware 2</td>
<td>.5</td>
<td>10251</td>
<td>Learn trouble-shooting techniques to fix computers</td>
<td>Select College</td>
<td>CIS145</td>
<td>Microcomputer Hardware and Troubleshooting</td>
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<td>✔</td>
<td>A562X</td>
<td>Robotics 1</td>
<td>.5</td>
<td>21009</td>
<td>Learn basic use of motors, servos, and sensors</td>
<td>Select College</td>
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<tr>
<td>✔</td>
<td>A563X</td>
<td>Robotics 2</td>
<td>.5</td>
<td>21009</td>
<td>Use advanced programming, sensors, and electronics to solve problems</td>
<td>Select College</td>
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<tr>
<td>✔</td>
<td>A431X</td>
<td>Web Design 1</td>
<td>.5</td>
<td>10201</td>
<td>Learn HTML, CSS, and Javascript</td>
<td>Portland Community College</td>
<td>CS122</td>
<td>Software Design</td>
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<tr>
<td>A432</td>
<td>Web Design 2</td>
<td>0.5</td>
<td>10201</td>
<td>Learn jQuery and Ruby</td>
<td>Select College</td>
<td>CS133 W</td>
<td>JavaScript for Web Developers</td>
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<td>Select College</td>
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</table>

*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

<table>
<thead>
<tr>
<th>Name of Certificate or Degree Program</th>
<th>Electronic Engineering Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest award available in Program</td>
<td>AAS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College Course #</th>
<th>Post-Secondary Course Name</th>
<th>Number of Credits</th>
<th>Accelerated College Credit/College Now?</th>
</tr>
</thead>
<tbody>
<tr>
<td>EET 101</td>
<td>Introduction to Electronic Testing Equipment/Soldering/Tools</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CMET 110</td>
<td>Statics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CMET 111</td>
<td>Electrical Engineering Technology Orientation</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CMET 112</td>
<td>Technical Algebra/Trigonometry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CMET 121</td>
<td>Strength of Materials</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CMET 122</td>
<td>Technical Engineering Physics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CMET 133</td>
<td>Materials Technology</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

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](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

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; SRPs 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 2016 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 the appropriate Addendum folder. (Consult the Guide to Using the Oregon CTE Program of Study Application 2016 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: Click here to enter information ...
Element 2: Alignment and Articulation

The alignment of this POS includes:

- A unified, cohesive sequence of content among secondary and post-secondary partners contained in a non-duplicative sequence of courses or learning experiences.
- 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.).
- Articulation agreements are developed, implemented and supported at the institutional level to ensure long-term sustainability and cross-sector cooperation.
- 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 the appropriate Addendum folder. (Consult the Guide to Using the Oregon CTE Program of Study Application 2016, 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: Click here to enter information ...
Element 3: Accountability & Evaluation

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 the appropriate Addendum folder. (Consult the Guide to Using the Oregon CTE Program of Study Application 2016, 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: Click here to enter information ...
Element 4: Student Support Services

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 CTSOs: DECA, FBLA, FCCLA, FFA, 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 the appropriate Addendum folder. (Consult the Guide to Using the Oregon CTE Program of Study Application 2016, 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: We will be creating a school based program and connect with other local organizations and work to integrate one of them into our POS.
Comments:

1. Relevant Links:
PCC WEBSITES OF PROGRAMS http://www.pcc.edu/programs/
CIVIL ENGINEERING TECHNOLOGY WEBSITE http://www.pcc.edu/programs/civil-engineering/
CIVIL ENGINEERING TECHNOLOGY COOPERATIVE EDUCATION http://spot.pcc.edu/jobs/quest/eqcmet.htm
CIVIL ENGINEERING TECHNOLOGY CATALOG http://catalog.pcc.edu/programsanddisciplines/civilengineeringtechnology/
CIVIL ENGINEERING TECHNOLOGY ADVISING SPECIALIST http://spot.pcc.edu/~lbrownin/
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 MANAGEMENT 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 Civil 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. The Civil Engineering Technology degree program has their own website and advising guides which details how students can get started and get support.

B. Students participate in CTE POS specific career related learning experiences or related work experience. Evidence: Students are required to take CMET 280 CE: Civil/Mechanical Engineering
Technology 1-5cr. 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. Currently there is a direct transfer program with Southern Oregon University for a BAS Business Management, Oregon Institute of Technology, BAS Business and Technology or a BS Operations Management that AAS students can transfer directly into. 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

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 the appropriate Addendum folder. (Consult the Guide to Using the Oregon CTE Program of Study Application 2016, 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: Teacher effectiveness evaluations are not determined by us.
### Certification of Assurance

**Name of CTE POS** Engineering Pathway  
**Name of Secondary School** Sunset High School  
**Name of Community College** Portland Community College

#### SECONDARY LOCAL SUPPORT and CERTIFICATE OF ASSURANCE

I have reviewed this program application document for clarity, completeness and adherence to program quality standards, and support its approval. I agree that the CTE program area requirements for secondary CTE programs, including appropriate CTE certification for teachers, the rules and regulations for Public Law 108-270, 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**  
**Administrator's Name** Chris Bick  
**Date** 6/17/16

#### LOCAL SUPPORT and CERTIFICATE OF ASSURANCE

The program advisory committee has been involved in the design and development of this program.

**Advisory Committee Signature**  
**Date** 6/17/16

#### POST-SECONDARY LOCAL SUPPORT AND CERTIFICATE OF ASSURANCE

This community college has been involved in the design and development of this CTE program of study and agrees to continue collaboration meeting all 5 Core Elements, especially alignment and articulation and reliable and valid technical skills assessment.

**Community College Administrator's Signature**  
**CC Administrator's Name** Kendra Cawley  
**Date** 6/29/16

#### For Regional Coordinator Use Only

**Recommended Status:**  
- [x] RECOMMENDED FOR STATE APPROVAL (Perkins Eligible)  
- [ ] DISAPPROVED (and returned for revision)  

**Regional Coordinator Signature**  
**Date** 6/27/16

#### For ODE/OCCWD Use Only

**Approval Status:**  
- [ ] FINAL STATE APPROVAL (Perkins Eligible)  

**Expiry Date:**  
**Date:**

**Education Specialist Signature**

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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., “OregonTownHSAccounting2016.”
5. Create subfolders clearly named for each Element’s Addendum that you are including with the application, e.g., “Addendum1,” “Element1,”” or “1StandardsContent.”
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., “OregonTownHSAddendum1.”
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 form—please, no duplicate 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 nakeia.daniels@ode.state.or.us. For technical help with this procedure, call Ron Dodge—503-947-5653, or Nakeia Daniels—503-947-5636.
   c. Alternatively, you may save folders on a Jump Drive or CD-ROM and send to ODE, in care of: Nakeia Daniels, Oregon Department of Education, PSB 2nd 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: nakeia.daniels@ode.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, 2016

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