Career Launch Endorsement Review (CLER) Application
INSTITUTION: Wenatchee Valley College

PROPOSED PROGRAM: Drafting Certificate

PROGRAM LEVEL (CHECK ALL THAT APPLY):

_____ High school Diploma

X ___ College Certificate

_____ College Associate Degree

_____ College Bachelor Degree

_____ Industry Recognized Certificate(s)

PROGRAM CIP: CIP-15.1301 PROGRAM NAICS CODE 541330

COLLEGES ONLY: PROGRAM EPC (Legacy) PLAN CODE (PeopleSoft) DDT1DC01

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Applications reviewed monthly and are due the first business day of the month.

Electronic submissions only to scopeland@sbctc.edu
Program Introduction

WVC has expanded the Drafting certificate from an 18-credit program to a 45-credit (one-year) certificate. This Career Launch Endorsement application provides documentation of the program development in order to describe the educational opportunity gaps and identify how this curriculum prepares graduates for entry level jobs in the Wenatchee area.

The 1-year drafting certificate program has been designed to prepare students to work as civil engineering technicians, entry level drafters, and map/survey technicians. The Program Learning Outcomes include:

1. Understand the theory and principles of civil engineering used in design and construction of structures and facilities.
2. Draft dimensional drawings and design layouts for projects in CAD software.
3. Review blueprints to determine dimensions of a structure or system.
5. Prepare GIS maps that incorporate field survey data, AutoCAD layers, shapefiles, and digitization.
6. Communicate with others verbally and in writing and work as a team.
7. Proficient in basic computer skills such as Windows operating system, word, and excel.

Program Checklist

P1. Program description including length of program in years and total hours (including split between classroom and worksite).

The one-year drafting certificate requires students to take 45 credit hours of coursework at WVC. A 45-credit one-year degree at WVC equates to approximately 450 hours of classroom instruction. The curriculum requires a Cooperative Work Experience (CWE) class where students are aligned with a paid internship (work experience) in the community. Students can register for 1-5 CWE credits while they work 100 (or more) hours in the work place.

P2. Estimated number of hours per week at worksite and in classroom (this approach may shift throughout the program).

The drafting certificate program guide outlines approximately 15 credit hours per quarter which is equivalent to approximately 15 hours per week in the classroom plus time to study and complete assignments. Most students will complete their work experience over the summer once the one-year program coursework is completed. Students will work out the employment details with the employer but they may work 10 hours per week for 10 weeks over summer quarter or they may vary the number of hours per week to reach the 100 hour minimum program requirement. Most students will find full time paid summer position and work 40 hours per week for ten weeks summing up to a total of 400 work hours. Students may also choose to complete their CWE course (internship) during the school year.
P3. Demonstration of labor market demand for specified skills/career in local region.

WVC reached out to SkillSource to provide occupation reports for drafters, civil engineering technicians, and map/survey technicians. While the demand is higher at the Statewide level with an average of 918 jobs per year, the occupation reports indicated a steady demand for these positions in the Wenatchee area with an average of eight new positions posted each year. Considering that these numbers are for Wenatchee only and the WVC service district spans three Counties, it is anticipated that there will be enough jobs for program graduates each year. Occupation data is summarized in the table below.

<table>
<thead>
<tr>
<th>Occupation title</th>
<th>Total # employed</th>
<th># new jobs/year</th>
<th>% annual growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil engineering technician</td>
<td>1749/17</td>
<td>188/2</td>
<td>0.08/0.05</td>
</tr>
<tr>
<td>Drafters*</td>
<td>5462/44</td>
<td>569/4</td>
<td>0.01/NA</td>
</tr>
<tr>
<td>Map and survey technician</td>
<td>1293/14</td>
<td>161/2</td>
<td>0.05/NA</td>
</tr>
<tr>
<td>Total # of Jobs State/Wenatchee</td>
<td>8504/75</td>
<td>918/8</td>
<td></td>
</tr>
</tbody>
</table>

*Drafters is a combination of architectural/civil, mechanical, electrical, and all other

The occupation data reported in the data table above is from 2020 Quarter 3 so numbers may be influenced by the COVID 19 pandemic. In addition to the data reported by SkillSource, industry outreach indicated that most firms contacted had hired for a similar position in the last year.

P4. Projected count of student enrollment, student completion, and anticipated employer participation for 5 years, post-pilot.

The following table outlines the anticipated student enrollment, completion, and employer participation for the next five years.

<table>
<thead>
<tr>
<th>Drafting Certificate</th>
<th>Fall 2021</th>
<th>Fall 2022</th>
<th>Fall 2023</th>
<th>Fall 2024</th>
<th>Fall 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headcount Enrolled</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Student Completion</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Employer Participation</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

P5. Concise description of development process to create the Career Launch program (e.g. who was involved, when, how was the program piloted, etc.). Include a listing of program advisory committee members and their affiliation to the program.

Wenatchee Valley College (WVC) has offered an 18 credit Drafting Technology certificate program for over seven years and from 2015-2019, 16 students obtained this 18-credit drafting certificate. This program consisted of three engineering courses and one art course. WVC
advised students that the 18-credit drafting certificate did not prepare graduates for the work force as a stand-alone credential. WVC often recommended that this 18-credit drafting certificate be paired with another degree or certificate in order to find employment.

In Spring 2020, WVC began reaching out to government agencies and industry to obtain feedback on engineering programs as part of the Career Launch grant. It appeared that there were job opportunities for two engineering pathways in the community. There were jobs for students with electrical and mechanical skills and knowledge and there were jobs for students with civil engineering skills. Thus, WVC decided to seek two engineering career launch endorsements: one for the BAS-ET program and one for a revised drafting certificate. The BAS-ET program was career launch endorsed in January 2021.

Prior to Fall 2020, the WVC Industrial Technology Advisory group guided the drafting program and the BAS-ET program. In Fall 2020, WVC faculty asked the Industrial Technology Advisory Group members if it was ok to form a separate Advisory Group to guide the drafting program revisions. They agreed that this was appropriate since the Industrial Technology Advisory group members does not include any civil engineers.

In Fall 2020, WVC invited the following industry and government representatives to participate in the Advisory Board for the Drafting Certificate:
Piper Petit, Transportation Engineer, WSDOT
Dan Ireland, PE, SCJ Alliance
Tim Randall, surveyor, Chelan Public Utilities District
Matt Collins, GIS Specialist, City of Wenatchee
Greg Stewart, Northwest Indian Fisheries Commission

WVC faculty met with the above listed Advisory Committee twice during the past year (December 10, 2020 and February 25, 2021). Meeting notes are available upon request. The Advisory Committee members provided input on the Program Learning Outcomes, coursework, and importance of including work experience with the program. WVC also reached out to industry for input on jobs available for graduates and that information is summarized in the Industry Related section below.

Once the Advisory Committee had provided input to develop learning outcomes and curriculum, the revised program was approved by the Dean, Work Force Division, and finally the WVC Curriculum Committee on May 18, 2021. Once those processes were completed, WVC prepared a Program Approval Request form which has been sent to SBCTC for approval. WVC is also working to get this program endorsed as a Career Launch program through submittal of this CLER application.

P6. Signed letter of endorsement from all relevant partners, stakeholders and regional networks (including employers, labor organizations, academic institutions, community-based organizations, individuals, and other relevant stakeholders in support of the proposed Career Launch program). Regional network endorsement preferred.
This drafting endorsement is well-supported by industry and educational providers in the region as documented by the ten letters of support attached for the program endorsement.

Five industry letters of support are attached from the following employers:
Dave Bierschback, Region Administrator, WSDOT
Matt Collins, GIS Manager, City of Wenatchee Public Works Department
Dan Ireland, P.E. SCJ Alliance
Adam Miller, P.E. Gray & Osborne
Ryan Brownlee, P.E. Pacific Engineering

Four high schools will be educational provider partners for this career launch endorsement:
Chris Cloakey, CTE Director, Cashmere High School
Doug Merrill, Pre-Engineering Teacher, Wenatchee High School
Tim Dailey, Pre-Engineering/Drafting Teacher, Okanogan High School
Jim Schmutzler, CTE Director, Eastmont High School

The drafting endorsement is also supported by the regional network as described in the letter of support provided by Dr. Sue Kane, North Central Education Service District

P7. Description of resources, supports, or other processes to recruit and support students from underserved backgrounds (e.g. including students of color, students from low income families, English language learners, students with disabilities, foster students, students experiencing homelessness, students from single parent homes, and other populations that face barriers to employment); or create an implementation plan to do so.

The demographics of the WVC campus demonstrate that this college recruits students from underserved backgrounds. WVC is a designated Hispanic Serving Institution with approximately 35% of degree seeking students with Latinx ethnicity and approximately 12% representing other minorities. WVC enrollment of Latinx students is over twice the statewide average of 14.5%. On average, for the last five years, 30% of students enrolled at WVC are supported by Pell grants which provides an estimate of the number of students from low-income families.

WVC is committed to equity and inclusion so these principles are embedded within the Strategic Plan to guide operating principles that support our diverse student population. Campus houses an office of Equity and Inclusion as well as a Director of Tribal Relations and a Director of Student Access. These offices have helped to develop student support programs such as MESA, TRIO SSS and CAMP. MESA is a nationally recognized academic program that provides academic support as well as personal and professional development for 1st generation college students, low income students and historically under represented students who are seeking science, technology, engineering, and math (STEM) degrees. The TRIO SSS program provides support services to low income, 1st generation college students, and students with disabilities to help them graduate from WVC. The CAMP program (College Assistance Migrant Program) provides academic and financial support to students from migrant or seasonal farm working families during their first year of college. The Director of Student Access also works with information technology staff to
ensure accessibility and incorporate universal design into the classrooms. WVC also developed the DREAMers Taskforce to help undocumented students fulfill their dream of higher education. WVC also offers a transitional studies program to provide very low-cost ESL (English as a second language) courses for the community. WVC translates all of our outreach materials into Spanish and English to allow for increased language access to students and their families.

WVC coordinates efforts to recruit students with Skillsource (WIOA), WA Department of Health Services (DHS), and Opportunities Industrialization Center (OIC) to reach unemployed and low skilled workers in the service district. WVC offers several grants that can provide tuition, books, and emergency housing support for students: Basic Food Employment Training, Work Force training grant, Opportunity Grant, and Foundation Scholarships. WVC also coaches these students with finding other scholarship funds to pay for additional schooling through completion of FAFSA and other financial aid sources through specific programs, for example, farm workers, food stamps, or state programs such as opportunity grants. WVC also offers workshops when employers lay off employees such as an upcoming workshop for Pier 1 and previous work with Alcoa. Work with Skillsource and Worksource referrals helps WVC reach youth and adults from a wide range of socio-economic backgrounds including youth of color, youth from rural areas, out of school youth, English language learners, youth with disabilities, foster children, homeless youth, single parents, and other populations that face barriers to employment.

Seven high schools in the service district teach AutoCAD and/or Drafting and Design Technology courses. The table below indicates that these schools have strong enrollment in these courses when they are offered. WVC will continue to support high schools in their efforts to offer these courses and reach out to these students through targeted marketing efforts to ensure that they know about the Career Launch endorsed Drafting program certificate.

The following table provides the enrollment in Drafting Courses at local High Schools

<table>
<thead>
<tr>
<th>High School</th>
<th>Course</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cascade</td>
<td>AutoCAD</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cashmere</td>
<td>AutoCAD</td>
<td></td>
<td></td>
<td>23</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Chelan</td>
<td>AutoCAD</td>
<td></td>
<td></td>
<td></td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Eastmont</td>
<td>AutoCAD</td>
<td>20</td>
<td>26</td>
<td>12</td>
<td>13</td>
<td>36</td>
</tr>
<tr>
<td>Okanogan</td>
<td>Drafting and Design Technology</td>
<td>26</td>
<td>12</td>
<td>12</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Wahluke</td>
<td>AutoCAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wenatchee</td>
<td>Drafting and Design Technology</td>
<td>59</td>
<td>59</td>
<td>46</td>
<td>40</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>AutoCAD</td>
<td>22</td>
<td>21</td>
<td>33</td>
<td>31</td>
<td>25</td>
</tr>
</tbody>
</table>

Once students are enrolled at WVC, the following student support programs are available to all students:

- Advising – WVC has Faculty Advisers and Educational Planners to help students pursue educational goals.
• Career center - WVC has a Career Center that provides student coaching and mentoring as well as connecting students to work study opportunities off campus.

• Child care - WVC offers sliding fee scale childcare for students through a partnership with the Westside alternative high school. This nationally-accredited program provides quality, licensed child care to children from one month to five years of age while parents attend class, study and work.

• Counseling - WVC offers free, confidential, short term (3-5 sessions) counseling with professional counselors in the counseling center. Services aim to help students explore concerns and discover new strengths, insights and ways of coping.

• Disability services – the student access department helps students with physical or learning disabilities in one or more of the following ways: providing alternative textbooks, classroom re-location or furniture, communication assistance (captioning, sign language interpretation, video), development of absence agreements, providing test accommodations, and/or finding housing accommodations in residence halls.

• Financial aid and scholarships – the financial aid office assists students in applying for all types of financial assistance, including grants, work study opportunities, veteran benefits, scholarships and student loans. WVC also awards scholarships to approximately 200 students annually; amounts vary up to full tuition.

• Health clinic – Columbia Valley Community Health operates a health clinic on campus 3 days/week. The health clinic employs a bi-lingual nurse practitioner and students can drop in without appointments. The clinic accepts most insurance policies and offers sliding scale fee options.

• Health insurance – WVC offers low cost accident only health insurance to students through Relation Insurance. Policies to cover dependents are also available.

• Transportation support- WVC is committed to making our college and programs accessible to everyone and therefore, all WVC students receive a free bus pass for our local bus system LinkTransit. This allows students to travel in from rural underserved and outlying areas of our service district.

• Tutoring - Tutoring services provide supplemental instructional support in a dynamic, collaborative learning setting to enhance the educational experience at WVC. Tutoring services are available free of charge to all WVC students enrolled in classes. Specifically, there is a Math skills lab that helps students succeed in math classes.

• Veterans programs - The WVC Veterans Office acts as a liaison between students and the Veteran Affairs Department of Education to provide students with information regarding VA educational benefits, tuition discounts, military tuition assistance and military gift credits while at WVC. This office helps guide students through the college application process and provides referrals to other campus services.

**Industry Related Checklist**

IR-1. Address of worksite(s) where Career Launch students will complete supervised training.  

The following employers offer internships and/or entry level work for drafters, civil engineering technician and/or GIS technicians and they have committed to offer positions to students who successfully complete the interview process:
1. Washington State Department of Transportation, North Central Region, 2830 Euclid Avenue, Wenatchee, WA
2. Gray & Osborne, 11 Spokane Street, Wenatchee, WA
3. SCJ Alliance, 25 North Wenatchee Ave. # 238, Wenatchee, WA
4. City of Wenatchee, 1350 McKittrick Street, Suite A, Wenatchee, WA
5. Pacific Engineering and Design, 200 S. Columbia St Suite 300, Wenatchee, WA

IR-2. Hourly wage for Career Launch participants.

The engineering consulting firms SCJ Alliance, Gray & Osborne, and Pacific Engineering pay interns ≥13.50 per hour. City of Wenatchee pays interns $13.50 – 15.50 per hour. WSDOT pays engineering interns $17-23 per hour.

IR-3. List of entry-level positions and associated job descriptions for which a Career Launch student would be eligible for upon completion.

Several entry level positions have been identified for the drafting program graduates. The following text lists job titles for six different positions where drafting program graduates would be well-qualified to apply for upon graduation. All of these jobs were recently posted (within the last 18 months) in the Wenatchee area. Key skills from these job postings were used to draft a general job description and to describe key skills for section IR-4 below.

1. AutoCAD Drafter, Bethlehem Construction, Cashmere, WA
2. AutoCAD/Civil 3-D Design Technician, Gray & Osborne, Wenatchee, WA
3. Transportation Technician II, WSDOT North Central Region
4. Engineering Technician, Chelan County Public Works, Wenatchee, WA
5. Engineering Technician, City of Wenatchee Public Works, Wenatchee, WA
6. Civil Drafting Technician, Pacific Engineering, Wenatchee, WA

Job description:

The primary responsibilities include the implementation of skilled engineering tasks to support design and construction projects in the office and field. This position will serve in a support role to the project engineer providing skilled surveying, materials testing, computer aided drafting and design (CADD), estimating, and inspection to ensure contractor work conforms to the plans and specifications of the contract.

Specific tasks include:

- Work collaboratively with a team to produce drawings.
- Prepare routine and complex correspondences, reports, contract plans, specifications, and estimates for location projects.
- Assist the project engineer in assuring final estimates and records are processed accurately and in a timely manner.
- Perform computer aided drafting and design (CADD).
- Utilize computer to calculate quantities, grades, elevations, coordinates, and curve data.
Create and prepare memos, letters, reports, survey field notes, daily field reports, schedules, and deliverables in accordance with current Design Manuals, Survey Policies, and Standards.

Serve as an inspector and materials tester for construction projects

Work as a member of a survey crew utilizing and caring for conventional and GPS survey equipment to gather field data on a variety of projects.

IR-4. List of specific skills and competencies required for completion of Career Launch program, with demonstrated alignment to entry-level positions, job descriptions, and average local salary ranges.

Five out of six of the job postings listed in IR-3 did not include a salary with the job announcement, however, the WSDOT Technician II salary range is $46,188.00 - $62,148.00. The salary range for Architectural and Civil Drafters in Washington is $23.91/hour – $35.49/hour (Data source: Employment Security Department web site).

The job postings listed in IR-3 were used to develop the table below which lists specific skills and competencies needed in the work place and how those align with the coursework.

<table>
<thead>
<tr>
<th>Skill from job posting</th>
<th>Course Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong mathematical proficiency in geometry, algebra, and trigonometry.</td>
<td>Students must place out of algebra into college level math or take remedial algebra courses. Then, students either take Math 100T which covers trigonometry or they take a higher level math course.</td>
</tr>
<tr>
<td>The ability to operate and maintain survey instruments and associated software to prepare records, drawings, and documents.</td>
<td>ENGR Survey class will teach students how to use a total station to prepare a topographic map.</td>
</tr>
<tr>
<td>The ability to read, interpret, understand, review manuals, policies, and procedures; and produce contract plans, specifications, and estimates.</td>
<td>ENGR 102 is a blueprint interpretation course and students are also introduced to reading project specifications. Students also take a business class to learn to use Excel which will help them calculate project estimates on the job.</td>
</tr>
<tr>
<td>Effective communication skills with diverse groups utilizing oral, written, and electronic communication methods.</td>
<td>Students take ENGL 101 composition and ENGL 235 Technical writing.</td>
</tr>
<tr>
<td>Experience using AutoCAD</td>
<td>ENGR 105 teaches AutoCAD</td>
</tr>
<tr>
<td>Basic principles, procedures and practices related to engineering, land surveying, CADD and GIS mapping, Global Positioning System (GPS) data collection and compilation and general data management.</td>
<td>Students take an ENGR surveying class and GEOG GIS class.</td>
</tr>
</tbody>
</table>
IR-5. Employer attests that Career Launch program is in compliance with required federal, state, and local regulations.

Endorsement letters (attached) attest that work opportunities will be in compliance with local, state, and federal regulations.

IR-6. Employers will outline a student supervision and mentorship model.

Endorsement letters attached state that students will be supervised and mentored during internships. The following text further describes the supervision and mentorship provided by the employer and WVC.

Drafting program students must enroll in a Cooperative Work Experience (CWE) course in order to complete their degree. As part of this course, students will participate in paid internships offered by local employers. Student interns are typically offered an internship that is equivalent to working full-time (40 hours per week) for the duration of one academic quarter (8-11 weeks or approximately 400 hours). Alternatively, students may choose to work fewer hours per week and complete their CWE course and internship by spreading the hours out over more weeks. At a minimum, students must complete a 100-hour internship in order to complete this program.

Students must apply for the paid internship position, sit for an interview, and be hired by the company in order to complete the paid work experience. At the worksite, students will be trained and complete assigned tasks while working with an industry mentor. Students will work with their worksite supervisor and a college faculty member to complete the CWE course requirements. The CWE course requirements include goal-setting, a site visit and supervisor and student evaluations as well as activities intended to reflect on student learning. Students also develop learning objectives, maintain an hourly work log with descriptions of daily work completed, and draft a final report to describe how they made progress towards their learning objectives during their work experience. While students are enrolled in the CWE course, they participate in five discussion sessions that center around topics associated with the work experience. Upon completion of the work experience, WVC faculty help students define a clear path for the future. WVC faculty help students revise their resume and cover letter to incorporate their work experience gained during the paid internship. WVC faculty also work with students and employers to conduct exit surveys and interviews to evaluate the work experience from the employer and student intern perspective.

IR-7. Description of common career pathway(s) beginning with entry-level position specified with demonstration of likely salary growth over specified time period.

This flow chart depicts the different career pathways that students might pursue after program completion and completion of a paid work internship. Students might continue to work as a drafter or civil engineering technician. For those students more interested in surveying or mapping, they could earn enough hours to become a professional land surveyor. For those students more interested in construction support, they could take courses to become a Certified...
Erosion and Sediment Control Lead (CESCL) to expand their job opportunities at construction work sites. They might also take courses and tests to become certified in materials testing.

One specific job pathway for program graduates who work at Washington State Department of Transportation (WSDOT) is that they may start as a Transportation Technician level I and work their way up to a Transportation Technician level II and then move into a Transportation Technician level III. The starting pay for a level I is $39,528 and the top salary for a level III is $74,604. This is a very realistic pathway through the Transportation Technician series and once WSDOT employees are at the Transportation Technician level III, they may also advance into the Transportation Engineering series as a Transportation Engineer 2 (TE2) and have the potential to advance further into the professional engineering series. The career advancement from technician to engineer does not happen as frequently as the transition through the technician series. The North Central Region (Wenatchee) has Transportation Technician positions and these positions are located statewide.

Students may choose to return to school to further their education to earn a two-year degree at WVC or possibly transfer to Central Washington University to earn a 4 year construction management degree. WVC is working with Central on a possibly articulation pathway for students who earn the drafting certificate.

IR-8. Demonstrated competency alignment with relevant professional standards for specified entry-level positions when applicable.

There are no national recognized professional standards identified for occupations such as engineering technician or drafter or map/survey technician.

IR-9. Signed letter from employers partners attesting that Career Launch completers will be ready for specified entry-level jobs, including an optional, non-binding commitment estimating number of Career Launch completers they plan to interview/hire over the first three years of the program.
There are five letters from employer partners that attest that the students who graduate from the WVC drafting certificate program will be well-qualified for entry level employment or internships upon completion of their coursework. Each letter contains the following information:

1. Evidence that they are familiar with the coursework (knowledge, skills, and abilities) taught in the drafting program at WVC.
2. A statement that each entry level position or internship will be paid at least at the minimum wage level and a commitment to interview students on an annual basis and offer paid work opportunities to qualified students.
3. A statement about how the training provided by WVC makes the student a good candidate to be competitive for an internship and/or entry level paid position. The paid work may start as an internship as described in the letters and most of these companies want to promote employees from those entry level paid intern positions.

**Academic-Related Checklist**

AR-1. List of academic institution(s) providing career-aligned instruction for Career Launch program.

Wenatchee Valley College is offering the one year drafting certificated to provide career-aligned instruction for the Career Launch program. Wenatchee, Eastmont, Okanogan and Cashmere high schools are also educational providers in this Career Launch program. These high schools teach articulated engineering course work as described in Section AR-6 below; see attached letters of support from these high schools.

AR-2. Curriculum scope and sequence aligned to skills and competencies provided in employment.

The following table outlines the proposed curriculum including required courses and possible elective credits:

**Drafting Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Credits</th>
<th>Course Description (Abbreviated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 102</td>
<td>Interpreting Engineering Graphics</td>
<td>2</td>
<td>Blueprint (engineering plans) interpretation</td>
</tr>
<tr>
<td>ENGR 105</td>
<td>Computer Aided Design</td>
<td>5</td>
<td>AutoCAD</td>
</tr>
<tr>
<td>ENGR 106</td>
<td>Advanced Computer Aided Design</td>
<td>4</td>
<td>Solidworks</td>
</tr>
<tr>
<td>NATR 125 or GEOG 215 GIS</td>
<td>Introduction to GIS</td>
<td>3 or 5</td>
<td>ArcGIS</td>
</tr>
<tr>
<td>ENGR 267</td>
<td>Introduction to Survey</td>
<td>5</td>
<td>Survey</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition</td>
<td>5</td>
<td>Writing</td>
</tr>
<tr>
<td>MATH 100T (or higher)</td>
<td>Technical Math, Math in Society, or higher</td>
<td>5</td>
<td>Technical Math, Math in Society, or higher</td>
</tr>
</tbody>
</table>
## CWE Internship and Co-operative Work Experience

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCT 130</td>
<td>Intro to Excel Spreadsheets</td>
<td>5</td>
<td>Microsoft Office Excel</td>
</tr>
<tr>
<td>ENGL 235</td>
<td>Technical Writing</td>
<td>5</td>
<td>Technical writing</td>
</tr>
<tr>
<td>Elective (If needed)</td>
<td></td>
<td>0 to 4</td>
<td>Elective credits (suggested below)</td>
</tr>
</tbody>
</table>

| Total Credits | 45 |

### Recommended Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 110</td>
<td>Drawing</td>
<td>5</td>
<td>Introduction to drawing from observation</td>
</tr>
<tr>
<td>ART 132</td>
<td>3D Digital Design 1: Intro to Computer Aided Modeling</td>
<td>5</td>
<td>3D digital design</td>
</tr>
<tr>
<td>Math 141 (or 142, 146, 151, 152, 153)</td>
<td>Pre-calculus and/or Calculus</td>
<td>5</td>
<td>Pre-calculus or Calculus</td>
</tr>
<tr>
<td>Physics 114, 115, or 116</td>
<td>General Physics</td>
<td>5</td>
<td>Physics</td>
</tr>
<tr>
<td>Chemistry 161, 162</td>
<td>General Chemistry</td>
<td>5</td>
<td>Chemistry</td>
</tr>
</tbody>
</table>

AR-3. Demonstration of student supports (e.g. mentoring, advising, financial aid, tutoring) available for Career Launch students enrolled in the course.

WVC provides a comprehensive range of student development services to support student learning needs outside the classroom. In addition to what is described in Section P7 above, these include:

- Educational planning for students, class scheduling for the first quarter of enrollment, understanding program requirements, and developing an educational plan
- Financial aid, including federal and state need-based aid and private scholarships
- Counseling services to address personal and emotional issues that are interfering with success in college
- Disability support services and accommodations
- Multicultural services, including academic and personal support and leadership development opportunities
- Career services, including career coaching and exploration, job search support, transfer guidance, mentorships, college work experience, and work-study job placements
- International student programs for students from abroad who are seeking an American collegiate experience and education
- Student programs, including leadership opportunities through the student senates and a broad range of clubs and organizations
- MESA: offers a friendly and comfortable space where students gather to study and engage in STEM. Members of MESA receive a unique combination of enrichment activities, academic support, industry involvement and an encouraging community environment.
Faculty advising: one-on-one advising from designated faculty subject matter experts; coaching students with course selection, degree completion and transfer.

AR-4. Number of postsecondary credits provided and / or credential earned upon completion.

The drafting program certificate is 45 credits.

AR-5. Demonstrated curricular alignment with relevant professional and / or academic standards associated with coursework and credential, when applicable.

Section IR-5 describes the curriculum alignment with relevant professional skills and knowledge requirements.

AR-6. Details of potential for current or future partnerships and/or scalability of the program within and across sectors and/or geographic locations (e.g. articulation, degree pathways).

WVC currently offers dual credit articulations with local high schools so that high school students earn college credit (ENGR 102 and/or ENGR 105) for engineering course work while in high school. Currently, four high schools have classes that qualify for ENGR course credit at WVC: Eastmont, Wenatchee, Okanogan, and Cashmere. WVC is working to expand the dual credit articulation agreements and agreements are currently in progress for an ENGR course offering at Wahluke and Omak High Schools.

WVC is working with Central Washington University to develop an articulation agreement so that students can transfer to the Construction Management program. Students would earn a Drafting certificate from WVC with work experience and then complete a 2 year degree at WVC before entering the program at Central at junior level status.

End of Text Application.
Attachments: Ten Letters of Support