

Career Launch Endorsement Review (CLER) Application



Wenatchee Valley College – Environmental Systems and Refrigeration Technology (ESRT)
CLER application

INSTITUTION __ Wenatchee Valley College_____

PROPOSED PROGRAM __ Environmental Systems and Refrigeration Technology (ESRT)_____

PROGRAM CIP__ 47.0201_____PROGRAM EPC (Legacy) _ ATS – 703 Certificate – 703B__
PLAN CODE (PeopleSoft)_____

NAICS Code__ 238220_____

Please note: **Registered Apprenticeship programs become automatically endorsed for Career Launch.** You need not submit an application.

CONTACT INFORMATION

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21Feb20

Chief Academic Officer

Date

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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 Checklist

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

ESRT:

- Certificate of Completion = 53 credits (1 year); total of 670 hours in classroom.
- Associate of Technical Science Degree = 106 credits (2 years); total of 1,220 hours in classroom and minimum of 400 hours at the worksite = 1,620 total hours.
 - See Program Guide at end of application.

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

Students in these programs are expected to spend between 5-25 hours per week at their respective worksites. A full-time student, on average, can expect to spend 15-20 hours per week in the classroom.

P3. Demonstration of labor market demand for specified skills/career in local region.

ESRT:

Growth for Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021):

<u>2020 Jobs</u>	<u>2028 Jobs</u>	<u>Change (2020-2028)</u>	<u>% Change (2020-2028)</u>
136	155	19	14.0%

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

ESRT	2019-20	2020-21	2021-22	2022-23	2023-24
Anticipated Headcount Enrolled:	58	60	60	60	60
Anticipated FTEs Enrolled:	48	50	50	50	50
Anticipated Program Completers:	11	15	15	15	15

P5. Concise description of development process to create the Career Launch program (e.g., who was involved, when, how was the program piloted, etc.)

The Dean of Workforce Education, Dean of Allied Health and Nursing, and the Dean of Liberal Arts and Sciences all attended the webinar held on 10/14/19 via Zoom. From there, these Deans all had a discussion as to the appropriate direction of this grant. The Dean of Workforce Education met with the

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Vice President of Instruction, Director of Workforce Grants, BAS-Engineering Technology faculty, Automotive Technology faculty, and Career Services personnel.

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.

(See attached)

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.

WVC is a designated Hispanic-serving institution, with a student population of over 45% Hispanic/Latino students. WVC has two programs, TRiO and CAMP, who support Hispanic/Latino students. Recruitment efforts are held throughout WVC's service district and will include outreach to local industry partners, including the Colville Tribe, various fruit industry partners and local public utility districts (PUDs). WVC already has a strong outreach effort throughout its service district and efforts to recruit for BAS-DA will benefit from these established relationships.

WVC has also created Spanish-translated materials that have the branding of PIO (WVC's Community Relations Office) to address students of color and non-English speaking parents. Other departments that have outreach efforts may have their own internal materials not created by PIO, such as the (Access Center) Lisa Foster, (CAMP) Yuritzi Lozano, (TRiO) Ivan Valdovinos and transitional studies.

Industry-Related Checklist

I-R1. Address of worksite(s) where Career Launch students will complete supervised training.

Patriot Plumbing, Heating & Cooling, Inc.
536 S. Chelan Ave.
Wenatchee, WA 98801

I-R2. Hourly wage for Career Launch participants.

\$14-\$15 per hour for students.

I-R3. List of entry-level positions and associated job descriptions for which a Career Launch student would be eligible for upon completion.

ESRT: Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician and Heating, Ventilation, Air Conditioning and Refrigeration Maintenance Technician.

I-R4. 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.

ESRT: Proficient use of hand and power tools, quantitative problem solving skills, good understanding of the diagnostic equipment, and use and understanding of the many sources of written manuals.

<u>25th Percentile Earnings</u>	<u>Median Earnings</u>	<u>75th Percentile Earnings</u>
\$18.60/hr	\$22.12/hr	\$27.30/hr

I-R5. Employer attests that Career Launch program is in compliance with required federal, state, and local regulations.

Yes

I-R6. Employers will outline a student supervision and mentorship model.

Yes – students work with a lead technician as an apprentice.

I-R7. Description of common career pathway(s) beginning with entry-level position specified with demonstration of likely salary growth over specified time period.

Patriot Plumbing, Heating & Cooling, Inc. has a path to quickly move students from entry level HVAC Installer Apprentice to HVAC Lead Installer at \$20 per hour. Much of the work to hit each benchmark involves self-study and training. The next move would be taking on a new position as Service Technician and the pay ranges from \$22 plus incentives to \$38 plus incentives per hour depending upon experience, certifications and licenses.

I-R8. Demonstrated competency alignment with relevant professional standards for specified entry-level positions when applicable.

Patriot Plumbing, Heating & Cooling, Inc. is probably a bit unique, in that they hire for personality and customer service skills. The fact that an applicant is attending the HVAC/R program tells us that he is serious about this as a career. They have not hired an HVAC employee outside of the college students or

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graduates since 2016. Their next criteria are: 1. Good driving record 2. Clean background check 3. Customer service savvy.

I-R9. 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.

(See attached)

Academic-Related Checklist

A-R1. List of academic institution(s) providing career-aligned instruction for Career Launch program.

One of the courses that is required for the ESRT program is Basic Welding (WELD) 128. Articulations for this course to WVC include local high schools:

Brewster High School, Bridgeport High School, Cashmere High School, Chelan High School, Manson High School, Mansfield High School, Okanogan High School, Omak High School, Pateros High School, Tonasket High School and Waterville High School.

A-R2. Curriculum scope and sequence aligned to skills and competencies provided in employment checklist.

ESRT:

ESRT 196 and 296 (Cooperative Work Experience) Course Objectives:

- Hands-on experience to support skills and theory of classroom.
- Prepare student for employment.
- Reinforce student aspirations and specific interests.

ESRT Program Outcomes:

Students who complete the ATS in Environmental Systems and Refrigeration Technology will have the skills and knowledge to:

- Obtain a 608 refrigerant license for employment.
- Seek a Washington State HVACR Specialty Electrical 06A License.
- Work in the Refrigeration or HVAC industries as an entry-level employee.
- Demonstrate the ability to work on refrigeration control circuits
- Understand and troubleshoot an air conditioning and heat pump system.
- Service commercial refrigeration equipment
- Understand on the job safety precautions as it relates to refrigeration systems
- Seek employment using skills and techniques geared toward the refrigeration industry jobs
- Intelligently discuss various type of HVACR systems during a job interviews
- Obtain a RETA CARO entry level license

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The ESRT two year ATS degree qualifies students to work in many various areas of the refrigeration industry including residential, commercial and industrial as installers, operators, and maintenance personnel.

A-R3. Demonstration of student supports (e.g. mentoring, advising, financial aid, tutoring) available for Career Launch students enrolled in the course.

Student Services: WVC provides strong academic support for its students to facilitate their success. WVC tenured faculty are available for face-to-face meetings on a regular basis and through email/phone to offer additional support to students and for advising.

Student Services and Instruction personnel have been instrumental in the launch of WVC's first two BAS degrees. Monthly meetings have helped the college maintain a dialogue to get this underway—especially focusing on Curriculum, Financial Aid, Advising, and Admissions. The dedicated advisor for the program will be the faculty director at first, and as the program grows, the above noted BAS Director will be hired.

Library and Technology Services: Library resources extend beyond the book collection to include Ebrary's Academic Complete, a collection of 100,000+ undergraduate e-books. Academic journals are provided with core academic collections from ProQuest and Gale and specialized databases from other vendors. Articles not covered by WVC databases are easily accessible through the InterLibrary Loan service. The library makes available 85 databases, 49 of which are paid with the balance being free resources vetted by library staff.

WVC librarians are available to help find, evaluate and document resources in person including evenings and Saturdays. The WVC 24x7 online "Ask a Librarian" service is available to all students.

The library's study rooms can be reserved online, and two computer labs and plentiful wireless access support students' needs. WVC's Virtual Desktop service allows students to access their WVC desktop wherever they have internet access.

The library has an E-Resources Librarian currently on staff, who acquires, evaluates and supports the online library services and databases offered to faculty, staff and students. This position supports expanding the services offered to BAS students with the introduction of this degree by dialoguing with WVC faculty and other librarians at schools in similar transitions and identifying the best resources to add.

The WVC library system is well positioned to support these workforce programs. The Workforce Dean has had several conversations with the Dean of Library and Technology Services to ensure the library can adequately support students. While the library does maintain a current print collection supporting the curriculum, the majority of resources are electronic and are easily discoverable using Primo, a search tool that simultaneously searches the college catalog and all of its electronic databases. Current electronic resources include two core academic databases; access to over eight hundred academic journals on education; 3,800 books in the EBook Central; comprehensive coverage of education in the core online reference collection (Credo); and 600 online videos on education.

The library's Dean and staff are in a unique position to offer support to students by virtue of the fact that the Dean's department includes the district's library system, information technology unit, distance

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learning and content production unit and the core tutoring services. The Dean is an equal partner with the district's academic deans in ensuring the success of the district's academic programs. The department can respond quickly and cohesively to teaching and learning needs and can leverage budget as well as revenue from distance learning and technology fees. In addition, the Dean and key staff are leaders in the community and technical college system's new library consortium. That group's first project was to migrate to a common library software platform (Ex Libris' Alma and Primo). The new platform will increase access to education materials held in libraries across the Northwest, by virtue of the fact that SBCTC libraries will be on the same platform as four-year colleges in the Orbis-Cascade and WIN networks.

New support will include assigning a librarian to liaise with the Dean responsible for these degrees to analyze course syllabi in order to ensure they can be supported with library resources, to design appropriate library instruction for these students, to identify new library resources needed to support the degree, and to liaise with peers at other institutions offering the same degree. The library has a demonstrated ability to devote resources to new courses and programs, and has significant flexibility with its budget to support both the implementation and maintenance of programs. In addition, the district has a year of Title III grant funds remaining, which include funds aimed at acquiring library materials in support of new programs. Close to \$70,000 was allotted for new materials for transitions to existing or new programs in this grant period and much of that was used to support degrees in general. The Title III grant (awarded in 2013) has helped WVC change its culture with online resources and support, thus positioning the college well to take on a four-year degree programs.

WVC's library has also been granted additional resources from the Title III grant, which allowed the purchase of journal articles, books and book chapters, theses and dissertations. WVC will fund the library annually in the amount of \$3,000.00 to continually replace aging materials and grow the education collection for all BAS programs. This annual support will help the library enhance services to enable all students receive additional resources related to research.

Financial Aid: The WVC Financial Aid Office assists students in finding and applying for financial assistance, including grants, work-study opportunities, veteran benefits, scholarships and student loans. Programs available include the Federal Pell Grant, Federal Supplemental Education Opportunity Grant, Federal Direct Student Loans, Federal Direct Parent Loan to Undergraduate Students, Veteran Administration Benefits, Federal Work Study, Washington State Need Grant, Washington State Opportunity Grant, Washington State Work-Study Program, Wenatchee Valley College Institutional Grant, Wenatchee Valley College Tuition Waiver, and Wenatchee Valley College Tuition Payment Plan. Workforce Education's Workforce Grants staff assist students eligible for funding through the Opportunity Grant, Basic Food Education and Training program, and Worker Retraining program. Workforce Grants staff also provide extended wraparound services and aid students with non-tuition expenses.

Career Center: The WVC Career Center supports students with all aspects of the career development process, including résumé and cover letter reviews, interview preparation, job hunting strategies, and overall career and life planning targeted towards the student's individual career goals. In addition, the Career Center can help prepare students for their required internships. The Career Center has been instrumental in finding internship partners for other BAS programs. This service will continue with students and helping them secure the residency requirement for these programs.

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Child Care: Through a partnership with WVC and Wenatchee School District, affordable childcare services are available to WVC students at the Westside Early Learning Center. The program provides quality, licensed childcare for children from one month to five years of age while their parents(s) attend class, study or work.

Counseling: Counselors provide academic, career and personal counseling. The services are free, voluntary, and confidential for WVC students. Student services/counseling is dedicated to supporting students in their pursuit of academic and personal growth.

Computer Labs: There are over a dozen computer labs and learning labs available for students in Wenatchi Hall, Wells Hall, and in the Brown Library. In addition, the Library lends Chromebooks and other technology to students for short-term and long-term use. In the future, WVC has already made plans to reevaluate the computer lab needs moving forward.

Disability Resource Center: The Disability Resource Center provides assessment and accommodations for students with documented disabilities. They provide special course materials, coordinate testing for disabled students and assist faculty to provide appropriate accommodations.

The Tutor Center and Write Lab: Tutoring services are available free of charge to all currently enrolled students, regardless of number of credits being sought. The goal of tutoring is to provide supplemental support that will enhance the educational experience at WVC. The Write Lab provides help to all WVC students who have writing assignments. The Tutor Center and Write Lab are available on campus, and the eTutoring service is available online 24x7. In January 2016, a new coordinator for tutoring services was hired. She comes to WVC with a wealth of experience from the WSU tutoring center in Pullman, where she was university trained to provide specific tutoring services. WVC Tutoring Center is also offering an evening schedule to bring industry partners into the center to assist with upper level coursework.

Academic Supports: WVC will begin student support services from the initial interest in these programs. WVC is aware that many students work full-time while attending classes. This can be a significant challenge specifically for students whose first language is not English. Along with supports from ECE faculty, the WVC write lab, and the WVC tutor center these programs have the opportunity to collaborate with the WVC Continuing Education department to develop community courses focusing on student success as needed.

Veterans Administration Programs: The Veterans Affairs Office assists all eligible veterans, reservists, dependents and VA chapter 31 students. A Veterans Study Lounge is also available in the Brown Library. Over \$20,000 is made available to veteran students for work-study opportunities throughout WVC each academic year. Veterans Affairs Coordinator, Laura Murphy-Belser, works with veteran students to address challenges in veteran benefits and non-face-to-face course-work.

WVC provides a comprehensive range of student development services to support student learning needs outside the classroom. 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

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- 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.
- Tutor Center: The goal of tutoring is to provide supplemental instructional support. Tutoring services on the Wenatchee campus and on the Omak campus meet that goal by providing a dynamic, collaborative learning opportunity that enhances the educational experience at WVC.
- Write Lab: provides help to all students who have writing assignments with one-on-one tutoring and coaching.

A-R4. Number of postsecondary credits provided and / or credential earned upon completion of program.

ESRT:

- Certificate of Completion = 53 credits
- Associate of Technical Science Degree = 106 credits
 - Includes 5 credits awarded for Cooperative Work Experience Course.

A-R5. Demonstrated curricular alignment with relevant professional and / or academic standards associated with coursework and credential, when applicable.

ESRT graduates will be prepared to:

- Obtain a 608 refrigerant license for employment.
- Seek a Washington State HVACR Specialty Electrical 06A License.
- Work in the Refrigeration or HVAC industries as an entry-level employee.
- Demonstrate the ability to work on refrigeration control circuits
- Understand and troubleshoot an air conditioning and heat pump system.
- Service commercial refrigeration equipment
- Understand on the job safety precautions as it relates to refrigeration systems
- Seek employment using skills and techniques geared toward the refrigeration industry jobs
- Intelligently discuss various type of HVACR systems during a job interviews
- Obtain a RETA CARO entry-level license

A-R6. 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), when applicable.

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ESRT Program Guide

Associate of Technical Science Degree (requires all first- and second-year courses)

Basic HVACR and Controls Certificate of Completion (complete all three quarters of first-year classes)

Commercial/Industrial HVACR and DDC Controls (complete all three quarters of second-year classes, plus OCED 102* or higher, MATH 100T* or higher, and BCT 116 or their equivalents)

Offered at Wenatchee campus

First Year - Fall Quarter		Credits
ELEC 115	Applied Electricity	5
ESRT 102	OSHA 10 HVAC Principles (Web)	1
ESRT 110	Refrigeration Principles	5
ESRT 114	Refrigerant Recovery/Recycle	1
ESRT 136	Indoor Air Quality	2
BCT 116	Professional Work Relations	3
First Year - Winter Quarter		
ELEC 125	Wiring Diagrams and Schematics	5
ESRT 120	Heating Systems	5
ESRT 210	Boiler Systems	3

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MATH 100T*	Technical Math or higher	5
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First Year - Spring Quarter

ELTRO 132	Intro to Computer Controls & PLCs	5
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ESRT 130	Air Conditioning and Heat Pumps	5
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OCED 102*	Writing in the Workplace/Technical English or higher	5
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WELD 128	Basic Welding	3
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Total Credits for Certificate		53
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Second Year - Fall Quarter

ELTRO 202	Intro to the National Electrical Code	2
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ELTRO 210	Program Software for PLCs	5
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ELTRO 223	Tag-Based PLC Programming	3
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ESRT 200	Commercial HVACR Equipment	5
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ESRT 205	Blueprint Reading (Seminar)	2
ESRT 215	Commercial DDC HVAC Controls	3
Second Year - Winter Quarter		
ELEC 225	Industrial Electricity/Controls	5
ELTRO 221	Graphic Interface Programs for PLCs	5
ESRT 220	Industrial Refrig. Systems	5
ESRT 222 ESRT 296	Industrial Project Lab or ESRT Cooperative Work Experience	3
ESRT 223	Design and Load Applications	3
Second Year - Spring Quarter		
ESRT 230	Industrial Refrigeration, PSM/RMP	2
ESRT 238	Commissioning, LEED, and TAB	3

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ESRT 295	Capstone HVACR Project	2
ESRT 296	ESRT Cooperative Work Experience	5
Total Credits for Degree		106

*Assessment score required.

End of Application.