Career Launch Endorsement Review (CLER) Application

INSTITUTION **Everett Community College**

PROPOSED PROGRAM **Information Technology**

PROGRAM CIP **11.0901** PROGRAM EPC (Legacy) **527** PLAN CODE (PeopleSoft)_____

NAICS Code_____

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

CONTACT INFORMATION

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John Bonner (Mar 31, 2020)

Chief Academic Officer

Mar 31, 2020

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

Introduction

The Career Launch Program Endorsement recognizes high-quality career connected learning opportunities addressing persistent educational opportunity gaps, meeting the talent needs of employers and leading to academic learning and building awareness of, exposure to, and preparation for career opportunities.

Application Materials

The following checklists outline the specific requirements for a CLER application. Additional evidence (e.g. existing program outcomes) may be submitted with your checklist responses.

Please note the following:

- Respond completely to the following three (3) checklists in your submission packet.
- Page limit: 20 pages, including letters of endorsement and letters of employer partners.
- Submit your completed application to Scott Copeland at scopeland@sbctc.edu.

Program Checklist

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

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

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

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

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

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.

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.

Industry-Related Checklist

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

I-R2. Hourly wage for Career Launch participants.

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

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.

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

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

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

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

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.

Academic-Related Checklist

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

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

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

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

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

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.   End of Application.

Program Checklist
P1. Program description including length of program in years and total hours (including split between classroom and worksite).
Computer Information Technology Degree Pathway
(http://www.everettcc.edu/programs/bat/cis/ata)

The Computer Information Technology (IT) pathway is a traditional two-year, 90 credit hour program designed to prepare students for careers in Computer Support Technician, System Administration, help desk, cyber security, pc support or other closely related IT careers. The program is focused on providing students with a solid foundation of theory (70 credit hours), combined with 14 contact hours of hands-on lab work, and 100-250 hours of work-based learning (internship).

Preparation includes learning about:
- Installing and configuring network components, both hardware- and software-based, to support organizational security.
- Implement public key infrastructure.
- Planning, building and troubleshooting networks
- Troubleshoot and problem solve core service and support challenges while applying best practices for documentation, change management, and scripting
- Planning and implementing security policies
- Communicating with peers, clients and supervisors
- Configure and support PC, mobile and IoT device hardware
- Internet connectivity using TCP/IP protocols
- Implement basic data backup and recovery methods and apply data storage and management best practices, including software deployment, networking standard, and supporting operating systems.

This is a hands-on program designed to provide students with real-world, industry-based lab learning scenarios. In the lab environment, students will learn by setting up routers, switches, network cabling, wireless access points, network servers and PCs. Students will also participate in internships with organizations that create or use Information Technology. Elective courses are also available to enhance career opportunities in many technologies.

P2. Estimated number of hours per week at worksite and in classroom (this approach may shift throughout the program).
- Average weekly program hours spent in the classroom: 35
- Average weekly program hours spent at worksite: 10-25
    - This is accomplished through an internship required in the ATA. Students complete 10-25 hours for credit per week during one quarter during the second year of the degree. [Note: Some students engage in full-time internships (or

employment within the field) up to 40 hours a week, but can only receive credit for up to 250 hours per quarter.]

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

The two-year Associate of Technical Arts (ATA) in Information Technology is built upon stackable credentials. Students who earn the ATA also attain the coursework necessary for two (2) certificates; Computer User Support Specialist Certificate and Systems Administrator Certificate. Skills and careers linked to these credentials include Computer User Support Specialist (SOC 15-1151) and Network and Computer Systems Administrator (SOC 15-1142), respectively, as well as Information Security Analysts (15-1122). Demand for these skills is high with a continually growing job market.

Labor Market Data for Associated Occupations					
Occupation	**Location**	**Median Annual Wage**	**Growth by 2026**	**Annual Openings**	**Location Quotient**
Computer User Support Specialist (15-1151)	**Seattle-Bellevue-Tacoma MSA**	**$58,070**	**NA***	**NA***	**1.58**
	WA State	$56,650	35%	2,080	1.31
	National	$50,980	11%	-	-
Network and Computer Systems Administrator (15-1142)	**Seattle-Bellevue-Tacoma MSA**	**$96,060**	**NA***	**NA***	**1.31**
	WA State	$89,430	28%	930	1.08
	National	$82,050	23%	-	-
Information Security Analyst (15-1122)	**Seattle-Bellevue-Tacoma MSA**	**$106,030**	**NA***	**NA***	**1.41**
	WA State	$105,080	43%	300	1.10
	National	$98,350	32%	-	-
*Information Not Available					

On its own, the current market climate is compelling but demand is anticipated to increase even more so with regulations from the Department of Defense (DOD) changing in 2020. Companies that contract and/or subcontract with the DOD as part of their supply chain will be required to meet more strict cybersecurity regulations, including hardware and software as well as knowledgeable, skilled IT technicians. Considering that the DOD prime contracts with 50,000 companies per year, a number that is multiplied when including subcontractors, the need for skilled technicians is expected to dramatically increase in the coming years.

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

- 2018 FTE was 116. The CIS department has seen substantial enrollment growth (34%) over the past two academic years.
  - Associate Degrees awarded in IT 2018-19: 20
    - Summer and Fall 2019 have already awarded 21 degrees
    - Average annual degrees awarded over last 5 academic years: 14
    - Degrees awarded have tripled over the last 5 years.
  - Average annual student completion (including EvCC Certificates): 72
  - Average annual industry recognized credentials awarded: 225
- Current, annual employer participation with work-based learning and student internships is 20-25 employer partners (expanding from 15-20 from previous years). EvCC expects this trend to continue to expand with the Career Launch endorsement and continued rapid program expansion.

It is expected that these numbers will continue to grow, as industry demand continues to grow.

P5. Concise description of development process to create the Career Launch program (e.g. who was involved, when, how was the program piloted, etc.)
EvCC's Computer Information Systems (CIS) department has developed a multifaceted approach to securing strategic partnerships with a wide variety of regional, national and international IT businesses. The faculty consistently encourage advisory board participation, routinely reach out to industry experts for one-on-one conversations and are actively participating in online discussion forums such as a Google Cloud Consortium. These personal relationships, advisory boards and industry forums are essential when seeking program input on a variety of levels.

The development of the EvCC Career Launch program has been folded into our current employer engagement process. Any major program remodeling or retooling of curriculum and industry recognized credentials as well as modification to work-based learning processes are heavily discussed with our business partners prior any curricula changes being finalized by EvCC's Instructional Council. The goal of the CIS department's Career Launch program industry engagement is to seek value-added program feedback and direction from industry experts within the following business partners:

Amazon	Microsoft	Zumiez	Premera Blue Cross
Witescope.IO	Phish Cloud	Dragos	Grimm
City of Everett	City of Arlington	Casne	Kaiser Permanente

Additionally, EvCC's CIS tenure-track faculty member has worked with Casne's Engineering Service Desk Senior Partner for eight (8) years in building curriculum, training cyber operators and establishing cyberwarfare standards for the US Air Force, as part of the 262 Cyber Operations Squadron (COS). This experience and specialized knowledge are key to training students and preparing them for the growing labor market.

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.
Please see attached employer letters.

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.
Everett Community College (EvCC), through its Vision, Mission, and Strategic Plan, has made a commitment to advance equity and social justice by transforming itself into a diverse, equitable, and inclusive working and learning environment. EvCC acknowledges that this transformation requires culture change and a commitment to reflect, question, and change on multiple levels. We are committed to cross-organizational engagement and collaboration in order to create an equity-minded organization that maximizes human and community potential.

Reflecting the voices of many, the 5 Dimensions of Equity are designed to:
- Recast traditional higher educational frames of thought regarding aspiration, access, achievement, economic progress, and engagement;
- Explore underlying personal, professional, and systemic attitudes, beliefs, norms, and practices;
- Motivate reflection, deeper conversations, curiosity, and inquiry;
- Encourage vulnerability, humility, and commitment;
- Inspire change at personal, professional, organizational, and systemic levels; and
- Create a continuous cycle of critical analysis, discussion, and change.

The Business and Applied Technology (BAT) Division, of which the CIS department is part of, has embraced the spirit of the 5 Dimensions of Equity by developing a Community of Practice surrounding this work. The division has developed two distinct teams that are addressing equity and achievement gaps within the Black/African American and Native American and Alaskan Native populations. The essence of these teams is to address existing equity and achievement gaps by engaging campus partners, community members and existing students. The teams are currently extending invitations to several community members and formatting a student survey that will reflect upon the current BAT educational environment, challenge what has been deemed normal and acceptable, and envision a transformed, student centered experience within the BAT division. We are in the early stages of this process (6 months) and the entire BAT team is committed to generational change within underserved communities.

The CIS department is also leading two department level initiatives to address underserved populations by addressing system barriers to completion as well as equity and achievement gaps.
·   Tutoring – the CIS department faculty recently conducted an in-depth analysis on program student success and completion data. The data clearly illustrated the department had several equity gaps in student success and completion. What was interesting about the data was students didn't have access to computer systems at home, reliable WiFi or internet access as well as structured course material support. In addition to the analysis of the data, faculty conducted informal discussions with students within the classroom. From the formal analysis of the data

and informal conversations with students, a collective decision was made to add CIS specific tutoring sessions on campus. Starting winter 2020, professional CIS tutors, made up of prior CIS students and community members, will be available two days a week for all CIS students.

· Integrated Basic Education and Skills Training (I-BEST) – the faculty have been very active in this space. Courses are designated as I-BEST each quarter and when combined with the new tutoring initiative, faculty feel student success and completion will continue to improve.

· Housing Hope – In winter 2019, the CIS department became involved in the BAT division's long-standing partnership with Housing Hope by adding specific CIS degree and certificate pathway options as well as academic support services for Housing Hope students. Housing Hope's Mission is to "promote and provide affordable housing and tailored services to reduce homelessness and poverty for residents of Snohomish County and Camano Island." Through Housing Hope's EduPloyment program, the CIS partnership seeks to facilitate career pathways for individuals in households experiencing homelessness or poverty through a mode of education, employment readiness training, work experience and employment. Since the program's inception in spring 2018, over 20 students have successfully completed the program. This program is truly changing the lives of many Snohomish County homeless residents by providing industry relevant IT skills that directly lead to job placement. EduPloyment is a community collaboration that includes several services and funding partners, including but not limited to: Everett Community College, Service Alternatives, DSHS, Workforce Snohomish, Snohomish County Human Services, Boeing, Basic Food Employment Training, Affordable Housing Providers, and Workfirst.

· Tulalip Tribes – The Tulalip Tribes was recently awarded a Native American Career and Technical Education Program (NACTEP), Information Technology grant. This grant is designed to provide skill upgrades to incumbent workers of Tulalip Data Services and other tribal owned and operated businesses. The grant also seeks to assist traditional and nontraditional tribal students with securing in demand IT skills and industry recognized credentials. EvCC's CIS program was selected as the sole Training Provider for the NACTEP grant which runs from 10/1/18 – 9/30/21. This grant covers up certain first year IT classes and this program serves as a recruitment tool for students advancing into earning an associates degree in IT at EvCC.

Industry-Related Checklist
I-R1. Address of worksite(s) where Career Launch students will complete supervised training.
City of Arlington: 238 North Olympic Avenue, Arlington, WA 98223
City of Everett: 2930 Wetmore Avenue, Everett, WA 98201

I-R2. Hourly wage for Career Launch participants.
Average wage for current EvCC work-based learning and internship participants is $17/hour.
Wages for industry providing letters for this endorsement include:
- City of Arlington: $15/hour
- City of Everett: $12-$15/hour

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

Career Launch students who complete the endorsed program and paid work experience will be eligible for the following entry-level positions at each industry partner site (job descriptions attached to letters):
- City of Arlington: IT Technician
- City of Everett: PC 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.
EvCC, CIS Certifications are aligned with O*NET occupation codes as demonstrated below.

Computer Support 15-1151: Provide technical assistance to computer users. Answer questions or resolve computer problems for clients in person, via telephone, or electronically. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems. Similar job titles reported by students: Computer Specialist, Computer Support Specialist, Computer Technician, Desktop Support Technician, Help Desk Analyst, Help Desk Technician, Information Technology Specialist (IT Specialist), Network Technician, Support Specialist, Technical Support Specialist. Median salary for this occupation in the local metropolitan statistical area is $58,070 annually.

Network and System Administrator 15-1142: Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system. Monitor network to ensure network availability to all system users and may perform necessary maintenance to support network availability. May monitor and test Web site performance to ensure Web sites operate correctly and without interruption. May assist in network modeling, analysis, planning, and coordination between network and data communications hardware and software. May supervise computer user support specialists and computer network support specialists. May administer network security measures. Similar job titles reported by students: Information Analyst, Information Systems Manager (IS Manager), Information Technology Specialist (IT Specialist), LAN Specialist (Local Area Network Specialist), Local Area Network Administrator (LAN Administrator), Network Administrator, Network Coordinator, Network Manager, Network Specialist, Systems Administrator. Median salary for this occupation in the local metropolitan statistical area is $96,060 annually.

Information Security Analyst 15-1122: Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses. Similar job titles reported by students: Computer Network Specialist, IT Consultant (Information Technology Consultant), Network Engineer, Network Specialist, Network Support Specialist, Network Technical Analyst, Network Technician, Personal Computer Network Analyst, Senior IT Assistant (Senior Information Technology Assistant), Systems Specialist. Median salary for this occupation in the local metropolitan statistical area is $106,030 annually.

I-R5. Employer attests that Career Launch program is in compliance with required federal, state, and local regulations.
Please see attached industry letters for attestation to alignment and compliance with standards.

I-R6. Employers will outline a student supervision and mentorship model.
Employers agree to the following work based learning environment and requirements:
1. Employers will provide the student with a safe work environment that complies with applicable OSHA/WISHA regulations.
2. The student will receive one credit for every 50 hours worked for satisfactory completion of work and learning experiences.
3. The student will be given the opportunity to gain a broad experience. If the internship duties are altered from the original job description, the employer will contact the Internship Coordinator.
4. An EvCC representative will visit the work site at least once during the placement to evaluate the student's progress.
5. At the end of the quarter, the employer will provide the college with the Internship Timesheet and Student Performance Evaluation.
6. Students will comply with the requirements of the position and the internship work experience program responsibilities.

Perhaps the most important piece of supervision and mentorship is the Student Performance Evaluation as feedback for student growth and improvement. Students will be evaluated in the following categories:
1. Quality of Work: Competence, accuracy, neatness, thoroughness.
2. Quantity of Work: Use of time, volume of work accomplished, ability to meet schedules, productivity levels.
3. Job Knowledge: Degree of technical knowledge, understanding of job procedures and methods.
4. Working Relationships: Cooperation and ability to work with supervisor, co-workers, students, and clients served.
5. Attendance/Dependability: Reports for work as scheduled, is seldom absent or tardy, meets obligation of position.
6. Specific Achievements: These will be defined at the outset and duration of the work experience.

I-R7. Description of common career pathway(s) beginning with entry-level position specified with demonstration of likely salary growth over a specified time period.
The two-year, 90 credit hour, Associate of Technical Arts (ATA) in Information Technology is built upon stackable credentials. Students who earn the ATA also attain the coursework necessary for up to four (4) certificates; Computer User Support Specialist Certificate, Network and Systems Administrator Certificates and/or Cybersecurity Support Technician Certificate. Skills and careers linked to these credentials include Computer User Support Specialist (SOC 15-1151), Network and Computer Systems Administrator (SOC 15-1142), and Information Security Analyst (SOC 15-1122).

Computer Support: Take five (5) introductory courses and earn this certificate. This certificate provides a foundation in computing, networking, and security concepts aimed at jobs in an IT career pathway. Students will complete certification testing for Microsoft Technology Associate in Network, Mobility, and Security Fundamentals, and CompTIA IT Fundamentals, and A+ certifications. These industry certifications are administered as part of the college coursework to

enhance your resume when seeking employment. Students earning this entry level certification can earn approximately $36,680 with potential growth to a median salary of $58,070/year and upwards of $96,830.

Information Security Analyst: Upon completion of the Computer Support Technician Certificate, students interested in exploring the Cybersecurity pathway have an option of taking three (3) additional courses to gain the Cybersecurity Support Technician Certificate. This certificate provides the baseline working knowledge and technical skills required for students to analyze computer and network vulnerabilities. Students will also learn methods to detect and remove malicious code within a network and the tools used by hackers to gain access into networks. Students will complete certification testing for the CompTIA Cybersecurity Analyst (CySA+) certificate. These industry certifications are administered as part of the college coursework to enhance your resume when seeking employment. Students earning this entry level certification can earn approximately $64,890 with potential growth to a median salary of $106,030/year to upwards of $154,560.

Systems Administrator: Students have the option to take an additional four (4) courses to level up to expand their earning potential. This certificate builds upon the knowledge gained in the Computer Support and Cyber Security certificates and provides a foundation in computer server systems concepts. Students will complete certification testing for Microsoft Technology Associate in Windows Server, Linux Professional Institute's Linux Essentials, and the CompTIA Cloud Essentials industry certifications. These industry certifications are administered as part of the college coursework to enhance your resume when seeking employment. Students earning this entry level certification can earn approximately $63,100 with potential growth to a median salary of $96,060/year to upwards of $145,780.

Network Administration: Students have an additional option to expand upon the foundational knowledge gained in the Systems Administration certificate by taking an additional four (4) courses in Net Admin. This certificate provides more advanced computer network systems. Students complete certification testing for the Cisco Certified Entry-level Network Technician (CCENT) and Cisco Certified Networking Associate (CCNA) certifications. These industry certifications are administered as part of the college coursework to enhance your resume when seeking employment. Students earning this entry level certification can earn approximately $63,100 with potential growth to a median salary of $96,060/year to upwards of $145,780.

I-R8. Demonstrated competency alignment with relevant professional standards for specified entry-level positions when applicable.
All coursework in IT leading to certificates and degrees as well as industry recognized credentials are aligned with O*NET job classifications. All courses, with the exception of two (IT 210 and 251 - internship), culminate in testing for an industry standard certificate through Microsoft Technical Associate (MTA), CompTIA, Linux, or Cisco. These industry credentials are essential to proving competency in IT related positions, particularly those at entry-level where prospective employees do not have an IT related work history to lean on.

I-R9. Signed letter from employer 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.
Signed letters are attached from the following employer partners: City of Arlington, City of Everett

Academic-Related Checklist
A-R1. List of academic institution(s) providing career-aligned instruction for Career Launch program.
Everett Community College will provide all instruction related to earning the ATA in Information Technology. After completion of the 2-year credential, students will be eligible for transfer to complete their 4-year degree at the following institutions:
- Central Washington University
- Whatcom Community College – BAS in IT Networking-Cybersecurity
- Evergreen State College

A-R2. Curriculum scope and sequence aligned to skills and competencies provided in employment checklist.
Required IT coursework:
IT 101 - Information Technology Foundations: Orientation to academic and career opportunities in the Information Technology field. Topics include computer terminology, hardware, operating systems, data management, security concepts and ethics. Students explore Information Technology career options and prepare for internships in the field. Each student creates a personal academic pathway. Learning resources and continuing education opportunities are introduced. *Industry credential:* CompTIA IT Fundamentals
IT 111 - Networking Fundamentals: Fundamentals of computer networking including hands-on experience in Windows networking. Network infrastructure, wireless, network hardware such as cabling, switches, and routers, and protocols, and TCP/IP tools. *Industry credential:* Microsoft Technology Associate (MTA) Network Fundamentals
IT 115 - Devices and Mobility Fundamentals: Introductory course focusing on student ability to accomplish technical tasks such as understanding the fundamentals of device configuration, data access and management, device security, cloud services, and enterprise mobility. This course includes hands-on experience. *Industry credential:* MTA Mobility and Devices Fundamentals
IT 117/122 - Introductions to Networks and Routing & Switching: Architecture, structure, functions, components, and models of the internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Introduction to the OSI Reference Model and building simple LANs, performing basic configurations for routers and switches, and implementing IP addressing schemes. Concepts and configuration skills involved in designing, installing, and maintaining a Cisco switched Local Area Network (LAN). Layers 1 and 2 of the OSI model. Using hubs and switches to create a segmented network. Cisco Internet Operating System Command Line configurations will be used. *Industry credential:* Cisco Certified Entry-Level Network Technician (CCENT)
IT 161/162 - Computer Hardware and Technical Support / Computing Operation and Troubleshooting: Fundamentals of computing device hardware and technical support, in

alignment with the first of two CompTIA A+ industry certification objectives. Hands-on experience with computer hardware assembly and repair including laptop and printer troubleshooting and Windows networking Operational procedures, customer service, and documentation. Computing operation and advanced troubleshooting of hardware and operating systems in alignment with the second of two CompTIA A+ industry certification exams. Students receive hands-on experience with operating system installation and configuration, computer security principles, and mobile device operation. *Industry credential:* CompTIA A+

IT 180 - Information Security Fundamentals: Presents the principles of information security. Includes examples of challenges faced by information technology professionals and tools for designing security policy, acceptable use policy, materials disposal policy, and access management policy. Threat assessment, risk assessment and disaster recovery strategy are discussed. Course offers opportunities for hands-on experience with security software tools. *Industry credential:* MTA Security Fundamentals

IT 202 - Server Administration Fundamentals: Local Area Network (LAN) server installation, configuration and management. Covers topics such as equipment choice, network operating system choice, user account administration, system security, data protection, Internet connectivity, and monitoring system performance. *Industry credential:* MTA Windows Server Administration Fundamentals

IT 210 - Network Application Support: Presents the Microsoft Office suite and other common workplace applications from both user and administrator perspectives. Lab exercises will emphasize typical support issues such as communication methods, deployment/upgrade automation, remote administration and the way these factors affect customer satisfaction. *Industry Credential:* None

IT 240 - Linux System Administration: Presents the Linux operating system from the perspective of a systems administrator. Topics include Linux shell commands and essential tools, administration of local and remote systems, file systems, storage management, operating system deployment, user account management, and security. *Industry credential:* Linux Essentials

IT 245 - Network Defense: Principles of network defense and protocol analysis including data carving from network packet captures. Intrusion detection using flow records, analyzing wireless based encryption caracking attacks, reconstructing a suspect's web surfing history and uncovering DNS-tunneled traffic. Uncover evidence of and analyze attacks on routers, firewalls, IDS, web proxies, and many other network devices. *Industry Credential:* CompTIA Cybersecurity Analyst (CySA+)

IT 251 - Computer Careers Internship: Provides students with a safe, supervised work environment to apply their academic skills. This allows the student to put into practice administrative and technical skills, to foster professional growth, and to gain self-confidence directly associated with certification and/or the degree focus of the student. *Industry Credential:* None

IT 261 - Cloud Fundamentals: Concepts, principles, and considerations used in storing and maintaining information. Utilizing a combination of hands-on practical exercises and clear

explanation with real-word examples, students will learn to create and maintain storage options ranging from local to public cloud. *Industry credential:* CompTIA Cloud Essentials

Technical Electives (10 credits required):
Networking Track:
IT 217/222 - Scaling and Connecting Networks: Architecture, components, and operations of routers and switches configured for larger and more complex networks. Covers configuration and troubleshooting of routers and switches and resolving common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Knowledge and skills needed to implement a WLAN in a small-to-medium network. Experience with Wide Area Networking (WAN) technologies and network services required in a complex network. Selection criteria of network devices and WAN technologies to meet network requirements. Configuration and troubleshooting network devices and resolve common issues with data link protocols. Develop knowledge and skills needed to implement secure virtual private network (VPN) operations in a complex network. Final course in the CCNA series. *Industry Certification:* Cisco Certified Networking Associate (CCNA)
Cybersecurity Track:
IT 145 - Digital Forensics: Examining the fundamentals of system forensics, such as the nature of forensics, the role of computer forensics specialists, computer forensic evidence, and application of forensic analysis skills. It also gives an overview of computer crimes, forensic methods, and laboratories. It then addresses the tools, techniques, and methods used to perform computer forensics and investigation. Explores emerging technologies of digital forensics. *Industry Credential:* EC-Council Cyber Forensics Associate (CFA) (Beginning Spring 2020)
IT 280 - Ethical hacking methodology that can be used in a penetration testing or ethical hacking situation preparing students for the EC-Council ANSI accredited Certified Ethical Hacker credential 312-50. Lab intensive environment developing in-depth knowledge and practical experience with the current essential security systems. Develop understanding how perimeter defenses work and then will be led into scanning and attacking lab networks; no real network is harmed. Understand how intruders escalate privileges and what steps can be taken to secure a system though Intrusion Detection, Policy Creation, Social Engineering, Buffer Overflows and Penetration Testing. *Industry Credential:* CompTIA PenTest+
Other accepted technical electives:
IT 101, IT 251, IT 252, CL 101, CL 102, CL 103, CL 104, CL 105, CL 106, CL 107, CL 110, BT 100, BT 105, BT 219, BT 240, BT 242, ENGR 111, ENGR 121, CS 110, CS& 131, CS 132, CS& 141, CS 143

General Education Requirements (20 credits minimum):
ENGL 098 or &101
Select one: BUS 110D; BUS 165; CMST& 210 (PR); CMST& 230; HDEV 155
MATH 086 or higher

College 101
At least 4 credits that include Diversity coursework

A-R3. Demonstration of student supports (e.g. mentoring, advising, financial aid, tutoring) available for Career Launch students enrolled in the course.
EvCC has a robust and fully integrated Student Services support model. Upon successful completion of an application, receiving a student ID number, completion of mandatory College Orientation, and applying for Financial Aid, all new students are required to attend a mandatory entry advising appointment prior to registering for program courses. Additionally, returning students are required to meet with a faculty advisor prior to registering for their third quarter at EvCC. The purpose of this mandatory third quarter advising appointment is to make certain the student is on track, accurately coded and has an opportunity to meet and talk with their program advisor. Tutoring services provided: drop-in tutoring, study skills resources, small group tutoring, supplemental instruction, workshops, computer support and eTutoring through the Western eTutoring Consortium.

Additional, fully integrated student support services include:

Tutoring Center: The Tutoring Center is a safe, creative space where we help students become more successful by employing a variety of tools such as, demonstrating processes, relating ideas, providing resources, encouraging group work and welcoming questions. We promote students' increasing independence and confidence, preparing them for a lifetime of learning. http://www.everettcc.edu/programs/academic-resources/transitional-studies/support/tutoring-center

Counseling Services: The Everett Community College Counseling & Student Success (CSS) offers appointments for currently enrolled students or returning students with professional counselors for Career Counseling, Academic/Educational Counseling, Advising, and free short-term counseling, as well as referral to community resources to help students adjust to, cope with, and succeed in college. http://www.everettcc.edu/students/css
CSS counselors are experienced and trained professionals that provide short term holistic counseling. Counselors also teach Human Development courses on a broad range of topics including: Career & Life Planning, Stress Management, and Human Relations in the Workplace. All CSS counselors are Washington State Licensed Mental Health Counselors.

Center for Disability Services: Everett Community College is committed to providing an equal opportunity for students with disabilities. Students may be eligible for accommodations if they have a physical, mental, psychological or sensory barrier that limits one or more major life activities. Students should fill out a New Student Application form and provide information about their disability to the CDS Office. The CDS Office will conduct an interactive dialogue during an intake appointment with that student to determine which, if any, accommodations are appropriate while attending classes at EvCC. http://www.everettcc.edu/students/cds/

Diversity and Equity Center: The Diversity and Equity Center (D&E) is a welcoming space designed to support the needs of underrepresented communities both on and off campus through focused retention programming, community events, identity-based clubs, institutional initiatives,

and connections to resources. Located on the third floor of the Parks Student Union Building, the Diversity and Equity Center provides students with one-on-one student services, Work Study, volunteer, and student job opportunities, scholarships, a community lounge, and a student computer lab. http://www.everettcc.edu/administration/equity-social-justice/diversity-and-equity-center

Financial Aid Department: http://www.everettcc.edu/students/financial/financial-aid/

Student Life: Student leadership development, student engagement and inclusive activities are the main focus of the Office for Student LIFE. Student LIFE serves the Associated Students and the campus community by providing programs and services that support educational, cultural, social and personal growth, in order to create a positive learning environment that enhances the total student educational experience. https://www.everettcc.edu/students/sa/

A-R4. Number of postsecondary credits provided and / or credential earned upon completion of program.
Information Technology ATA: 90 credits are required to earned the IT-ATA. As students progress within the ATA, they have the potential to earn EvCC certificates in Computer Support, Systems and Network Administration and Cybersecurity Support Technician and the associated industry recognized credentials embedded within the follow EvCC certifications:
- **Computer Support Specialist Certificate**. Coursework embedded in associate degree attainment:
  - o Microsoft Technology Associate (MTA) – Network and Mobility and Security Fundamentals
  - o CompTIA IT Fundamentals
  - o CompTIA A+
- **Systems Administrator Certificate**. Coursework embedded in associate degree attainment:
  - o Windows Server Administration
  - o Linux Professional Institute's Linux Essentials
  - o CompTIA Cloud Essentials
- **Network Administrator Certificate**:
  - o Cisco Certified Entry-Level Network Technician (CCENT): Coursework embedded in associate degree attainment.
  - o Cisco Certified Networking Associate (CCNA)
- **Cybersecurity Support Technician Certificate**:
  - o CompTIA Cybersecurity Analyst (CySA+)

Information Technology AAS-T: 90 credits are required to earn the Information Technology AAS-T. As students progress within the AAS, they have the potential to earn the Computer Support certificate and associated industry recognized credentials. Within the technical requirements section of the AAS, students have the option of securing additional industry recognized credentials in Systems and Network Administrator.

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

Please reference the attached curriculum map:
https://www.everettcc.edu/files/programs/information-technology.pdf

The entire CIS program degrees and certificates are aligned with relevant industry and academic standards. The faculty routinely engage industry experts on curriculum/program changes and relevancy discussions. Industry experts routinely engaged are employed by the following businesses:

Amazon	Microsoft	Zumiez	Premera Blue Cross
Witescope.IO	Phish Cloud	Dragos	Grimm
City of Everett	City of Arlington	Casne	Kaiser Permanente

Industry standard credentials are embedded in and aligned within each stackable EvCC certificate and ATA/AAS-T, as represented in AR-4.

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.
Currently the program is adding, on average, six to seven (6-7) new work-based learning sites per year. Over the time period and scope outlined in the Career Launch process, EvCC anticipates adding ten to fifteen (10-15) new work-based learning sites.

Conversations continue to be held with our Housing Hope partners on possible CIS program expansion. The consortium is planning to expand the Housing Hope offerings by bringing the CIS program to the EvCC East County Campus beginning spring 2020. Additionally, the CIS department is collaborating with Mukilteo High School administrators to finalize plans to offer the Computer Support Certificate at EvCC's Corporate and Continuing Education facility. The program will target high school juniors and seniors starting spring 2020. Mukilteo High School is focusing student recruitment efforts on specific underserved populations.

The Tulalip Information Technology NACTEP grant continues to build strong momentum which naturally requires the CIS department to expand course offerings. During the last quarterly partner meeting, the partners agreed an increase in course offerings was required to keep pace with increased student enrollment.

March 5, 2020

Scott Copeland
Associate Director for Campus Support, SBCTC
1300 Quince St SE, 4th Floor
PO Box 42495
Olympia, WA 98504-2495

Dear Mr. Copeland,

It is with great pleasure that the City of Arlington is partnering with Everett Community College's Computer Information Systems program to provide paid, work-based learning as part of a coordinated effort to increase Career Connected Learning in our community. We have worked closely with EvCC faculty and staff to ensure that the proposed Career Launch training and curriculum aligns with relevant professional standards for typical entry-level positions in the IT field, particularly at our company. Career Launch students that complete the program will be ready to compete for these jobs and we are interested in interviewing (and possibly hiring) as many as one to two graduates over the course of three-years.

In an effort to meet the demand for IT professionals at the City of Arlington, our company will provide Career Launch students paid work experience that contributes to helping students earn the college and industry credentials they need to be successful technicians and develop the soft-skills every employee needs to thrive in the workplace. We estimate that the hourly wage associated with these experiences will be $15.00 an hour.

We have worked with EvCC to develop a supervision and mentorship model that provides stability for each student, complies with required federal, state, and local regulations, and builds and tests competencies associated with the career pathway.

As a result of our collaboration, students will have the technical skills needed and be eligible for entry-level positions, including IT Technician. Job descriptions of these positions are included with EvCC's Career Launch Endorsed program application as required.

This partnership is of significant importance to our company as hiring qualified employees has become increasingly difficult as we compete with our King County neighbors and across industry sectors. We are pleased to be part of this program and offer our committed support.

Sincerely,

Bryan Terry, Director of IT

IT Technician

Class Code:
A33

Bargaining Unit: AFSCME Represented

CITY OF ARLINGTON, WASHINGTON
Established Date: Aug 16, 2018
Revision Date: Aug 17, 2018

SALARY RANGE

$4,261.00 - $5,561.00 Monthly

SUMMARY:

Under the supervision of the Information Technology (IT) Manager, the IT Technician is responsible for supporting the daily operations of the city's computer equipment and central services equipment, including telecommunications equipment. The position is primarily responsible for providing technical assistance and end user support which includes diagnosing, troubleshooting and determining the appropriate actions to resolve all technology service requests for the City's computer hardware, software, network, telecommunications, and applications.

ESSENTIAL JOB FUNCTIONS:

- Adheres to information technology policies and procedures in regards to all aspects of computing, telecommunications and networks.
- Responsible for effective operation of the helpdesk at the Tier I and Tier II level which includes creating tickets, solving ticket requests, escalating tickets as necessary to IT Systems Administrator or IT Manager, and assisting in providing periodic helpdesk status reports to IT Manager.
- Proactively communicates status of helpdesk tickets and related issues to customers.
- Assists staff with basic Active Directory needs such as password changing, distribution groups, user accounts and email accounts.
- Performs periodic virus and software updates for existing/new computer equipment as needed or requested.
- Provides a variety of hardware repair functions. Diagnose, repair and/or replace computer memory, hard drives, video cards, network adapters and related equipment. Setup, locate and relocate PCs, printers and other hardware.
- Provides support for smartphones, laptops and other mobile devices.
- Performs a variety of duties in the installation, testing, configuration, troubleshooting and supporting desktop hardware and desktop software applications and equipment.
- Performs desktop architecture and asset management including software/system images for new PCs, and distributing new software.

- Maintains database of inventoried PCs, hardware, licensed software and maintenance agreement inventory for the City.
- Maintains the hardware and software within public safety vehicles with regard to their functionality, connectivity and end-user troubleshooting, including serves as point of contact for Snohomish County 911 with regard to New World systems and its maintenance within the vehicles and desktops within the Police Department.
- Utilizes effective oral and written communication principles and practices.
- Maintains effective interpersonal skills using tact, patience and courtesy
- Employee must be able to perform multiple work tasks at the same time, perform well with frequent interruptions, and tolerate a fairly high level of stress.
- Employee may provide help desk support services to "IT Partner" cities from time to time.
- Maintains regular attendance.
- Perform other related duties as assigned.

KNOWLEDGE, SKILLS AND ABILITIES:

- Knowledge of Microsoft Active Directory user and computer components.
- Knowledge of Helpdesk software ticket creation, tracking and reporting (Spiceworks).
- Knowledge of IP addressing, switches, routers, and other network related equipment.
- Must have strong knowledge of active directory, IIS or similar web services and desktop hardware including PCs, laptops, printers, scanners, tablets, smartphones and other peripheral devices.
- Skilled in Windows 7, Windows 8.1, Windows 10 operating systems.
- Skilled in Microsoft Office 2010, 2013, 2016 Suites and other desktop software.
- Skilled in Microsoft O365 – Exchange Online Protection, Software deployment, Active Directory Sync, SharePoint Online, and other O365 Services.
- Skilled in Adobe Acrobat, Adobe Creative Suite, Adobe Reader, Adobe Flash.
- Skilled in Microsoft SharePoint.
- Skilled in Hyper-V or other virtualization software.
- Skilled in Computer hardware, software and peripherals such as central processing units, monitors, cables and printers.
- Skilled in diagnosing and troubleshooting problems related to computer hardware and software.
- Ability to explain desktop computing procedures to non-technical users.
- Ability to be flexible under changing priorities.
- Ability to handle multiple jobs at one time and to work under pressure.
- Ability to communicate effectively both orally and in writing.
- Ability to communicate technical information to a wide variety of users at an appropriate level of understanding
- Ability to organize and apply logic
- Ability to be consistently courteous and tactful while responding to the needs of customers.
- Ability to maintain and deal with confidential material.
- Ability to establish and maintain effective working relationships with internal customers and outside vendors.

QUALIFICATIONS:

- U.S. Citizen or legally eligible to work in the United States.
- High school diploma or equivalent
- Associate's Degree or technical arts degree in computer science, information technology or related field of study is preferred.
- Minimum of two years of experience supporting and administering help desk, call center or other technology related position.
- Or any combination of education and experience which would provide the applicant with the desired skills, knowledge and abilities required to perform the job may be considered.
- Valid Washington State Driver's License with a driving record acceptable to the City.
- Must pass a comprehensive background check prior to employment and periodically during employment.
- Must maintain Washington State Patrol Access Security Awareness Training required by The Criminal Justice Information Services (CJIS) Division of the FBI to access necessary network infrastructure.

WORKING CONDITIONS:

Work is performed primarily indoors in an office environment utilizing standard office equipment. Position requires the ability to travel to a variety of meeting locations both inside and outside the City, and may include attendance at meetings and events outside normal working hours. May sometimes be required to drive a City-owned vehicle to various work sites.

While performing the duties of this job, the employee may be required to sit, stand and use hands to finger, handle, or feel objects, tools, or controls. The employee is frequently required to walk, reach with hands and arms, stoop, kneel, crouch, or crawl. The employee frequently is required to talk or hear. Duties are often performed in an office environment and may require sitting or standing for extended periods of time. The employee may occasionally be required to lift computer and office equipment, possibly up to 50 pounds but will frequently lift items of approximately 10-15 pounds.

This position is not available for job-sharing or telecommuting and will sometimes be on-call.

EVERETT
WASHINGTON

March 27, 2020

Scott Copeland
Associate Director for Campus Support, SBCTC
1300 Quince St SE, 4th Floor
PO BOX 42495
Olympia, WA 98504-2495

Dear Mr. Copeland,

It is with great pleasure that City of Everett is partnering with Everett Community College's Computer Information Systems program to provide paid, work-based learning as part of a coordinated effort to increase Career Connected Learning in our community. We have worked closely with EvCC faculty and staff to ensure that the proposed Career Launch training and curriculum aligns with relevant professional standards for typical entry-level positions in the IT field, particularly at our company. Career Launch students that complete the program will be ready to compete for these jobs and we are interested in interviewing (and possibly hiring) as many as two graduates over the course of three-years.

In an effort to meet the demand for IT professionals at City of Everett, our company will provide Career Launch students paid work experience that contributes to helping students earn the college and industry credentials they need to be successful technicians and develop the soft-skills every employee needs to thrive in the workplace. We estimate that the hourly wage associated with these experiences will range from $12.00-$15.00.

We have worked with EvCC to develop a supervision and mentorship model that provides stability for each student, complies with required federal, state, and local regulations, and builds and tests competencies associated with the career pathway.

As a result of our collaboration, students will have the technical skills needed and be eligible for entry-level positions, including Helpdesk and Desktop Support Technicians. Job descriptions of these positions are can be found on the City of Everett website:
https://www.governmentjobs.com/careers/everettwa/classspecs/1100818?keywords=PC%20Technican&pagetype=classSpecifications

This partnership is of significant importance to our company as hiring qualified employees has become increasingly difficult as we compete with our King County neighbors and across industry sectors. We are pleased to be part of this program and offer our committed support.

Sincerely,

Steven L. Hellyer
City of Everett