### October 23
#### Study Session Agenda

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<tr>
<td>1:00 p.m.</td>
<td>Call to Order and Welcome</td>
<td>Action</td>
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<tr>
<td></td>
<td>Beth Willis, Chair</td>
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<tr>
<td>1:05 p.m.</td>
<td>Host College Presentation: Bellingham Technical College</td>
<td>Discuss</td>
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<td>Patricia McKeown, President</td>
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<tr>
<td>1:55 p.m.</td>
<td>Student Voice – Innovative College and Career Pathways: Washington’s New Adult Basic Education State Plan</td>
<td>Discuss Tab 1</td>
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<td>Jon Kerr</td>
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<tr>
<td>2:25 p.m.</td>
<td>Innovative College and Career Pathways: Washington’s New Adult Basic Education State Plan</td>
<td>Discuss Tab 2</td>
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<td>Jon Kerr</td>
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<td>3:05 p.m.</td>
<td>Break</td>
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<td>3:15 p.m.</td>
<td>Compensation Background</td>
<td>Discuss Tab 3</td>
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<td>John Boesenberg</td>
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<td>3:55 p.m.</td>
<td>2014 Operating Budget Request</td>
<td>Discuss [Tab 9]</td>
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<td>Nick Lutes</td>
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<td>4:25 p.m.</td>
<td>Baccalaureate Degree Statements of Need</td>
<td>Discuss Tab 4</td>
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<tr>
<td></td>
<td>Edward Esparza</td>
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<tr>
<td></td>
<td>a) Olympic College, STEM – Information Technology</td>
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<td>b) Green River Community College, STEM – Information Technology</td>
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<td>c) Cascadia Community College, STEM – Sustainable Practices</td>
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<td>d) Renton Technical College, STEM – Information Technology</td>
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<td>e) Bellevue College, STEM – Molecular Bio Science</td>
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<td>f) Skagit Valley Community College, Environmental Conservation</td>
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<tr>
<td>5:25 p.m.</td>
<td>Cascadia Community College Report</td>
<td>Discuss</td>
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<td>President Eric Murray</td>
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<td>5:30 p.m.</td>
<td>Adjournment</td>
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<tr>
<td>6:00 p.m.</td>
<td>Dinner Meeting with State Board Members, Executive Director, Bellingham Technical College and Whatcom Community College Trustees and their staffs.</td>
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<td>Bellingham Technical College, Campus Center, Café Culinaire</td>
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### October 24
#### Regular Business Meeting Agenda

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<td>8:00 a.m.</td>
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<td>8:30 a.m.</td>
<td>Call to Order and Adoption of Agenda</td>
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<td>Beth Willis, Chair</td>
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8:35 a.m. Host College Presentation: Whatcom Community College
Kathi Hiyane-Brown, President
Discuss

9:25 a.m. Approval of Consent Agenda
a. SBCTC Meeting Minutes, September 11, 2013
b. Centralia College Property Acquisition for Parking
Resolution 13-10-50
c. Lower Columbia College Property Acquisition for Student Housing
Resolution 13-10-51
Action Tab 5

9:30 a.m. Allocation and Accountability Task Force Update
Denise Graham
Discuss Tab 6

9:50 a.m. Final Consideration of Lake Washington Institute of Technology, Bachelor of Applied Science in Transportation and Logistics
Resolution 13-10-52
Edward Esparza
Action Tab 7

10:10 a.m. Final Consideration of South Seattle Community College Bachelor of Applied Science in Sustainable Building Science Technology
Resolution 13-10-53
Edward Esparza
Action Tab 8

10:30 a.m. Break

10:40 a.m. 2014 Supplemental Operating Budget Request
Resolution 13-10-54
Nick Lutes
Action Tab 9

10:55 a.m. 2014 Supplemental Capital Budget Request
Resolution 13-10-55
Wayne Doty
Action Tab 10

11:15 a.m. Student Achievement Awards
Resolution 13-10-56
David Prince
Action Tab 11

11:35 a.m. Chair’s Report
Beth Willis, Chair
Discuss
- Trustees’ Association Report
  Dan Altmayer, TACTC President
- Presidents’ Association Report
  Jill Wakefield, WACTC President
- Executive Director Report and Parking Lot Update
  Marty Brown

12:10 p.m. Adjournment
Next Meeting: December 4-5, 2013 ~ Pierce College - Puyallup

EXECUTIVE SESSION: Under RCW 42.30.110, an Executive Session may be held. Action from the Executive Session may be taken, if necessary, as a result of items discussed in the Executive Session.

PLEASE NOTE: Times above are estimates only. The Board reserves the right to alter the order of the agenda. Reasonable accommodations will be made for persons with disabilities if requests are made at least seven days in advance. Efforts will be made to accommodate late requests. Please contact the Executive Director’s Office at (360) 704-4309.

Indoor Air Quality Policy: To promote a fragrance-free environment, the State Board requests that meeting participants refrain from wearing perfume, cologne and other fragrances.
Student Voice – Innovative College and Career Pathways: Washington’s New Adult Basic Education State Plan

Brief Description
Input from stakeholders across the state identified the need for all adult Washingtonians to have access to innovative, high quality education programs that provide the knowledge, skills, and credentials necessary for securing family sustaining employment that will strengthen state and local economies. Because of its groundbreaking work in the creation and implementation of Integrated Basic Education and Skills Training (I-BEST) and the I-BEST strategy, Washington State has been on the forefront of innovation and acceleration of student success in basic skills instruction. Due to our pioneering work in developing uniquely effective and accessible college and career pathways, our programs continue to be instrumental in creating an educational foundation that places our citizens on clearly articulated and accelerated pathways to success. Today’s student panel will highlight the major programs comprising the I-BEST Comprehensive College and Career Readiness Pathways that form the foundation of the 2015-2019 Washington State Adult Education draft plan, which is strategically targeted to prepare all adults for the 21st Century workforce and family sustaining jobs.

Background Information and Analysis
Because of the creation and development of I-BEST and the Opportunity Grant initiatives, Washington has become a flagship of innovation for the nation. The implementation of the Comprehensive I-BEST College and Career Readiness Pathway has enabled Adult Basic Education students to show a dramatic and unprecedented increase in educational attainment, transition to college, certificate and degree completion, and to secure family-sustaining jobs.

In 2007, the America’s Perfect Storm research done by Educational Testing Service found that nationally our skilled workforce consists mainly of baby boomers, who are leaving the workforce in great numbers and will continue to do so. The research also found that today’s jobs that are being left vacant now require more and higher level skills and that the United States does not and will not have the skilled workers to meet these workforce demands. Ten years ago it was realized that this was a reality in Washington State as well. These findings became Washington State’s perfect storm and the drivers for change in our State.

With help from the Ford Foundation, we drilled into our data to find proof of our ability to provide the solution. Perhaps the most significant result of the study was that it clearly identified what success looked like. It identified the greatest increase in economic attainment as being one year of college level credits (45 credits) plus a credential. This became known as the tipping point for students needing to find career pathways.

The study tracked 35,000 working age adults who came to community and technical colleges with a high school education or less, or who were non-English-speaking. Six years after starting college, the highest value added for work success was realized by those students who reached the tipping point. English speakers of other language students who reached the tipping point had an annual earnings increase of $7,000 and ABE students had an annual earnings increase of $8,500.
The study next looked at our state’s success at getting students to the tipping point. It found that up and down the educational pipeline, the two-year system was losing working age adults with high school education or less and English Speakers of Other Languages (ESOL) at an alarming rate. The good news was that one third of every new class entering the community and technical college system was made up of prime working age students with a high school diploma or less or were non-native English speakers. But five years after beginning, eight out of ten ABE/ESOL students made modest skills gains and at best earned a GED but went no further.

In order to avoid Washington’s perfect storm, Washington State brought in experts in integration from across the nation to help Washington plan how to get students to the tipping point. Simultaneously the I-BEST delivery system was born and the results have been conclusively positive. Before I-BEST only 13 percent of our ESOL and less than 33 percent of ABE students continued to college-level work. And after five years of entering a community or technical college only 4-6 percent earned a certificate or degree or reached the tipping point. The implementation and expansion of I-BEST changed that and successfully put our pre-college adults on accelerated pathways to certificates, degrees, and careers in high demand jobs. When compared with other basic skills students in workforce programs, Columbia University’s Research Center found that I-BEST students are:

- Three times more likely to earn college credit
- Nine times more likely to earn a credential

I-BEST students have also become the driving force behind increased student achievement beyond basic skills. In 2011 I-BEST students earned 83 percent of the certificates and degrees accrued by basic skills students and were 81 percent of the ABE students reaching the tipping point. Washington’s WorkForce Board’s net impact study found that I-BEST students more than doubled quarterly earnings when compared to traditional ABE students and made nearly the same quarterly earnings as students in more costly private career schools. The expansion of I-BEST into a set of comprehensive college and career pathways has shown the same success for all levels of students. The comprehensive pathway provides more access to more pre-college students, greatly increasing options for all students. (See attachment A.)

The Comprehensive I-BEST College and Career Readiness Pathway model ensures that adults have innovative, efficient, rigorous, and accelerated pathways to a high school diploma, that our lowest level students can progress in a year or less to college-level programs leading to family sustaining jobs, and most importantly, that students are able to develop the workforce and academic skills needed to earn workforce credentials and degrees that are critical to meeting the needs of the 21st Century workforce. Because of the successful piloting and implementation of the comprehensive pathways, these research-proven strategies have been identified by stakeholders from across the state as the key foundational concept for the Washington State Adult Education Five-year Plan: Pathways to College and Careers for Washington’s Emerging Workforce.
Potential Questions

- What are positive effects of I-BEST colleges and career pathways for students and how can we scale them up?
- What are the barriers for students to participate in these pathway programs that accelerate transition of even our lowest skilled adults into career pathways?
- How do we neutralize the financial disincentive to basic skills programs and expand I-BEST pathway options for all students?

Recommendation/Preferred Result

Identify a financial model to support Adult Basic Education students and programs that fully addresses the needs of Washington’s growing populations and the Comprehensive I-BEST College and Career Pathway opportunities that will allow students at all levels to take advantage of high quality, accelerated pathways to success.

Policy Manual Change □ No ☒

Prepared by: Jon Kerr, Director of Adult Basic Education
360-704-4326, jkerr@sbctc.edu
The Comprehensive I-BEST PATHWAY

COMMUNITY AND TECHNICAL COLLEGE PROFESSIONAL/TECHNICAL AND ACADEMIC PROGRAMS
Professional/technical and academic programs at all 34 colleges provide adults with skills, knowledge and certificates/degrees that lead to employment and additional education that allows students to become competitive in the global economy and workforce.

ACADEMIC I-BEST PROGRAMS
Academic I-BEST employs the same strategies as professional technical I-BEST and applies them to a 2 to 2-year degree pathway ensuring accelerated student progress through higher levels of ABE and precollege education and transition into 2-year degree programs.

DEVELOPMENTAL EDUCATION I-BEST PILOTS
These pilots move students further and faster through precollege hurdles in math and English and successfully into professional/technical and academic degree programs.

PROFESSIONAL/TECHNICAL I-BEST PROGRAMS
Professional/technical I-BEST programs all result in recognized certificates that lead to employment and/or progression along a defined educational and career pathway. I-BEST programs are also offered at three correctional facilities.

ON RAMP to I-BEST PILOTS (SkillUp, SBTCG, I-DEA, I-BEST at Work, ORIA)
On Ramp pilot programs provide ABE and ESL students who demonstrate skills at federal levels 1-3 to acquire skills needed to participate in Professional/Technical or Academic I-BEST projects in 1-3 quarters.
Innovative College and Career Pathways: Washington’s New Adult Basic Education State Plan

Brief Description

The *2015-2019 Washington State Adult Education Five Year Plan* was drafted under the leadership of Washington’s Adult Education Advisory Council (AEAC) to better address the needs of Washington’s emerging workforce for pathways to college credentials and family wage jobs. It mirrors the priorities of SBCTC’s *System Direction, Mission Study*, and *Policy Focus and Dashboard*. It was written in accordance with the requirements of Title II of the Workforce Investment Act and the U.S. Department of Vocational and Adult Education and aligns with the Workforce Training and Education Coordinating Board’s *High Skills, High Wages* plan.

Background Information and Analysis

This item is a preview of the *2015-2019 Washington State Adult Education Five Year Plan* to get Board feedback prior to adoption in December 2013 (see attachments A-E). At the June 2013 board meeting, the Board was briefed on the need for a new Adult Basic Education state plan. The draft state plan has been written to address two imperatives. The first, identified by the Adult Education Advisory Council and the Office of Adult Education, was to clearly define and address the emerging needs within our state for a better prepared citizenry and workforce. The current state plan was developed in 1999 prior to the implementation of I-BEST; the student achievement initiative; and accelerated, integrated and contextualized college and career pathways and does not reflect the current skill needs of our workforce. The second imperative came from the U.S. Department of Education. They identified a new plan as a requirement for continued funding through the Office of Vocational and Adult Education that aligned with state initiatives. The new plan answers that requirement in the context our state policy priorities and goals for a prosperous future for all Washingtonians.

Broad public input for this plan was gathered and evaluated under the active leadership of the state’s Adult Education Advisory Council (AEAC). This body was created by the legislature in 1991, recognized by the U.S. Department of Education in 1997, and has members appointed by the governor to represent key agency partners and sectors. The AEAC recommends this plan for consideration by the governor and approval by the State Board for Community and Technical Colleges.

Public input was gathered in three ways:

- Review of key documents, including those noted above.
- Fourteen public forums and additional focus groups, including contacts with a range of adult learners.
- On-line stakeholder surveys targeting the same specific groups and the general public and announced through adult education and AEAC contacts and on the SBCTC website.

The plan details six overarching goals key to the success of learners over the next five years and lays a foundation for an open and competitive RFP process that will promote innovation to meet the new vision and reach the goals.

- Implement and scale comprehensive, innovative college and career pathways that accelerate student completion and foster economic growth.
- Guide and support transformational instructional practices that accelerate student attainment of certificates, the Tipping Point, and AA/BA degrees leading to family sustaining employment.
• Contextualize adult education courses to support transition to high school completion and equivalency certification, postsecondary education, and employment.
• Strengthen and maintain a culture of rigorous instruction and evidence of increased performance.
• Create and maintain strategic alliances to leverage local resources and increase navigation support to students.
• Foster student self-advocacy.

Potential Questions
• How will SBCTC support the elements of this plan that are critical to accelerating student progress on pathways to postsecondary certification and family-wage jobs that support a vibrant economy?
• How will instruction change and improve in order to meet the more rigorous standards described in the new state plan?
• What are the potential stumbling blocks to success? What are potential solutions?
• Beyond the federal requirements to report student level gains annually, how should results of this new plan be measured, evaluated, and reported to the State Board for Community and Technical Colleges?

Recommendation/Preferred Result
The State Board for Community and Technical Colleges will make recommendations regarding the draft plan and approve the 2015-2019 Washington State Adult Education Five Year Plan at its December meeting.

The Board will take action to ensure that there is sufficient support for adult basic education programs and students to meet goals and implementation of the plan across the state and college system.

Policy Manual Change ☒ No ☐

Prepared by: Kathy Cooper, Policy Associate, Adult Basic Education
360.704.4322, kcooper@sbctc.edu
The Washington State Plan for Adult Education – Pathways to College and Careers for Washington’s Emerging Workforce - was written to address two imperatives. The first, identified by the Adult Education Advisory Council and the Office of Adult Education, was to clearly define and address the emerging needs within our state for a better prepared citizenry and workforce. The second came from the U.S. Department of Education at the same time as they identified a new plan as a requirement for continued funding through the Office of Vocational and Adult Education. The new plan answers that requirement in the context our state policy priorities and goals for a prosperous future for all Washingtonians.

Broad public input for this plan was sought and evaluated under the active leadership of the state’s Adult Education Advisory Council. This body was created by the legislature in state law in 1999, was formally recognized by the U.S. Department of Education in 1997, and has members who are appointed by the state’s governor to represent key agency partners and sectors. The AEAC recommends this plan for the consideration of constituents and partners, the recommendations of the state governor, and for the approval of the State Board for Community and Technical Colleges.

Public input was gathered in three ways:

1. Review of key planning documents that included the Governor’s Result Washington Initiative, the Workforce Training and Education Coordinating Board’s High Skills, High Wages ten year plan, and the State Board for Community and Technical Colleges’ System Direction, Mission Study, Policy Focus and Dashboard.

2. Fourteen public forums and focus groups targeted specific constituents and the general public. The gatherings collected input in four key areas:
   - Key roles for adult learners as they complete their education,
   - Skills required to carry out those roles,
   - Support and contributions needed to ensure learner success in gaining required skills, and
   - Indicators and evidence of program effectiveness
   - Attendees included:
     - members of the Adult Education Advisory Council (see Section 3.1);
     - adult education administrators, directors, staff and volunteers;
     - adult education instructors and tutors;
     - adult learners;
     - College system representatives; including presidents, VPs of instruction, etc.;
     - employers including members of Association for Washington Business;
     - labor leaders and members, including Washington State Labor Council, American Federation of Teachers, Washington Education Association; and
     - interested and engaged public.

3. On-line stakeholder surveys targeting the same specific groups and the general public and were announced through adult education and AEAC contacts and on the SBCTC website. The survey instrument mirrored the four key questions discussed in the public forum.
Washington State Adult Education 5-year Plan – 2015-2019
Pathways to College and Careers for Washington’s Emerging Workforce

Building on the Best Thinking across Key Systems

Adult Education Advisory Council (AEAC) - In RCW, appt. by Governor; Represents key systems
1. Governor’s Results Washington initiative,
2. Student Achievement Council’s Strategic Master Plan for Higher Education
3. SBCTC’ System Direction and Mission Study, and Policy Focus and Dashboard
4. Workforce Education and Training Board’s High Skills High Wages plan.

Vision

All adult Washingtonians will have access to innovative, high quality education programs that provide the knowledge, skills and credentials necessary for securing family sustaining employment that strengthens the state and local economies.

Mission

The adult education system will provide research-proven instruction and college and career readiness pathways that allow adults to master academic and technical skills to attain their career and educational goals and successfully navigate education and employment opportunities.

Goals

- Implement and scale comprehensive, innovative college and career pathways to accelerate student completion and foster economic growth.
- Guide and support transformational instructional practices that accelerate student completion to certificates, the Tipping Point, and AA/BA degrees leading to family sustaining employment.
- Contextualize adult education courses to support transition to high school completion & equivalency certification, postsecondary education, and employment.
- Strengthen and maintain a culture of rigorous instruction and evidence of increased performance.
- Create and maintain strategic alliances to leverage local resources and increase navigational support to students.

ADULT BASIC EDUCATION OFFICE
1300 QUINCE STREET SE
OLYMPIA, WA 98504
HTTP://WWW.SBCTC.EDU/
I-BEST – Foundation for Innovations in Teaching and Learning at Every Level

Washington’s Integrated Basic Education and Skills Training Program (I-BEST) is a nationally recognized model that quickly boosts students literacy, work and college readiness skills so students earn credentials, get living wage jobs, and put their talents to work for Washington’s employers. I-BEST successfully challenges the traditional notion that students must complete basic education before starting to earn college credits.

All I-BEST programs pair two instructors in the classroom. One teaches professional and technical or credit-bearing academic content or the content required for a specific job and progress on the beginning steps of a career pathway. The other teaches basic skills in areas of reading, math, writing or English language. Because I-BEST programs develop skills in the contexts of specific jobs and college programs, they enable students to move through college, earn credentials and get jobs faster.

This research-based program was named a Bright Idea by Harvard’s John F. Kennedy School of Government in 2011 and has been designated by the U.S. Department of Education as the most significant innovation in the last 20 years. According to a December, 2012 report by the Community College Research Center, I-BEST programs provide benefits that justify additional costs.

I-BEST programs along the comprehensive pathway are offered at all 34 colleges. They provide adults with skills, knowledge and certificates/degrees through innovative educational practices that lead to employment, more education and success in their workplaces, families, and communities– all building a stronger workforce.
Washington State Adult Education 5-year Plan – 2015-2019
Pathways to College and Careers for Washington’s Emerging Workforce

Your Voice is Still Needed

The State Board for Community and Technical Colleges has almost completed the process of drafting a new state plan to guide the purpose and direction of adult basic education (ABE) and the distribution of federal ABE funds for the next five years.

The Governor-appointed Adult Education Advisory Council, the guiding body for this work, invites you to share your responses to the draft plan that was created over the last several months. The plan reflects insights from public planning documents, open forums, and surveys. This is a final opportunity to join us in shaping the future of ABE in Washington and ensure that ABE and English language education will open up new career pathways and education opportunities for adults whose limited skills or English might otherwise hold them back. You will find the draft plan and a link for comments and recommendations at http://www.sbctc.ctc.edu/college/_e-abe_state-plan.aspx.

Your voice is important to our future. Thank you for your participation.

Jon M. Kerr, Director, Adult Basic Education

Background Information

The Adult Education and Family Literacy Act (AEFLA; Title II of the Workforce Investment Act) provides federal funds for services that help adults develop skills such as reading, writing, math, English language competency, and problem solving.

The Division of Adult Education and Literacy, under the Office of Vocational Education and Adult Education (OVAE) in the U.S. Department of Education (ED), administers the AEFLA. AEFLA funding flows from the state to eligible institutions, which include local educational agencies, community-based organizations, volunteer literacy organizations, institutions of higher education, libraries, public housing authorities, one-stop career centers, and correctional institutions.

Adult basic education programs are an integral part of Washington’s education and workforce system. The Office of Adult Basic Education — as part of the SBCTC — administers federal and state adult education and literacy funds and offers program development training and activities to local providers in order to assure quality basic skills services for all students across the State. The purpose of the program is to assist adults to obtain the knowledge and skills necessary for work, further education leading them to college certificates and degrees with meaning in the workforce, family self-sufficiency, and community involvement.

Contacts

Kathy Cooper, Policy Associate, kcooper@sbctc.edu, 360-704-4322
Christy Lowder, Administrative Assistant, clowder@sbctc.edu, 360-704-4323
Washington State Adult Education
5-year Plan – 2015-2019

Pathways to College and Careers
for
Washington’s Emerging Workforce

ADULT BASIC EDUCATION OFFICE
1300 QUINCE STREET SE
OLYMPIA, WA 98504
HTTP://WWW.SBCTC.EDU/
*This plan is intended to address the needs of the Adult Education system and the state of Washington through 2019. The Adult Education Advisory Council, recognizing significant changes in the authorizing environment such as - but not limited to - changes in federal and state legislation, program funding, and the demands of the workplace and economy, may recommend changes in the proposed duration of this plan to the State Board for Community and Technical Colleges. The State Board for Community and Technical Colleges reserves the right to make changes due to - but not limited to - federal and state legislation or funding changes.
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Washington’s Adult Education and Family Literacy five-year State Plan was developed with guidance from the Governor’s appointed Adult Education Advisory Council (AEAC) in support of Governor Jay Inslee’s Results Washington initiative, the Higher Education Coordinating Board’s Strategic Master Plan for Higher Education, the State Board for Community and Technical Colleges’ System Direction and Mission Study, and Policy Focus and Dashboard, and the Workforce Education and Training Board’s High Skills High Wages plan.

**Vision**

All adult Washingtonians will have access to innovative, high quality education programs that provide the knowledge, skills and credentials necessary for securing family sustaining employment that strengthens the state and local economies.

**Mission**

The adult education system will provide research-proven instruction and college and career readiness pathways that allow adults to master academic and technical skills to attain their career and educational goals and successfully navigate education and employment opportunities.

**Goals**

- Implement and scale comprehensive, innovative college and career pathways to accelerate student completion and foster economic growth.

- Guide and support transformational instructional practices that accelerate student completion to certificates, the Tipping Point, and AA/BA degrees leading to family sustaining employment.

- Contextualize adult education courses to support transition to high school completion & equivalency certification, postsecondary education, and employment.

- Strengthen and maintain a culture of rigorous instruction and evidence of increased performance.

- Create and maintain strategic alliances to leverage local resources and increase navigational support to students.

- Foster student self-efficacy.
Washington State has been on the forefront of innovation and acceleration of student success in basic skills instruction, particularly due to our pioneering work in developing uniquely effective and accessible college and career pathways. Our programs continue to be instrumental in creating an educational foundation that places our citizens on clearly articulated and accelerated pathways to success. The 2015-2019 Washington State Plan for Adult Education focuses on foundational practices enabling the design and implementation of exemplary basic skills college and career readiness pathways for the 21st Century.

This work is critical to creating the educational infrastructure that will help put our 90 million adults (45% of our nation’s population) who are 16 and older, no longer in school, and functioning below the high school level onto clearly articulated pathways to a family sustaining career. Washington’s adult education programs are nationally recognized for providing adult learners with innovative instruction in critical core skills that are essential for success in the 21st Century workforce. This plan outlines how Washington State plans to leverage that success in continuing to scale up these critical core practices.

In the past, adult education programs have been viewed as only providing remedial education, a place where students went if they were not college ready. Those times have changed and now our adult education programs are a powerful, life-changing educational experience for the one in six Washington adults who lack the basic skills needed to succeed as workers, parents, and citizens. Employers, if denied access to this future population of highly trained and credentialed workers, will lack the skilled workforce critically needed in high demand jobs to compete in a global market. We know we must find ways to continue providing more pathways to meaningful certificates and degrees for all under-trained adults. We can no longer leave anyone behind.

We also know that adult education is the solution. Our programs will continue to focus on developing and facilitating the most innovative and effective instructional approaches and student support systems possible. In our most forward-looking programs, instruction is delivered in classrooms and online in both distance learning and hybrid models providing synchronous and asynchronous access to education 24/7.

Adult education is collaborating with our many workforce and social service partners to bring proven innovations into every classroom, helping to ensure that all students acquire the
qualifications and access the resources needed to secure a family sustaining career and live a life of contribution to their communities.

Our programs offer adults innovative opportunities to reach their goals of high school completion and even more important postsecondary certificates and degrees in high demand career fields. These programs are designed to give students an opportunity to meet high school graduation requirements in a mature setting and (in some cases simultaneously) to accumulate college credit, greatly reducing time to degree and high demand jobs—saving both time and money.

We know that in the 21st Century a high school diploma is not enough, that talent and skills determine the competitive edge in today’s economy. By 2018, 64 percent of all jobs will require workers with higher qualifications than just a high school diploma. Currently in Washington State, one out of every six people lacks the basic reading, writing, and math skills to get a living-wage job and meet the needs of employers. This segment of Washington’s population is growing quickly at the same time that more and more jobs are requiring college experience. By 2019, two-thirds of all new jobs in Washington will require at least one year of college education, and we know this is true across the nation. In order to move toward a more vibrant economy, employers will increasingly need access to more highly skilled, credentialed workers.

Washington’s adult education providers are partnering with regional agencies, organizations, institutions, and industry to build, scale and sustain demand-driven career pathways to meet the needs of our citizens and employers. These college and career readiness pathways are the building blocks to marketable,
stackable, and credible credentials. These pathways connect education, training, and support services in new ways that foster success for all individuals.

Adult education in Washington has a proven track record leading to student success by design. It is time that we recognize the potential value that our English speakers of other languages & our adult basic skills students bring to our workforce and communities. This plan outlines our efforts toward self-efficacy for these students, effective 21st Century skills development, and an appreciation for the critical role played by adult basic education students in a vibrant economy and skilled workforce, an educated citizenry, and strong communities.
1.0 Eligible Agency Certifications and Assurances

UNITED STATES DEPARTMENT OF EDUCATION
Office of Vocational and Adult Education
The Adult Education and Family Literacy Act
Enacted August 7, 1998 as Title II of the
Workforce Investment Act of 1998 (Public Law 105-220)

The Washington State Board for Community and Technical Colleges (State Agency) of the State of Washington hereby submits its Unified Five-Year State Plan to be effective from July 1, 2014 to June 30, 2019. The eligible agency also assures that this plan, which serves as an agreement between State and Federal Governments under the Adult Education and Family Literacy Act, will be administered in accordance with applicable Federal laws and regulations, including the following certifications and assurances.

1.1 Certifications (EDGAR 76.104, Certifications and Assurances)
Education Department General Administrative Regulations:
1. The plan is submitted by the State agency that is eligible to submit the plan.
2. The State agency has authority under State law to perform the functions of the State under the program.
3. The State legally may carry out each provision of the plan.
4. All provisions of the plan are consistent with State law.
5. A State officer, specified by title in the certification, has authority under State law to receive, hold, and disburse Federal funds made available under the plan.
6. The State officer who submits the plan, specified by the title in the certification, has authority to submit the plan.
7. The agency that submits the plan has adopted or otherwise formally approved the plan.
8. The plan is the basis for State operation and administration of the program.

1.2 Assurances (Sec.224 (b)(5),(6),(8))
Workforce Investment Act of 1998 (Public Law 105-220), Section 224 (b)(5)(6) and (8).
1. The eligible agency will award no less than one grant to an eligible provider who offers flexible schedules and necessary support services (such as child care and transportation) to enable individuals, including individuals with disabilities or individuals with other special needs, to participate in adult education and literacy activities, which eligible
provider shall attempt to coordinate with support services that are not provided under this subtitle for support services.

2. Funds received under this subtitle will not be expended for any purpose other than for activities under this subtitle.

3. The eligible agency will expend the funds under this subtitle in a manner consistent with fiscal requirements in Section 241.

Section 241, Administrative provisions.
Supplement Not Supplant – Funds made available for adult education and literacy activities under this subtitle shall supplement and not supplant other State or local public funds expended for adult education and literacy activities.

Maintenance of Effort
1. In general.
   a. Determination – An eligible agency may receive funds under this subtitle for any fiscal year if the Executive Director finds that the fiscal effort per student or the aggregate expenditures of such eligible agency for adult education and literacy activities, in the second preceding fiscal year, was not less than 90 percent of the fiscal effort per student of the aggregate expenditures of such eligible agency for adult education and literacy activities in the third preceding fiscal year.
   b. Proportionate reduction – Subject to paragraphs (2),(3) and (4), for any fiscal year with respect to which the Executive Director determines under subparagraph (a) that the fiscal effort or the aggregate expenditures of an eligible agency for the preceding program year, the Executive Director
      i. shall determine the percentage decreases in such an effort or in such expenditures; and
      ii. shall decrease the payment made under this subtitle for such program year to the agency for adult education and literacy activities by the lesser of such percentages.

2. Computation – In computing the fiscal effort and aggregate expenditures under paragraph (1), the Executive Director shall exclude capital expenditures and special one-time project costs.

3. Decrease in federal support – If the amount made available for adult education and literacy activities under this subtitle for a fiscal year is less than the amount made available for adult education and literacy activities under this subtitle for the preceding fiscal year, then the fiscal effort per student and the aggregate expenditures of an eligible agency required in order to avoid a reduction under paragraph (1)(b) shall be decreased by the same percentage as the percentage decrease in the amount so made available.
4. Waiver – The Executive Director may waive the requirements of this subsection for one fiscal year only, if the Executive Director determines that a waiver would be equitable due to exceptional or uncontrollable circumstances, such as a natural disaster or an unforeseen and precipitous decline in the financial resources of the State or outlying area of the eligible agency. If the Executive Director grants a waiver under the preceding sentence for a fiscal year, the level of effort required under paragraph (1) shall not be reduced in the subsequent fiscal year because of the waiver.

1.3 Assurances for the Unified Plan.
Not applicable

Washington State Board for Community & Technical Colleges
(State Agency)
1300 Quince Street SE
Olympia, WA 98504-2495
(Address)
By: ____________________________________________
(Signature of Agency Head)
Executive Director
(Title)
______________________________________________
(Date)
MINIMUM WAGE TO HANFORD CAREER

"After 30 years of not being in school, I thought it was going to be hard, especially with English as my second language. After graduating from HBEST I was immediately hired at Hanford."

SETAREH FARAHANI
2.0 Needs Assessment

2.1 Individuals Most in Need

Every four years, the Washington State Workforce Training and Education Coordinating Board (WTECB) conducts a net impact and cost-benefit analysis of workforce development programs. The Participant Return on Investment Measure is the net impact on participant earnings and employer provided benefits compared to the cost of the services. (WTECB)

The Workforce Board study examined the experience of workforce participants between 2007 and 2010. It compared their earnings, employment and other factors with individuals who did not participate in a workforce program, but had similar characteristics and faced the same regional labor market at the same time.

The report describes the state of our economy in the Net Impact Study with the following statement:

“A nationwide recession impacted the ability of Washington residents to find jobs and become self-sufficient. The same challenges were true for the state’s workforce participants observed by the Workforce Board in 2010, 2011 and into 2012. Although the Great Recession officially began in December of 2007 and ended in June of 2009, its economic aftershocks are still being felt.” (WTECB)

The population in our state that cannot find work because they are unable to read, write, or speak English are the most in need. Without education through access to a comprehensive college and career pathway, there is no hope of a living-wage job or increased employment opportunities.

2.2 Populations

Washington’s adult education programs serve the fastest growing population segments in our state. Nearly one million adults in Washington have not reached the basic academic and English language levels needed to develop the critical skills demanded by today’s recovering economy. Yet in 2013, Washington was only able to serve 59,000 of these individuals. It is essential to the vitality of Washington’s workforce that we increase the number of these individuals who are on highly integrated and contextualized college and career pathways to family sustaining careers.

Educationally Disadvantaged Adults

In Washington, 10% of the population has less than a 12th grade education. Of those, nearly half have less than a 9th grade education. The number of jobs for people without a high school education is declining. These people do not have the skills to find better work at a time when employers cannot find employees to fill open positions.
Individuals with Limited English Proficiency
12.8% of Washington’s population are foreign born, the same as the national average. While the national average of the population speak a language other than English in the home is 20.3%, in Washington 17.8% do so. More than 60 languages are spoken in Washington homes. (Census)

Economically Disadvantaged Adults
According to the U.S. Census, 12.5% of Washington’s population (2007-2011) is below poverty level - slightly lower than the national average of 14.3%. The percentage levels increases when families are counted. For single-mother families with children under the age of 5, it is 45.4%.

Criminal Offenders in Correctional Institutions
The prison population in Washington increased from 6,040 in 1990 to 18,360 in 2010. There are currently 16,778 offenders in correctional institutions. Almost 40% of these did not have a confirmed high school diploma or equivalent upon entry. (DOC)

Parents and Family Leaders
A high school diploma and a family-support income are the best predictors of children’s success in school in this state. Washington providers includes family literacy skills and contexts in multiple program models that promise generational progress for both ABE and ESL learners.

Employers, if denied access to any or all of these populations, will lack the skilled workforce critically needed to compete in the global market. Washington’s adult education programs are dedicated to providing pathways to meaningful certificates and degrees for all adults—and this plan has been developed with that goal in mind.

"The minimal time and money that an employer invests in promoting educational programs to their employees pays the company back tenfold."

Rader Farms, Bellingham, WA
3.0 Description of Adult Education and Literacy Activities

All services provided under this plan accelerate the progress of adults along well-defined pathways to college and career readiness that lead to postsecondary certificates/degrees and family-wage jobs and support vital families, communities, and economies across Washington.

3.1 Description of Allowable Activities

Overview

Washington’s adult basic education programs address the needs of adult learners as they strengthen local communities and businesses. Adults who lack the skills and knowledge to fully participate in, contribute to, and benefit from Washington’s postsecondary education system and economy are eligible to access adult education services in a variety of settings across the state. Core services are offered at all locations to adult learners who meet the federal eligibility requirements for enrollment. These learners:

- Have attained 16 years of age;
- Are not enrolled or required to be enrolled in secondary school under state law;
- Lack sufficient mastery of basic educational skills to function effectively in society;
- Do not have a secondary school diploma or its recognized equivalent, or have not achieved an equivalent level of education; and/or
- Are unable to speak, read, or write the English language.

Comprehensive interventions are designed to address skill and knowledge deficits across the levels defined in Title II of the Workforce Investment Act of 1998.

Vision and leadership for this system of services comes from the Washington State Board for Community and Technical Colleges (SBCTC). SBCTC is advised about issues related to students’ career pathway goals by the Workforce Education and Training Coordinating Board (WTECB).

SBCTC is also advised and supported by the Washington State Adult Education Advisory Council (AEAC), which meets four times each year. This body was created by the legislature in 1991, and its members are appointed by the state governor to represent agencies, partners and sectors. Represented entities include: Adult Basic Education providers, community-based organizations, employers, libraries, unions, the Department of Commerce, the Department of Corrections, Community and Technical Colleges, the Department of Health and Human Services, the Employment Security Department, the Governor, the Office of the Superintendent of Public Instruction, the State Board for Community and Technical Colleges, the Washington Workforce Association (WIBs), and the Workforce Education and Training Coordinating Board (state WIB). The AEAC was the first officially certified state advisory council when it was recognized by the U.S. Department of Education in March of 1997.

Building on policies and initiatives created through this comprehensive system of advising, coordination and support, providers leverage success using innovative processes that have gained recognition in formal research among colleagues and funders across the nation as well as from the President of the United States. These processes unify and inform the delivery of Adult Basic
Education (ABE) courses, English as a Second Language (ESL) instruction, and high school credential programs.

The Comprehensive Integrated Basic Education and Skills Training (I-BEST) Pathway
Professional/technical and academic programs at all 34 colleges provide adults with skills, knowledge and certificates/degrees through innovative education and career pathways that lead to employment, additional education and success in their workplaces, families, and communities— all contributing to a stronger workforce and society.

The Comprehensive I-BEST Pathway Diagram

I-BEST – Foundation for Innovations in Teaching and Learning at Every Level
Washington’s Integrated Basic Education and Skills Training Program (I-BEST) is a nationally recognized model that quickly boosts students’ literacy and work and college readiness skills so students earn credentials, get living wage jobs, and put their talents to work for Washington’s employers. This innovation successfully challenges the traditional notion that students must complete basic education before starting to earn credits in a job-training or academic program.

I-BEST pairs two instructors in the classroom – one to teach professional and technical or credit-bearing academic content and the other to teach basic skills in areas of reading, math, writing or
English language. I-BEST programs develop skills in the contexts of specific jobs and college programs, enabling students to move through college, earn credentials and get jobs faster.

This research-based program was named a Bright Idea by Harvard’s John F. Kennedy School of Government in 2011 and has been designated by the U.S. Department of Education as the most significant innovation in the last 20 years. According to a December, 2012 report by the Community College Research Center, I-BEST programs provide benefits that justify additional costs.

Research conducted separately by the Community College Research Center and the Workforce Training and Education Coordinating Board found that I-BEST students outperform similar students enrolled in traditional basic skills programs. I-BEST students are:

- 3 times more likely to earn college credits.
- 9 times more likely to earn a workforce credential.
- Employed at double the hours per week (35 hours versus 15 hours).
- Earning an average of $2,310 more per year than similar adults who did not receive basic skills training.

More than 3,000 Washington students are enrolled in I-BEST programs annually.

I-BEST is being replicated and implemented across the country. Washington’s community and technical college system has provided information and assistance to 20 other states seeking to adopt I-BEST and similar programs. These include Minnesota, Indiana, Oklahoma, Wisconsin, Illinois, Kansas, Kentucky, North Carolina, Alabama, California, Colorado, Connecticut, Georgia, Louisiana, Maryland, Mississippi, New Mexico, Oregon, Rhode Island and Texas.

**On Ramps to I-BEST – Increasing Transitions from Levels 1, 2 and 3**

Funded providers use key elements of I-BEST programs, e.g. contextualization, team teaching, enhanced students services, and articulated college and career pathways, to increase the speed at which students master basic and ESL skills at federal levels 1, 2 and 3. On Ramp options include, but are not limited to:

- programs focused on career clusters
- partnership efforts between colleges and community-based organizations and local workforce development councils (WIBs)
- I-BEST at Work projects that partner providers, employers and WIBs
- Project I-DEA (Integrated Digital English Acceleration), a three-year pilot program with support from the Gates Foundation that will transform ESL instruction using a flipped classroom model and 50% online instruction

In 1-3 quarters, On Ramp students acquire the skills needed to transition to basic skills education classes at federal levels 4-6 and/or Professional/Technical or Academic I-BEST pathways.
Professional/Technical I-BEST – Moving Students from Levels 4, 5 and 6 to Postsecondary Success in Professional/Technical Programs

Students who function primarily at federal levels 4 – 6 can be served in Professional/Technical I-BEST programs that result in recognized certificates leading to progression along a defined educational and career pathway. These programs are available at every Washington community and technical colleges, often in partnership with local community based organization and increasingly as part of the education services at state correctional facilities.

Developmental and Academic I-BEST Programs – Moving Students from Levels 4, 5, and 6 to Postsecondary Success in Academic Programs

Developmental and Academic I-BEST programs employ the same strategies as professional technical I-BEST. They apply these strategies to credit-bearing classes along 2-year degree pathways and ensure accelerated student progress through higher levels of adult education and precollege education and transition into 2-year degree programs.

Expanding Options for High School Credentials – Certificates and Diplomas

In light of changes to options for acquiring high school credentials made by the federal government and the growing importance of these certificates and high school diplomas,
Washington state has expanded the options available to adults. Our goal is to ensure that adult learners acquire the necessary credentials by gaining the knowledge and skills demanded in the workforce and required for postsecondary success.

Toward that end, Washington will continue to award state certificates linked to the recognized high school equivalency state exam. In addition, the state will continue to support two pathways to diplomas awarded by colleges that address different populations and have been in place for many years. Adults can earn a diploma through a high school completion program or request a diploma at the time they are awarded an associate degree or two-year professional/technical certificate.

To ensure that adults have access to a rigorous, affordable high school diploma program that reflects the knowledge, skills, and experience of adults, Washington is launching a new option, High School 21+ (HS 21+). HS 21+ expands the pathways offered by community and technical colleges and community based organizations with a comprehensive, competency-based approach tailored to adult learning styles. HS 21+ is for adult learners (21 and older) who do not have a recognized high school certificate or diploma. It is designed to move adults into I-BEST programs or other postsecondary training and education and to provide the skills needed to support lifelong learning. The program awards credit for prior learning, military training, and work experience. Because it’s competency-based, students can move quickly as outcomes are met, saving both time and money.

3.2 Special Rule (Use of Funds for Family Literacy)
Special Rule Use of Funds for Family Literacy is not applicable.

3.3 Description of New Organizational Arrangements and Changes
Policy and funding responsibility for Washington’s Adult Basic Education programs moved to the purview of SBCTC from the Office of the Superintendent of Public Instruction in 1991. Like the simultaneous transfer of responsibility for technical colleges, the move was based on the needs of the future workforce and economy. At the same time, an Adult Education Advisory Council (AEAC) was created by a state law that authorizes the governor to appoint agency partners and stakeholders to offer advice on ABE issues to the State Board, the Workforce Training and Education Coordinating Board and the Governor. SBCTC’s Executive Director and Director of Adult Education serve as members of that Council.

The State Board for Community and Technical Colleges (SBCTC) is responsible for administering the Community and Technical College Act and providing leadership and coordination for Washington's public system of 34 community and technical colleges. The SBCTC is governed by a nine-member board appointed by the Governor.
SBCTC’s Office of Adult Education, administers and monitors federal and state Adult Education and Literacy funds to local providers and provides program development and training activities in order to assure quality basic skills services for all students across the State.

The Office of Adult Education’s main focus is to be the advocate for students and programs to the State Board, Office of Vocational and Adult Education, and state and federal legislators and a catalyst for innovation. The organizational structure supports the transition of adults to postsecondary education and employment, integration of learning with workforce development, and one-stop student support activities. It is dedicated to partnering and collaborating with other agencies critical to student retention and completion and the success of Washington states workforce and economy.

**Education Division**

**August 22, 2013**
4.0 Annual Evaluation of Adult Education and Literacy Activities

4.1 Annual Evaluations
The Adult Education and Family Literacy Act requires annual evaluation of the “effectiveness of adult education and literacy activities based on the performance measures described in Section 212.” Washington conducts an annual evaluation of each funded provider and performs ongoing evaluations of individual providers and the system as a whole. The key evaluation of program effectiveness is the National Reporting System performance indicators.

Washington evaluates programs according to the core indicators of performance outlined in the Adult Education and Family Literacy Act:

- Demonstrated improvements in literacy skill levels in reading, writing, and speaking the English language, numeracy, problem solving, English language acquisition, and other literacy skills.
- Placement in, retention in, or completion of postsecondary education, training, unsubsidized employment or career advancement.
- Receipt of a secondary school diploma or its recognized equivalent.

Washington uses various means of assessment in its annual and ongoing evaluation process, including desk monitoring, program improvement processes, and performance and financial audits.

Desk Monitoring
On an annual and ongoing basis, the Adult Education office reviews each provider’s enrollment as well as performance, which is evaluated according to NRS indicators as described in Chapter 5. Each provider is responsible for meeting the percentages set by the performance indicators and for meeting enrollment goals, which are a percentage of the target population.

Through the Washington Adult Basic Education Reporting System (WABERS+) online data collection system, the Adult Education office receives data on enrolled students directly from providers. Utilizing WABERS+ data, the Adult Education office and providers regularly evaluate program effectiveness.

At both the state and provider levels, WABERS+ provides the capacity to analyze program performance, identify program improvement needs, assess the effectiveness of program design and plan appropriate staff development to better serve adult learners.

Based on data, the Adult Education office links performance to program improvement efforts and funding decisions. Participant outcome data are crucial in creating a system responsive to learner and community needs. The data also serve as a basis for the state to identify and share information concerning best practices among practitioners.
Program Improvement Process

Using data from WABERS+ and required program improvement training, providers evaluate their programs and implement needed changes to improve program effectiveness. Recognizing that program improvement is impacted by many factors, the Adult Education office supports the following activities:

- New Director Orientation – provides new directors with information and resources needed to administer their programs and follow all federal and state guidelines.
- New Teacher Orientation – provides information and resources to new teachers to support their instruction.
- CASAS Cadre – provides a network of trained professionals to ensure the uniform administration and reporting of assessments used for determining federal level gains.
- Learning Standards – provides a framework to assist and support instructors and students.
- EL Civics training – provides instructional strategies, resource sharing and best processes to enrich instruction in civics-related topics.
- Rendezvous – a biennial conference for adult education faculty where faculty can share successes, learn about new programs and initiatives and network.
- Team Teaching Training – helps instructors work together to build a seamless instructional experience for students.
- Contextualized Instruction Support – assists instructors in contextualizing information and lessons.
- Training in Data for Program Improvement (DPI) – assists providers in data analysis and determining which program areas are strong and which may need improvement.
- National Reporting System – provides training on the fundamentals of the NRS. Trainings cover topics that include monitoring, data collection and use, types of data and measures, assessments, data quality, and related information. It includes guidance on how to use NRS data to address an evaluation or research topic that will inform practice and improve programs.

Adult Education encourages and supports the use of research-based instructional strategies. Support provided includes assistance with professional development, record keeping, evaluation of instruction, links to other local partners, and additional support based on individual needs.

Monitoring and Financial Audits

The Adult Education office conducts an annual monitoring visit and financial audit of one third of Washington adult education programs.

Monitoring includes reconciliation of student and faculty data with the information retained by the local provider, review for compliance with required professional development activities, and review for compliance with adult education assurances, policies, and procedures.

The financial audits include a review of sample invoice records, verification of expenditures and a determination of compliance with allowable costs. The audit includes an examination of the
provider’s internal controls to determine whether proper accountability exists for the receipt and disbursement of funds and whether documentation and reporting are adequate to ensure proper accountability.

5.0 Performance Measures

Washington State has established a nationally recognized, comprehensive Student Achievement Initiative (SAI) and performance accountability system comprised of measures to assess the effectiveness of all eligible agencies in achieving continuous improvement in adult education and literacy activities. The Student Achievement Initiative measures levels of performance against the core indicators in the Workforce Investment Act and builds upon the Workforce Training and Education Coordinating Board Performance Management for Continuous Improvement (PMCI) system.

5.1 Eligible Agency Performance Measures

The primary core indicator for measuring the effectiveness of adult education programs is performance in increasing the basic skills and college and career readiness of participants during each program year.

Federal student functioning level criteria are defined in the Washington State Adult Learning Standards. These are aligned to the College and Career Readiness Standards which describe the basic skills adult learners need to know and be able to do at each Adult Education and English as a Second Language (ESL) level. (Washington State Adult Learning Standards.) Basic skills providers and Workforce Investment Act partners use CASAS as the instrument to standardize protocols for accurately and consistently measuring substantive gain within and completion of Educational Functioning Levels (EFLs).

Performance measures consist of the core performance indicators that at a minimum measure the following:

- Demonstrated improvement in or completion of EFLs in reading, writing, and speaking the English language, numeracy, problem solving, English language acquisition, and other literacy skills.
- Placement in, retention in, or completion of postsecondary education, training, unsubsidized employment or career advancement.
- Receipt of a secondary school diploma or its recognized equivalent.

Data is collected and reported through the Washington Adult Basic Education Reporting System (WABERS+). This provides valid, reliable, and consistent data for evaluating performance by all providers.

Upon entry into adult education and literacy programs, all basic skills adults participate in orientation and goal-setting and are screened with the CASAS appraisal exam. Students’ assessed entry levels are rarely the same for each discrete content area. For reporting purposes, each student’s entry competency level is her or his lowest EFL.
Local providers document initial placement, substantive gains, achievements and completions of basic skills EFLs using mandated standard assessment protocols defined in the Washington State Adult Basic Education Assessment Policy. Data on Follow-up Measures (SPLs) (HSD/HSE, entered postsecondary education/training, entered employment, and retained employment) as well as wage progression are obtained through data matching and will be available one year or more after an individual student’s actual participation in adult education and literacy programs.

The Washington State Legislature requires basic skills providers to calculate and report on a quarterly basis “significant and substantive gains” in basic skills EFLs demonstrated by all participants. Significant gains are defined as a 5 point gain on the CASAS for ADULT EDUCATION and ESL Levels 1-3 and a 3 point gain on the CASAS for ADULT EDUCATION and ESL Levels 4-6. Substantive gains are defined as completion of an EFL, completion of a contextualized learning project, and/or the attainment of skills associated with a subject area within an EFL.

Tentative Educational Functioning Levels (EFLs) and Follow-up Measures (SPLs) of performance targets for 2015-16 have been identified, but at the time of this plan’s submission they have not been finalized with OVAE. Levels of performance have been calculated using data provided by local basic skills providers for 2012-2013. (Diagram place holder below until new targets established.)

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Date Negotiated:

*OPTIONAL - If Available, Estimated Baseline for Follow-up Measures Using Cohorts (based on State's analysis of sample cohorts, cohorts from 2010-11 data, comparison of characteristics of cohort with goal-setting students, past performance adjusted according to analyses by other States, other method):*

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<td>4200</td>
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<td>4500</td>
<td>10%</td>
</tr>
<tr>
<td>Entered Postsecondary Ed/Training</td>
<td>5278</td>
<td>5978</td>
<td>6078</td>
<td>10%</td>
</tr>
</tbody>
</table>

State indicated participating in optional technical assistance offered through the NRS? **Yes, No**

* Provision of these data estimates is voluntary. However, States are encouraged to provide these estimates since they offer a reasonable justification for reaching agreement on projected targets for FY 2013-14, particularly if the proposed targets reflect lower projections compared to 2011-12 performance levels and current 2012-13 targets.
5.2 Optional – Additional Indicators

Moving students up in the world – Washington’s nationally renowned Student Achievement Initiative (SAI) rewards colleges and approved community-based organization (CBO) providers for moving all students further and faster in college and increasing student success. Providers earn a portion of their funding based on results, not just enrollments. Providers earn points and funding when students reach key academic momentum points, such as significant basic skills gains, attaining a high school diploma or equivalency certificate, finishing college-level math, completing the first year of college, or earning a degree or certificate. The goal is to propel students to and through the “tipping point” – the level of education that means the difference between struggling in a low-wage job and having a viable career.

Moving students past basic skills and into college – The new approach recognizes that students who have below high school level math, reading and English language skills have a more challenging educational journey. Under this approach, basic skills students who reach academic milestones will be awarded one point more than other students who reach the same levels.

How will momentum points be calculated?
Starting in the 2013-2014 school year, points will be awarded each time a college student reaches one of the following momentum points. Financial awards will be distributed in October of 2014.

*If the student reaching this momentum point started in basic skills, an additional point will be awarded.
6.0 Procedures for Funding Eligible Providers

6.1 Applications
The SBCTC will release a Request for Proposals for 2015-2019 Federal Workforce Investment Act Title II for Adult Basic Education and Literacy Services on March 5, 2014. Each eligible organization desiring a grant shall submit an application containing information and assurances such as the SBCTC may require, including:

1. A description of how funds awarded under AEFLA will be spent.
2. A description of cooperative arrangements the eligible provider has with other agencies, institutions, or organizations for the delivery of adult education and literacy activities.

SBCTC will spend no less than 95 percent of the fund for carrying out adult education and literacy activities, and the remaining amount will be used for planning, administration, personnel development and interagency coordination.

6.2 Eligible Providers
The following are eligible providers for grant funding:

1) Local education agency
2) Community-based organization with demonstrated effectiveness
3) Volunteer literacy organization with demonstrated effectiveness
4) Institution of higher education
5) Public or private nonprofit agency
6) Library
7) Public housing authority
8) Nonprofit institution that is not described in (1) through (7) and has the ability to provide literacy services to adults and families
9) Consortia of the agencies, organizations, institutions, libraries, or authorities described in 1 through 8.

6.3 Notice of Availability
SBCTC will announce the availability of funds through the internet via the SBCTC website.

6.4 Process
Those interested in applying for SBCTC Adult Basic Education Funding will be required to:

1. Submit a letter of intent by February 24, 2014
2. Access the SBCTC Online Grant Management System (OGMS) and develop a formal response to each section of the application (available March 5, 2014)
3. Submit fully completed applications electronically to the SBCTC through (OGMS) by April 15, 2014
4. Evaluation of Applications

5. Proposals will be reviewed by a team of experts from SBCTC and/or other organizations.

Review of proposals will be based on the completion of the requested information in the narrative as well as completion of required forms. Criteria for scoring proposals will be based on the following AEFLA requirements:

1. The degree to which the eligible provider will establish measurable goals;
2. The past effectiveness of an eligible provider in improving the literacy skills of adults and families and, after the 1-year period beginning with the adoption of an eligible agency’s performance measures under Sec. 212 of AEFLA, the success of an eligible provider receiving funding under this subtitle in meeting or exceeding such performance measures, especially with respect to those adults with lower levels of literacy;
3. The commitment of the eligible provider to serve individuals in the community most in need of literacy services, including individuals who are low-income or have minimal literacy skills;
4. Whether or not the program is of sufficient intensity and duration for participants to achieve substantial learning gains and uses research-based instructional practices, such as phonemic awareness, systematic phonics, fluency, and reading comprehension;
5. Whether the activities are built on a strong foundation of research and effective educational practice;
6. Whether the activities effectively employ advances in technology, as appropriate, including the use of computers and blended learning resources;
7. Whether the activities provide learning in real life contexts to ensure that an individual has the skills needed to compete in the workplace and exercise the rights and responsibilities of citizenship;
8. Whether the activities are staffed by well-trained instructors, counselors, and administrators;
9. Whether the activities coordinate with other available resources in the community, such as establishing strong links with elementary and secondary schools, postsecondary educational institutions, one-stop centers, job training programs, and social service agencies;
10. Whether the activities offer flexible schedules and support services (such as child care and transportation) as needed to enable all students, including individuals with disabilities or other special needs, to attend and complete programs;
11. Whether the activities maintain a high-quality information management system that has the capacity to report participant outcomes and to monitor program performance against the eligible agency performance measures; and
12. Whether the local communities have a demonstrated need for additional English literacy programs.

6.6 Special Rule
If SBCTC implements any rule or policy relating to the administration or operation of a program that imposes a requirement not demanded by Federal law, SBCTC shall identify the rule or policy as being imposed by SBCTC.

7.0 Public Participation and Comment

Broad public input for this plan was sought and evaluated under the active leadership of the state’s Adult Education Advisory Council (AEAC described in Section 3.1). This body was created by the legislature in state law in 1991, recognized by the U.S. Department of Education in 1997, and has members who are appointed by the state’s governor to represent key agency partners and sectors. The AEAC recommended this plan for the consideration of the state governor and for approval by the State Board for Community and Technical Colleges.

7.1 Description of Activities
Public input was gathered in three ways by staff of the Office of Adult Education and members of the Adult Education Advisory Council:

1. Review of key planning documents that included:
   - Washington Governor’s Draft Goals, Outcomes and Measures
   - State Board for Community and Technical Colleges System’s Direction and Mission Study
   - Workforce Training and Education Coordinating Board’s (State WIB) Ten Year Plan
   - Current and past adult education plans from Washington and other states, primarily those engaged in the Accelerating Opportunity initiative supported by the Gates Foundation to expand I-BEST

2. Fourteen public forums and focus groups targeted specific constituents and the general public. The gatherings were announced through adult education and AEAC contacts and on the SBCTC website. These gatherings focused on four key areas:
   - Key roles for adult learners as they complete their education,
   - Skills required to carry out those roles,
   - Support and contributions needed to ensure learner success
   - Indicators and evidence of program effectiveness
   - Forums targeted:
o Adult Education administrators, directors, staff and volunteers
o Adult Education Advisory Council
o Adult Education instructors and tutors
o Adult learners
o Association for Washington Business (employers)
  o Washington State Labor Council, American Federation of Teachers, Washington Education Association
o Agency leaders and partners (see Section 3.1)
o The public

3. On-line stakeholder surveys targeted the same specific groups and the general public and were announced through adult education and AEAC contacts and on the SBCTC website. The survey instrument mirrored the four key questions discussed in the public forum.

7.2 Review by Governor

TBD
8.1 Strategies
The Governor-appointed Adult Education Advisory Council works to ensure the availability and quality of adult literacy and basic skills services across Washington State, by supporting, improving and expanding partnerships and coordination among the state’s adult literacy and basic skills stakeholders, providers and external partners at every level.

All publicly funded agencies that provide or refer students to adult basic education in Washington State use the CASAS assessment. This streamlines service delivery and facilitates successful partnerships. These agencies, including the Washington State Board for Community & Technical Colleges, the Department of Social and Health Services, the Employment Security Department, and the Washington State Department of Corrections, all have membership on the Adult Education Advisory Council.

Integrated, contextualized instruction combined with well-defined pathways to college and career readiness form the basis of all new initiatives designed to accelerate student learning. Building upon the proven success of the Professional Technical I-BEST programs (Integrated Basic Education and Skills Training) in moving students rapidly towards credentials that will allow them to earn a family-wage job, the Washington State Board for Community & Technical Colleges has helped funded providers develop On-Ramps to I-BEST, Developmental I-BEST, and Academic I-BEST. Each of these models relies upon the practices of team teaching, contextualized, integrated instruction, and integration of technology. These practices are essential to the original Professional/Technical I-BEST model.

The following are examples of successful program strategies for special populations:

- **Low-income adult learners who are educationally disadvantaged**
  - Washington educational services to low-income learners and those on public assistance are supported through a partnership with the Department of Social and Health Services and other publicly funded agencies. WorkFirst, Washington’s TANF
Program, provides referrals and wrap-around services to students on public assistance.

- High School 21+ is a new program that allows students over the age of 21 to earn a high school diploma while enrolled in ADULT EDUCATION. Basic skills are contextualized in the academic subject matter necessary for high school graduation in Washington.

- **Individuals with Disabilities**
  - Renton Technical College (RTC) has provided training and assistance to the Community and Technical College system in Washington in implementing Universal Design as a proven strategy for helping all students, including those with learning disabilities. In late 2002, RTC received a three-year grant from the Department of Education to help provide support to students with undiagnosed learning disabilities. In 2005, an additional three years were granted to expand project activities to include help to all students with disabilities and to other community and technical colleges in Washington State. According to an independent evaluator, the project was successful in increasing the completion rate of all students over the course of the grant, with the greatest increases shown for students with disabilities in UDL classrooms.
  - Instructors in these classrooms have implemented teaching strategies, including assistive technologies and e-learning, which have been shown to be effective in helping students with learning disabilities. Using the UDL paradigm, these strategies are offered to the entire class from the beginning of the quarter, not only those with diagnosed disabilities.
  - In July, 2011, the ADULT EDUCATION Office of the State Board for Community and Technical Colleges brought national trainers to the state to train 22 individuals from 12 colleges in Learning to Achieve, a project supported by LINCS, which is consistent with the principles of universal design.
  - All community and technical colleges in the Washington system maintain disabilities support services which ensure that all students with documented disabilities receive appropriate accommodations.

- **Limited English Proficient**
  - Project I-DEA (Integrated Digital English Acceleration) is a three-year pilot project supported by the Gates Foundation that will develop innovative instruction for ESL learners in the three lowest levels. I-DEA integrates the best practices of I-BEST, an information literacy approach, and the flipped classroom model. At least 50% of the instruction will be on-line and include opportunities for self-directed learning.
  - Ten partnerships of colleges and CBOs will develop instructional innovations in the first year. These will be joined by 10 additional learning hubs that will help to refine and replicate resources in the second year. In the third year the remaining 14 college-
CBO partnerships will participate, leveraging the entire system. Instructors and technology coaches will be trained to use a suite of online tools as they create and refine online learning modules based on I-BEST’s core components.

- **Criminal Offenders in Correctional Institutions**
  - The Department of Corrections contracts with community and technical colleges to provide basic skills and job training at each of the state’s 12 adult prisons, with the goal of making inmates more likely to obtain viable jobs and thus less likely to return to prison.
  - The average offender entering a Washington state prison scores at an eighth-grade level or lower in basic literacy skills. Roughly half are unemployed, and nearly a quarter lack a verified high school diploma or general education degree (GED).
  - During this past year, nearly 9,500 incarcerated offenders participated in educational opportunities offered by Washington state community and technical colleges.
  - In 2011-12, the Integrated Basic Education and Skills Training (I-BEST) model was piloted in the Specialty Baking program at Clallam Bay Corrections Center. In 2012-13, four more professional-technical I-BEST programs were added.
• **Single Parents and Displaced Homemakers**
  
o Washington State utilizes several funding opportunities to help mitigate the barriers to participation for single parents and displaced homemakers.
  
o The Basic Food, Employment and Training program (BFE&T) provides access and services to food stamp recipients in Washington State. Services include job search and job search training, education and skills training, and support services to Basic Food recipients not participating in the state’s Temporary Assistance for Needy Families (TANF) program.
  
o The Opportunity Grant helps low-income students in Washington State train for high-wage, high-demand careers. Adult basic skills students participating in I-BEST classes are eligible for Opportunity Grants.

As part of the comprehensive college and career pathways initiative, all adult education students benefit from the system-wide Reading Apprenticeship training for faculty. Reading Apprenticeship trainings are supported by adult education leadership funds and provide basic skills and I-BEST faculty with the skills to improve student reading comprehension in content areas through the use of *WestEd's Reading Apprenticeship® (RA)*. *WestEd's Reading Apprenticeship®* is a research-based framework for content area literacy instruction. RA is used to empower students to become skilled readers and improve their reading comprehension skills, particularly in content/program-related areas.

### 9.0 Integration with Other Adult Education and Training Activities

#### 9.1 Description of Planned Integrated Activities

Adult education and literacy activities are integrated with other education, training, and employment programs at the state and local levels. At the state level, the governor-appointed Adult Education Advisory Council (AEAC) is charged with improving partnerships, collaboration and coordination at every level. Membership in the AEAC includes representatives from the Adult Basic Education Office of the State Board for Community and Technical Colleges, higher education, adult education, community based organizations, private sector employers, private literacy organizations, economic development councils, library programs, labor programs, corrections education, and the general public.

The Workforce Education Council (WEC) consists of the chief workforce education officer from each of the 34 community and technical colleges in Washington State. The WEC is a subsidiary of the Instruction Commission (IC) and the Washington Association of Community and Technical Colleges.

The council membership meets once each quarter at one of the colleges and, in collaboration with representatives of the State Board for Community and Technical Colleges, organized labor
and the Association of Washington Businesses, explores and develops initiatives to improve access to workforce training, to boost local economic development and to expand the services for dislocated workers in the state.

The Washington State Instruction Commission for Community and Technical Colleges (IC) exists to enhance instruction and library/media services within the community and technical colleges of the State. The Instruction Commission is directly responsible to the Washington Association of Community and Technical Colleges presidents (WACTC) through a liaison appointed by the president of WACTC. The liaison serves as the primary communication link between the Commission and WACTC. The IC also forms a communication link between the following councils, all of which send representatives to the IC: the Council for Basic Skills, the Articulation and Transfer Council, the Continuing Education Council, the eLearning Council, the Library Media Directors Council, and the Workforce Education Council.

The BFE&T program, offered through the Department of Agriculture, is a source of funds for state and local agencies. Customarily, states administer the process through a designated BFE&T administrative agency. In our state, the Department of Health and Human Services (DSHS) is the designated agency. In 2013, the BFE&T program expanded to include participation by all 34 community and technical colleges in Washington State.

10.0 Description of Steps to Ensure Direct and Equitable Access

10.1 Description of Steps
Washington Adult Education ensures direct and equitable access for all eligible providers seeking to apply for grants or funds to deliver adult education services. Also, Washington Adult Education will circulate a request for proposal (RFP) notice and application for funds to all current providers. Information will also be available on the Washington Adult Education Website.

10.2 Notice of Availability
Washington Adult Education will use the steps outlined in Section 6 to publicize opportunities for funding and ensure direct and equitable access for eligible providers. Upon request, Washington Adult Education will provide necessary information to any eligible agency.
11.0 Programs for Corrections Education and other Institutionalized Individuals

11.1 Types of Programs
Funds made available under Sec. 222(a)(1) of the Adult Education and Family Literacy Act may be used to carry out corrections education or education for other institutionalized individuals, and may include academic programs. No more than 10 percent of federal funds allocated to an eligible provider will be used for these activities. Funds may be used for the cost of educational programs for criminal offenders in correctional institutions and for other institutionalized individuals, including academic programs for:

1. Basic education;
2. Special education programs as determined by the eligible agency and the correctional facility or other institution;
3. English literacy programs; and
4. I-BEST programs.

These programs must provide the same rigor as those offered in a non-institutional setting as described in Section 3.1. It is essential that programs offered by eligible providers in correctional facilities be part of the college and career pathways that allow offenders to seamlessly transfer to providers in the community once released.

11.2 Priorities
Eligible providers will ensure that programs for criminal offenders in a correctional institution will give priority to incarcerated individuals in the following order:

1. Individuals who are under the age of 22 have not obtained a high school diploma or high school equivalency certificate and who are likely to leave the correctional institution within four years of enrolling in the program.
2. Individuals who are over the age of 22 have not obtained a high school diploma or high school equivalency certificate and who are likely to leave the correctional institution within four years of enrolling in the program.
3. Individuals with a high school diploma or a high school equivalency certificate who are in need of adult basic education and who are likely to leave the correctional institution within four years of enrolling in the program.
4. Individuals in need of adult basic education who are likely to stay in the correctional institution for more than 4 years of enrolling in the program.

11.3 Types of Institutional Settings
Correctional institution means any
1. Prison
2. Jail
3. Detention center
4. Work Release Center or similar institution designed for the confinement or rehabilitation of criminal offenders

12.0 Description of Proposed State Leadership Activities

12.1 Description of Activities

1. The establishment or operation of professional development programs to improve the quality of instruction provided pursuant to local activities required under Section 231 (b), including instruction incorporating phonemic awareness, systematic phonics, fluency, and reading comprehension and instruction provided by volunteers or by personnel of a state or outlying area. All leadership activities are aligned to the Office of Adult Education’s State plan, Strategic Issues, and Goals.

a. SBCTC-Adult Education has an extensive range of opportunities for program development for all Adult Education funded programs to improve the quality of instruction.

i. Over a period of 10 years, Adult Education has provided professional development for faculty and staff on developing and delivering lessons and curricula based on the Washington Adult Learning Standards.

ii. New workshops incorporate training on the shifts defined in the College and Career Readiness Standards and on contextualizing and integrating instruction in classroom lessons.

iii. Team-teaching workshops clarify for instructors the steps to develop combined course outcomes and to develop integrated lessons in the context of both Adult Education and academic or vocational subject matter.

b. Every two years, Adult Education sponsors a state-wide conference, Rendezvous. Faculty and staff present creative and innovative research-based practices that they have implemented in their programs.

c. Two online courses (New Teacher Orientation and Learning Standards 101) offer instructors new to Adult Education the grounding to understand the system and to build their instruction based on current practices.

d. SBCTC-Adult Education built and maintains a database to track participation in all trainings, meetings, and other activities.

2. Provision of program improvement and support to eligible providers of adult education and literacy activities:

a. According to the plan set forth in the Data Quality Checklist, Adult Education has long supported ongoing local program improvement through workshops where provider teams read and analyze data, develop a question based on the data, explore
the question, and create and implement a solution to the question raised. At the end of
the project cycle, each program shares the project results.

3. Provision of technology assistance, including staff training, to eligible providers of adult
education and literacy activities to enable the eligible providers to improve the quality of
such activities:
   a. Adult Education works collaboratively with SBCTC-eLearning to provide all faculty
      full access to technologies on campuses that include the Canvas LMS, Collaborate
      and Tegrity. Faculty are encouraged to incorporate these and other technologies in
      class and in out-of-class activities for students.
   b. SBCTC provides all funded providers options for online learning to enhance
      technology skills.
   c. Funded providers are eligible to apply for grants that support local staff participation
      in mandatory leadership trainings, request funds to support participation in other state
      and national trainings, and to create innovative program improvement projects that
      i. **Increase Student Progression** by providing opportunities for students to
         move further and faster through the continuum of basics skills and college
         and career readiness pathways.
      ii. **Improve Transition** by offering opportunities for students to progress
         into college level training and be prepared to attain Tipping Point levels of
         skills and knowledge.
      iii. **Engage Communities** through outreach efforts to stakeholders and
         potential students to increase participation in and support for adult basic
         education.
      iv. **Support Innovations** that present opportunities for students to move
         further and faster along their educational pathway.

4. Support of state or regional networks of literacy resource centers:
   a. Adult Education is an active partner in the Western LINCS and staff participate in
      Regional Partner meetings. On an ongoing basis, staff monitor and participate in
      LINCS Community forums.

5. Monitoring and evaluation of quality and improvement in adult education and literacy
   activities:
   a. SBCTC staff conduct on-site reviews of approximately one-third of funded programs
      to identify strengths and/or weaknesses and to provide technical assistance
      appropriate to increase program effectiveness and program compliance with federal
      and state requirements.
   b. SBCTC staff are available for targeted technical assistance. This assistance may be
      requested by a provider in the form of training, a site visit, or other type of support.
The assistance may also be initiated by SBCTC staff based on a review of data or other factors.

c. In support of federal requirements, leadership funds promote high data quality, professional development on NRS Data Monitoring, the Washington Adult Basic Education and Reporting System (WABERS+), and the standardized assessment testing tool (CASAS). Funds also support ongoing Using Data for Program Improvement workshops where provider teams develop and implement plans that improve service to students by increasing student progression, transition, retention, etc.

d. Adult Education staff deliver workshops on topics that increase the quality of data collected and reported on adult students. These include training on NRS, WABERS+, and CASAS.

6. Incentives for program coordination and integration and performance awards:
   a. Adult Education is an active partner in the Student Achievement Initiative adopted in 2006 by the State Board for Community and Technical Colleges. This initiative provides funding directly to colleges for achievement measures. These measures of student achievement are based on national research as well as the Tipping Point research done in Washington State.

7. Developing and disseminating curricula, including curricula incorporating phonemic awareness, systematic phonics, and fluency and reading comprehension:
   a. Building on 10 years of implementation work with the WA Adult Learning Standards, Adult Education now offers training on contextualized and integrated instruction. A resource Website is available to faculty, and it will provide continuous resources and updates, as well as a place for faculty to share curriculum and ideas.

8. Additional significant statewide leadership activities:
   a. Participation in Washington State Adult Learning Standards and College and Career Readiness Standards cadre trainings
   b. Contextualization implementation workshops
   c. Training in messaging adult education to all stakeholders and funders.

9. Coordination with existing support services, such as transportation, childcare, and other assistance designed to increase rates of enrollment in, and successful completion of, adult education and literacy programs.

10. Integration of adult education instruction and occupational skill training and promoting linkages with employers.
    a. Comprehensive I-BEST Pathway.

11. Pathway linkages with postsecondary educational institutions.
12.2 Description of Joint Planning and Coordination for Unified Plan Only

Description of Joint Planning and Coordination for Unified Plan Only is not applicable.

12.3 Description of Activities under Section 427 of the General Education Provisions Act (GEPA)

Washington’s SBCTC Office of Adult Education ensures equal opportunities to participate for all eligible students, teachers, and other program beneficiaries in any project or activity carried out under the applicable program, such as adult basic education, and promotes the ability of such students, teachers, and beneficiaries to meet high standards.

The office also ensures equitable access to, and participation in, all projects and activities conducted with federal adult education funds. Programs addresses the special needs of students, teachers and other program beneficiaries to overcome barriers to programming and participation, including those based on gender, race, color, national origin, disability, and age.

The office ensures that local providers give equal access to, and equitable participation in, all such projects and activities through the monitoring and technical assistance process and follow the laws required of the Equal Opportunity Hiring Act and the Americans with Disabilities Act.

12.4 One-Stop Participation

Washington State’s Adult Education Advisory Committee provides guidance in the development of system one-stop operations to provide the following core services:

- Use of CASAS as the state-wide assessment for Educational Functioning Level (EFL and educational gain
- Providing Adult Education and ESL instruction to clients in need of retraining
- Providing high school equivalency or HSC preparation for clients in need of retraining
- Providing all educational services for WorkFirst clients.
- Providing navigational and support services to adult education students

In collaboration with the local Workforce Development Councils, local providers work together to provide literacy services to adult learners, parents, and their children. Staff from one-stop centers and/or partnering agencies, along with community college
and community based organization providers, have been cross trained in CASAS assessment and data collection to provide targeted support for Washington’s college and career readiness pathways.

Programs across the state, in collaboration with local WDCs and the SBCTC Workforce Division, are piloting the Start Next Quarter initiative to connect current and potential students with services and programs in Washington State. This is a free online eligibility screener for employment and training programs at participating agencies and community colleges. Eligible students may then apply for funding and learn the steps to start a training program.

In partnership with the Workforce Education and Training Coordinating Board (WTECB) and Washington Workforce Association (WWA), SBCTC collaborated to create the I-BEST Program Options website. This interactive online tool provides partners from the workforce development system, including WorkSource, Labor and Industry, WorkFirst and others with accurate I-BEST program information that can be accessed quickly and easily. This allows all agencies and systems to work together more effectively to create education/employment plans for shared clients and to coordinate resources that result in the skilled workers that Washington employers need. At the same time, the site addresses the needs of college and CBO staff such as advisors, faculty, volunteers, program directors, SBCTC staff, and students in locating I-BEST programs being offered across the state.

This tool provides real-time information about what types of I-BEST programs are being offered on each college campus and provides a contact name, phone number and email for further inquiries. It also indicates when a student can enroll in an I-BEST program and links directly to the college’s Web page. Students and agency partners can search for I-BEST programs by institution, career pathway, program name, county, or quarter the program will be offered.

The power of this tool leverages results from two perspectives:

1. **Within the system** – Provides the ability to engage potential students, advisors, instructors, etc. in order to guide students into the programs that address their needs and goals, keep programs vital, and fulfill the college’s role to meet the dual demands of employers and soon-to-be skilled workers.
2. **Outside the system** – Provide partners from the Workforce Development System, the WorkSource System, Labor and Industry, WorkFirst and others with accurate information that can be accessed quickly and easily and allows them both to create specific education/employment plans for their clients and to access the required funding that allows clients to become I-BEST participants and skilled workers.

The *I-BEST Program Options* tool was created at the request of the Workforce Board and the Workforce Development Council Directors, with a commitment to refer and co-enroll students, and support this effort. This innovation has laid the foundation to address one of the biggest hurdles to I-BEST participation – funding for tuition, supplies, etc.

As the options tool was fully implemented in 2013, the State Board staff worked with all partners to fully acquaint them with the benefits of the site and refresh their enthusiasm for keeping this commitment.
Appendix A – Eligible Agency Certifications and Assurances

FY15 Master Grant Assurances and Certifications
TBD
United States Department of Education
Office of Vocational and Adult Education

The Adult Education and Family Literacy Act
Enacted August 7, 1998 as Title II of the
Workforce Investment Act of 1998 (Public Law 105-220)

The Washington State Board for Community and Technical Colleges (State Agency) of the State of Washington hereby submits its revised State plan extension to be effective until June 30, 2014. The eligible agency also assures that this plan, which serves as an agreement between State and Federal Governments under the Adult Education and Family Literacy Act, will be administered in accordance with applicable Federal laws and regulations, including the following certifications and assurances.

Certifications

Education Department General
Administrative Regulations
(34 CFR Part 76.104)

1. The plan is submitted by the State agency that is eligible to submit the plan.

2. The State agency has authority under State law to perform the functions of the State under the program.

3. The State legally may carry out each provision of the plan.

4. All provisions of the plan are consistent with State law.

5. A State officer, specified by title in the certification, has authority under State law to receive, hold, and disburse Federal funds made available under the plan.

6. The State officer who submits the plan, specified by the title in the certification, has authority to submit the plan.

7. The agency that submits the plan, specified by the title in the certification, has authority to submit the plan.

8. The plan is the basis for State operation and administration of the program.
ASSURANCES
WORKFORCE INVESTMENT ACT OF 1998
(Public Law 105-220)

Section 224 (b) (5), (6), and (8)

1. The eligible agency will award not less than one grant to an eligible provider who offers flexible
schedules and necessary support services (such as child care and transportation) to enable
individuals, including individuals with disabilities, or individuals with other special needs, to
take part in adult education and literacy activities, which eligible provider shall attempt to
coordinate with support services that are not provided under this subtitle prior to using funds for
adult education and literacy activities provided under this subtitle for support services.

2. Funds received under this subtitle will not be expended for any purpose other than for activities
under this subtitle.

3. The eligible agency will expend the funds under this subtitle in a manner consistent with fiscal
requirements in Section 241.

Section 241 Administrative Provisions

(a) Supplement Not Supplant.—Funds made available for adult education and literacy activities
under this subtitle shall supplement and not supplant other State or local public funds expended
for adult education and literacy activities.

(b) Maintenance of Effort.—
(1) In General.—
(A) Determination.—An eligible agency may receive funds under this subtitle for any
fiscal year if the Secretary finds that the fiscal effort per student or the aggregate
expenditures of such eligible agency for adult education and literacy activities, in the
second preceding fiscal year, was not less than 90 percent of the fiscal effort per
student or the aggregate expenditures of such eligible agency for adult education and
literacy activities, in the third preceding fiscal year.
(B) Proportionate reduction.—Subject to paragraphs (2), (3), and (4), for any fiscal year
with respect to which the Secretary determines under subparagraph (A) that the fiscal
effort or the aggregate expenditures of an eligible agency for the preceding program
year were less than such effort or expenditures for the second preceding program
year, the Secretary—

(i) shall determine the percentage decreases in such effort or in such
expenditures; and

(ii) shall decrease the payment made under this subtitle for such program year to
the agency for adult education and literacy activities by the lesser of such
percentages.

(2) Computation.—In computing the fiscal effort and aggregate expenditures under
paragraph (1), the Secretary shall exclude capital expenditures and special one-time
project costs.
(1) Decrease in federal support.—If the amount made available for adult education and literacy activities under this subtitle for a fiscal year is less than the amount made available for adult education and literacy activities under this subtitle for the preceding fiscal year, then the fiscal effort per student and the aggregate expenditures of an eligible agency required in order to avoid a reduction under paragraph (1)(B) shall be decreased by the same percentage as the percentage decrease in the amount so made available.

(2) Waiver.—The Secretary may waive the requirements of this subsection for 1 fiscal year only, if the Secretary determines that a waiver would be equitable due to exceptional or uncontrollable circumstances, such as a natural disaster or an unforeseen and precipitous decline in the financial resources of the State or outlying area of the eligible agency. If the Secretary grants a waiver under the preceding sentence for a fiscal year, the level of effort required under paragraph (1) shall not be reduced in the subsequent fiscal year because of the waiver.
CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* APPLICANT’S ORGANIZATION

Washington State Board for Community and Technical Colleges

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: Mr. * First Name: Marty * Middle Name: 
* Last Name: Brown * Suffix: 
* Title: Executive Director

* SIGNATURE: [Signature] * DATE: [Date]
ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

Note: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management, and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM’s Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §290dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply, as applicable, with the provisions of the Hatch Act (5 U.S.C. §1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).

12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1721 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.


14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, Audits of States, Local Governments, and Non-Profit Organizations.

18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

**Signature of Authorized Certifying Official**

**Title**

Executive Director

**Applicant Organization**

Washington State Board for Community and Technical Colleges

**Date Submitted**

Standard Form 424B (Rev. 7-97) Back
**SF 424 Core Form**

### Application for Federal Assistance SF-424

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5a. Federal Entity Identifier: *5b. Federal Award Identifier:*

**State Use Only:**

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## Application for Federal Assistance SF-424

9. **Type of Applicant 1: Select Applicant Type:**
   - State Government

   Type of Applicant 2: Select Applicant Type:

   Type of Applicant 3: Select Applicant Type:

   *Other (Specify)

*10 Name of Federal Agency:

**U.S. Department of Education, Office of Vocational and Adult Education**

11. **Catalog of Federal Domestic Assistance Number:**

   84.002

   CFDA Title:
   - Adult Education – Basic Grants to States

*12 Funding Opportunity Number:

**Not Applicable**

*Title:

**2013-2014 Revised State Plan under the Adult Education and Family Literacy Act**

13. **Competition Identification Number:**

   **Not Applicable**

   **Title:**

   **Not Applicable**

14. **Areas Affected by Project (Cities, Counties, States, etc.):**

15. **Descriptive Title of Applicant’s Project:**

   **WIA Title II, AFLA, Washington State Plan for Adult Basic Education**

---

Attach supporting documents as specified in agency instructions.
Application for Federal Assistance SF-424

16. Congressional Districts Of:
   *a. Applicant: WA - all                       *b. Program/Project: WA - all

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:
   *a. Start Date: July 1, 2013                *b. End Date: September 30, 2014

18. Estimated Funding ($):
   *a. Federal  _______________________________  9,574,316 Est.
   *b. Applicant ________________________________
   *c. State ________________________________  43,049,423 Est.
   *d. Local ________________________________
   *e. Other ________________________________
   *f. Program Income __________________________
   *g. TOTAL ________________________________  52,623,739 Est.

19. Is Application Subject to Review By State Under Executive Order 12372 Process?
   a. This application was made available to the State under the Executive Order 12372 Process for review on ______
   b. Program is subject to E.O. 12372 but has not been selected by the State for review.
   ☒ c. Program is not covered by E.O. 12372.

20. Is the Applicant Delinquent On Any Federal Debt? (If “Yes,” provide explanation in attachment.)
   ☐ Yes    ☒ No

   If “Yes”, provide explanation and attach.

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U. S. Code, Title 218, Section 1001)

   ☒ ** I AGREE

   ** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:                      Mr.  *First Name: Marty
Middle Name: __________________________
*Last Name: Brown
Suffix: __________________________

*Title: Executive Director

*Telephone Number: 360-704-4309  Fax Number:

*Email: mbrown@sbctc.edu

*Signature of Authorized Representative:  __________________________  *Date Signed: 3/20/13
Adult basic education and literacy programs are an integral part of Washington’s education and workforce system. The Office of Adult Basic Education (ABE), part of the State Board for Community and Technical Colleges (SBCTC), administers federal and state Adult Education and Literacy funds to local providers, and provides program development training and activities in order to assure quality basic skills services for all students across the State. The purpose of the Adult Basic Education Program is to assist adults in obtaining the knowledge and skills necessary for work, further education, family self-sufficiency, and community involvement.

A range of instructional services are available to adults, 16 years of age and older, with academic skills below the high school completion level or in need of increased English language skills in order to succeed in their communities. Adult basic education develops skills in reading, writing, math, speaking/listening in English, GED and Adult High School preparation, and basic computer literacy. Washington’s nationally recognized and highly innovative I-BEST programs allow ABE students to transition quickly into certificate and degree programs so they are able to secure living wage positions in the workforce and access higher levels of education.

**Basic Education Program Requirements**

Program policies and guidelines, as well as valuable resources for adult educators in Washington are included on this page.

**Washington State Learning Standards**

The Washington State Adult Learning Standards are used to:

- Provide a common language that defines educational success for students, teachers, partners, funders, and others
- Design local curricula, course outlines, and lesson plans
- Engage departments in planning for outcomes and alignment between levels
- Communicate to students the skills and strategies taught and performance expected in any particular class
- Facilitate student goal-setting
- Assess student progress
- Encourage faculty professional development and collegial dialog
- Articulate with other educational partners (i.e. WorkFirst, vocational/technical programs) and help students transition (i.e. to college classes, vocational training)

**I-BEST Resources web-page**

**Grant Funding web-page**
Compensation Background

Brief Description
At the Trustees conference in Anacortes, during the dinner with the Executive Boards of the State Board, WACTC and TASCTC, the groups identified compensation improvement as a priority. The Presidents initiated a compensation study to explore policy and funding options and to update salary data developed as part of the 2007-08 system salary study. Improving salaries has also been identified as a Mission Study recommendation and a State Board policy focus for 2013-14. This presentation provides foundational information on salary governance and administration, allowing State Board members to better understand policy and funding options that may be considered as the 2015-17 system budget request is developed and acted upon.

Background Information and Analysis
A competitive salary helps colleges compete for the talented faculty and staff needed to ensure student progress and success. Although employee salaries are administered locally, the State Board adopts budget requests that include salary increase proposals. Additionally, the State Board interests include:

- Facilitating college competitiveness in the talent marketplace to ensure student success and effective management of college resources;
- Coordinating system positions on issues to improve system effectiveness with the Legislature;
- Allocation of funds, including salary increase dollars, in an equitable manner; and,
- Coordinating and facilitating development of positions on overarching policies having statewide impact on the system, its constituencies and students.

Awareness of the various employee types working in the CTC system and understanding the structures affecting salary governance and administration is key to identifying a path forward. The attached PowerPoint presentation (Attachment A) provides a brief description of each employee group and the regulations or process governing salaries.

As noted above, constituent stakeholders studied and reached agreement on salary increase targets in 2007-2008. A one-page summary of the Taskforce’s findings and recommendations is attached (Attachment B). Although agreement was reached on the targets, the Taskforce did not reach consensus on how to fund salary increases. However, the system developed, proposed and advocated for a $99.7 million 2009-11 budget request as an initial payment to:

- Provide faculty increments;
- Reduce the pay gap between faculty and exempt employees and their peer state counterparts;
- Align exempt staff salary increases with COLA driven increases provided to faculty;
- Continue efforts to reduce the salary gap between full- and part-time faculty; and,
- Convert 102 part-time faculty FTE to full-time faculty positions.

The recession deepened and funding was not received at that time nor was it received in the 2011-13 biennium, when the request was renewed.
The debate on how those targets should be funded continues and has grown more complex as budget cuts and tuition increases have shifted the cost of operating colleges from the state to students. Represented employee groups are aware of this shift in college financing and are expressing interest in accessing tuition collections to fund increases. Legislation has been introduced that would expand faculty bargaining authority to allow bargaining partners to exceed salary increase funding set by the Legislature. Supporters argue that faculty should have the same bargaining rights as other employee groups; the Legislature has not provided the funding needed to offer competitive salaries; and that, with greater reliance on tuition increases, colleges have funds to provide salary increases. While supportive of increasing faculty salaries, college representatives have not been supportive of expanding faculty bargaining, voicing concerns about shifting salary increase costs from the Legislature to students, potentially divisive negotiations and the potential for inequity between college districts.

Questions regarding funding options and their policy implications are explored below.

**Potential Questions**

Through application of the methodology developed by the 2007-08 Salary Taskforce, potential salary targets will primarily be data driven and designed to ensure colleges are nationally competitive for talent. However, as implied above, the more complicated questions for this study revolve around funding options and their policy implications. These questions include:

- **How should salary increases be funded?** The following possible options represent choices along a continuum – from status quo to full authority to manage salaries locally. Although the policy implications of each choice vary, the choices are not mutually exclusive.
  - Status quo: Continue to rely upon Legislative decision-making on salary increase funding.
  - Legislature sets aside a proportion of new funding for salary increases. For example, the Legislature provides a four percent salary increase and allows or requires one percent of the tuition generated funds to be used for salary increases.
  - Limited expansion of authority. Limit trustee authority to increase salaries for a specific purpose (i.e., promotions, retention, increments); to new funds; and/or to one-time, “bonus” type increases.
  - Provide authority to allow colleges to provide increases beyond those authorized and/or funded by the Legislature.

- **Does the delegation of salary increase authority from the Legislature to trustees affect collective bargaining?**
  - Is the addition of salary increase bargaining a big enough change to require a phased implementation? (i.e., When the civil service employees were given expanded bargaining rights, the Legislature provided a three-year implementation process that allowed agreements bargained under the “old” authority to expire and be replaced with agreements bargained under the “new” authority.) Should faculty job security (tenure) and other traditionally bargained issues be moved from statute to the bargaining table?
  - Should the bargaining model provided to civil service employees be offered (option to bargain centrally and submit proposals to the Governor’s Office and the Legislature for approval), or should the model applied to the universities (locally-funded increases tracked separately and not affect future state appropriations)?
Will expanded local bargaining lead to more employee or employer job actions (strikes or lockouts)? If this is a potential outcome of expanded bargaining, should it affect decision-making on this issue or is it “the cost of doing business?”

- What does “equity” mean within the context of salary increase decisions affecting different employee groups, governed by different laws and agreements?
  - If “equity” means “same,” how is salary increase equity achieved when decisions are made by different bargaining partners at approximately 50 different bargaining tables?
  - If equity is an overriding value, should salary decisions and bargaining be centralized to ensure consistency?
  - While equity within and between colleges and employee groups may be an important consideration, should it drive future actions? Or, should decision makers continue to recognize the value of local decision making and understand that contextual differences will drive differing results between colleges and between employee groups?
  - How will system and state efforts to pay part-time faculty “equal-pay-for-equal-work” be affected by local decision makers?
  - If colleges have disparate abilities to raise local revenue (tuition collections), how will equity in salary increases be achieved or maintained?
  - Should “equity” include consideration of cost-of-living differences across the state and/or the “market” for certain skills?

As implied above, there are likely more questions that will be important to consider as discussions continue.

**Recommendation/Preferred Result**

Board members will have foundational understanding of the data and structural elements that may be considered and/or affected as a salary increase operating budget item is developed and proposed. Board members will also be aware of the policy implications of some of the salary increase funding choices.

Board members will receive regular updates on the work by the presidents.

**Attachment C** is the draft Problem Statement and plan for moving forward with this year’s WACTC’s compensation study. This is a preliminary draft, is still being developed by WACTC Critical Issues Committee, and has not been fully reviewed, discussed and adopted by WACTC members.

Policy Manual Change Yes ☒ No ☐

Prepared by: John Boesenberg, Deputy Executive Director for Human Resources
360.704.4303, jboesenberg@sbctc.edu.
Compensation Study
Employee Categories & Governance
This presentation provides limited contextual data and information on state laws and regulations governing employee salaries.
Governance - Overview

- State laws delineate authority and limitations to set and adjust employee salaries.

- While these laws may be found in various places (state constitution, state statutes (RCW), state administrative law (WAC), they work together to provide authority & limitations.

- Each sector of government (general govt., K-12, University and CTCs) is governed by separate statutes – resulting in differing authorities and differing treatment of employees by category.

- Attorney General Opinions (formal/informal) and SBCTC allocation decisions impact application of the regulations.
Overview

- Teaching and learning are “people-centric” functions, requiring highly qualified and dedicated faculty and staff to ensure student success.

- Meeting student demand, expectations and learning styles will become ever more challenging as Washington’s population continues to grow and become more diverse – creating a premium on the attraction and retention of highly qualified employees.

Who are those employees and how is their employment governed?
FY 2012 Salary Expenditures as a Percent of Total Expenditures (State Only)
Employee Categories

• Faculty – Full-Time, Part-time
• Civil Service Classified – Represented/Non-Represented
• Technical College Classified – Represented/Non-Represented
• Administrative – Executive, Manager, Professional/Represented, Non-Represented
Fall 2012 Type of Employee as % of Total (State Supported Only)

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<td>Civil</td>
</tr>
<tr>
<td>Counselors</td>
<td>Profe</td>
<td>Service</td>
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<tr>
<td>Librarians</td>
<td>Technical</td>
<td>College</td>
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- **Headcount**
  - Academic Employee: 9,123 (62%)
  - Exempt: 1,957 (13%)
  - Classified: 3,605 (25%)

- **FTES**
  - Academic Employee: 6,845 (57%)
  - Exempt: 1,834 (15%)
  - Classified: 3,404 (28%)
Faculty

• Full-time or part-time as determined through college funding and student need.

• All faculty are represented: AFT at 19 Districts; WEA at 11 districts.

• Most working conditions are locally bargained; however, some are in statute (tenure, leave).

• Salary structures and entry salary are set locally through bargaining; salary increases limited by law to those authorized in the Appropriations Act. Parties negotiate distribution of authorized increases.
Administrative Employees

• Often called “Exempt” – meaning “exempt” from civil service.
• State law exempts positions or work. Examples include presidents, deans, senior managers or professionals, confidential assistants.
• Professionals and entry-level managers may be represented.
• Employment conditions governed by college policy or bargained agreement. Some are in statute (i.e., sick leave).
• Entry salary is set by college; salary increases limited by law to those authorized in the Appropriations Act.
Civil Service Classified

- In CTC system, work at the community colleges and State Board. Also work at state agencies and public universities/TESC.
- 2 unions represent classified at 24 CC districts: WPEA at 15; WFSE at 9 (Big Bend is non-represented).
- Trustees may decide to be represented by Governor or bargain locally: 22 bargain with governor in bargaining unit coalitions.
- Working conditions and salaries are bargained. Agreements are for 2 years (biennium). Bargaining must be completed by 10/1, economic terms certified by Governor, included in budget proposal and acted upon by Legislature.
Technical College Classified

- Preserved K-12 collective bargaining rights as they transitioned into the CTC system in 1991 – bargain under a different law than CC classified.
- TC classified employees are represented by a variety of unions, including WEA, AFT, Teamsters, Operating Engineers, Prof/Tech, Brotherhood of Electrical Workers.
- Working conditions, salary structures and entry-level salaries are locally negotiated; salary increases are limited by law to those authorized in the Appropriations Act
  - Since 1991, the Appropriations Act has not limited salary increases to those specifically enumerated in the Act
State Statutes

- RCW 28B.50.140 provides authority to Trustees to hire and set salary for Faculty and Administrators but limits “salary and compensation” increases to those provided in the Appropriations Act as allocated by the State Board.

- RCW 28B.52.035 (Faculty Collective Bargaining Act) limits bargained increases the amount or percentage provided in the Appropriations Act. Clarifies that CBA salary terms are not binding on the legislature.

- RCW 28B.50.465 & .468 codify I-732, providing for each college to receive a funding allocation sufficient to provide faculty & TC classified with a COLA based on the CPI of highest populated county (King).
  - Provides for local distribution in accordance with salary schedule, CBA and other compensation policies.
  - Legislature has suspended this law in 2003-05 & since 2009.
Appropriations Act

- This legislation is in effect for two years only and may be amended during the intervening session - meaning that compensation language has and may be changed.

- While statutes provide authority, the Act delineates allowed increases.
Limits salary increases in higher education to those specifically provided in the Act and those associated with promotions or faculty and professional staff retention. For CTCs, also provides for faculty increments funded by turnover savings and an exception to these limits for TC Classified and represented exempts.

- An exception is also provided for universities/TESC - allowing additional salary increases paid through local funds. Locally funded increases will not be included in the institutions’ base budget.
Appropriations Act

- The State Board has a separate section that addresses budget issues specific to the CTC system.
  - In the past, this section included funds for faculty increments, faculty and TC classified COLAs, exempts general salary increase and part-time faculty increases.
  - Section 605 of the current Act provides for the restoration of the 2011-13 three percent salary expenditure reduction and allows its use for any purpose, including salary increases.
SBCTC Role?

➢ Formal
  • Development and adoption of system operating budget request.
    • Due to salary increase processes, the State Board has never included classified employee salary increase funds in its budget request.
  • Allocation of appropriated funds.
  • General system oversight.

➢ Informal
  • Facilitate/coordinate discussion and position development.
  • Communication.
  • Expertise.
Last salary increase was in FY 2009(Fall ‘08). When increases were provided:

- Administrative Staff received a general salary increase based on CC classified bargaining.
  - Administrative staff may receive promotion and retention increases using local funds.

- Faculty received increment funding and a COLA based on the King County CPI (I-732). Allowed to use locally defined turnover savings to pay increments. Funds to increase part-time faculty salaries have also been provided.
  - Faculty may receive promotion increases using local funds. Typically, these take the form of an amount added to salary for earning tenure, earning an additional degree, or achieving “senior” status.
• Community College Classified received a general salary increase based upon negotiations with the Governor; step increases (5%) based upon seniority until top step is reached; additional steps have been added (2.5%) in 2007 and 2013 and special pay has been increased (shift differential, overtime, call back, etc.). Based upon a salary survey, funds to increase pay of classes significantly behind prevailing wage (more than 25%) have occasionally been provided.
  – Negotiators at the Governor’s “table” continue to rely upon the civil service classification and compensation plans.
  – Non-represented classified employees typically receive the same increases as represented, although delayed by 2 months.
Context – Salary Increase

• Technical College classified have received a COLA based on King County CPI (I-732).
• May receive other locally negotiated and funded step, across-the-board or targeted salary increases.
Context – Retirement Benefits

• Legislature determines plan options for employees:
  – Eligible classified employees may participate in a defined benefit or a hybrid retirement plan (PERS).
  – Eligible faculty participate in the State Board’s defined contribution plan or a hybrid retirement plan (TRS 3).
  – Eligible exempt employees participate in the State Board’s defined contribution plan or a hybrid plan (PERS 3).

• Employer/Employee contribution amounts are set by the Legislature or the State Board for the SBRP.
Context – Health Care Benefits

- Health benefits for state employees are managed by a central agency.
- The benefit package includes health, dental, vision, and nominal life and disability insurance amounts.
- Costs are shared by state and employee (through pre-tax payroll deduction and point-of-service payments). Employer premium pays an average 85% of cost and is set through civil service “super coalition” collective bargaining and Governor/Legislature approval.
Differences?

Universities/TESC

• Statutes provide Regents/Trustees with “full control” of their institutions and authority to employ and pay presidents, faculty and other employees. Additional authority is provided to allow for housing or a housing allowance.

• Appropriations Act restrictions apply – limiting increases to those provided in the Act and to normally occurring promotions and retention increases. However, the Act also provides an exception that allows for locally funded increases (never to be added to base).

• Less reliance on state funding and different students may create different mindset on role of tuition?
Differences?

- **State Classified Employees**
  - Compensation plan established centrally by civil service system (not through negotiations), with step increases set at 2.5% to 5%. Step movement is not funded separately. Essentially, agencies are funded at the mid-step of the pay range and pay for step increases through turnover savings.

- **K-12 Teachers/Administrators**
  - State funding is provided for teacher increment movement on the statewide salary allocation model. Local districts may negotiate/provide additional amounts (i.e., more contract days) using local monies (i.e., levies). Administrator salaries are funded by formula; actual salaries are set locally.
Questions

• Thank you for your attention!
State Board for Community and Technical Colleges
2007-2008 Compensation Study - Process and Results
January 30, 2009

Process:
A constituent-based taskforce was convened in 2007 by the State Board to study faculty and exempt employee compensation issues. The group addressed full- and part-time faculty and exempt staff compensation funding, allocation and structure with the intent of establishing and maintaining market competitiveness, internal equity and flexibility to meet the particular needs of colleges. A final report was issued in July 2008.

The Taskforce collected and reviewed Washington State and national compensation data, including information on salary trends, governance, funding, revenue sources, recruitment/retention and historical demographic information. Four groups were identified for comparative purposes: regional, national, Global Challenge States (GCS) and a custom developed list. Consistent with policy established at that time by the Governor and the Legislature, the GCS benchmark was selected as it represented the most comprehensive group of states against which Washington competes in the global economy.

Taskforce members agreed on the findings and recommendations listed below.

Findings:

- Average faculty salaries are 12.7% behind the GCS average.
- Average exempt staff salaries are 14.2% behind the GCS average.
- Basing administrator salary increases on classified employee collective bargaining while providing faculty increases based on I-732 results in salary inversion/compression problems and discourages faculty from accepting administrator positions.
- Increments are necessary and effective motivators for full- and part-time faculty retention and continued professional development.
- To ensure the recruitment and retention of well qualified part-time faculty, the system must renew its commitment to equal pay for equal work.
- Increasing access to full time instructors will help student success. Efforts to convert classes taught by part-time instructors to classes taught by full-time instructors should continue.

Recommendations:

- To remain competitive, align salaries with GCS - $50.2 million.
- To induce faculty to accept administrative positions and avoid salary compression/inversion, align administrator COLAs with faculty COLAs - $23.6 million.
- Encourage investment in professional development and retention through fully funding full and part-time faculty increments - $12.3 million.
- Shrink the gap between full- and part-time faculty salaries, moving part-time faculty from 59% to 67% of full time average - $22.5 million
- Increase student support outside of the classroom and student achievement through converting part-time to full-time positions (102) - $5.1 million
Problem: More than at any time in its history, the United States in general and Washington State in particular face intense competition for talent to maintain an advantage in the knowledge economy. Higher education institutions, including community colleges, provide a pipeline for a trained and innovative workforce essential for our sustained prosperity. In the context of an aging faculty and administrative leadership and the State’s future competitiveness in the global economy, Washington’s stellar community and technical college system faces significant challenges if it is to retain and recruit the most talented faculty and academic leaders in the nation. The lack of salary increases for five years has increased the difficulty for colleges to recruit and retain the employees needed to ensure student success. Recruitment efforts, often extended, result in small numbers of qualified applicants and salary levels are often cited for job offer rejections and resignations. Inadequate funding, regulations and current salary structures limit available options.

Meeting student demand, expectations and learning styles will become ever more challenging as Washington’s population continues to grow and become more diverse – creating a premium on the attraction and retention of highly qualified employees who can facilitate student success.

WACTC has assigned responsibility for the study and recommendations to its Critical Issues Committee.

Goal: To offer a compensation package that attracts and retain highly qualified employees able to facilitate current and future student success.

To achieve this goal, data and information will be developed along three tracks:

- Objective information, developed by the 2007-2008 Salary Taskforce, will be updated to inform decision-making related to goal setting and funding faculty (full- and part-time) and administrative staff compensation. The study may include a review of:
  - Comparative salary from peer states.
  - Contextual information addressing regional differences, district/budget size, faculty mix, turnover rates, etc.
  - Data cuts that provide multiple views of compensation data including historic; entry, mid-career and senior level salaries; base and add-on compensation; etc.
- Identification and review of structural barriers affecting salary administration and the ability to establish and maintain market competitiveness, internal equity, and flexibility to meet the particular needs of colleges.
- Funding options, including fund source and implementation timing.
Study Milestones/Timeline:

**September** – WACTC briefs the State Board on salary concerns, identifying improving salaries is a WACTC priority.

**September/October** –
- RFP is issued and processed for consultant to update data using the methodology established by the 2007/2008 Salary Taskforce.
- Critical Issues Committee discusses potential principles with WACTC.

**October 23** – State Board provided a foundation briefing on governance and administration of employee salaries in the CTC system. Stakeholders have an opportunity to share viewpoint.

**October 14 - 31** – Colleges surveyed to collect data on full and part-time faculty salaries and recruitment and retention difficulties experienced in 2012-2013.

**November** – Consultant is on-boarded and begins data collection and updating.

**December 19/20** – Critical Issues Committee sponsors a WACTC discussion on principles and policy considerations. Report college results of recruitment and retention survey.

**January 20/21** – Critical Issues Committee receives an update on consultant’s progress. WACTC discussion on principles, policy considerations and funding options continues, if needed.

**February/March** – Preliminary results of consultant’s data update is shared/discussed with WACTC (3/27-28) and other stakeholder groups (i.e., union leaders, trustees).

**March 26/27** – State Board is provided a study update.

**April** – Discussion with stakeholder representatives on policy and funding options continue.

**April 24/25** – WACTC meets and finalizes its recommendations to the State Board.

**May 7/8** – Recommendations made to the State Board for inclusion in 2015-17 Budget request. Policy changes requiring legislation are identified.

**June 18/19** – Board acts on CTC system budget request for 2015-17 biennium.

**June – October** – Legislation is drafted on policy changes, if required.
Baccalaureate Degree Statements of Need

Brief Description
A conceptual discussion will occur between the State Board and six colleges proposing to offer Bachelor of Applied science (BAS) degree programs. Five of the programs are eligible to receive Science, Technology, Engineering, and Math (STEM) funding as a result of Senate Bill 5624.

The Statement of Need addresses five areas:
- Relationship to institutional role, mission, and program priorities
- Employer/community demand for graduates with baccalaureate level of education proposed in the program
- Applied baccalaureate program builds from existing professional and technical degree program offered by the institution
- Student demand for program within service area
- Efforts to maximize state resources to serve place-bound students

(See Attachment A: Applied Baccalaureate degree programs being considered for implementation)

Background Information and Analysis

4a) Olympic College – BAS Computer Information Systems (STEM)
Olympic College proposes a Bachelor of Applied Science degree in Computer Information Systems. The proposed degree responds to proven industry demand for bachelor’s level information technology professionals. This degree will draw from the expertise of the college’s business and technology faculty as well as Olympic College’s experience successfully delivering a BAS in Nursing. Industry partners have committed to ensuring the program’s success by working closely with faculty on curriculum, standards and work-based learning internships. Both business and technology faculty and K-12 teachers will have critical opportunities for networking and professional development. The K-12 consortium that Olympic College will be working with includes Bremerton, North Kitsap, and South Kitsap school districts.

4b) Green River – BAS Information Technology: Secure Application Development (STEM)
Green River Community College proposes to build a 2+2+2 degree pathway called Expanding Career and Educational Learning in Information Technology (EXCEL-IT). Through this program high school students will earn college credit via a concentrated concurrent education model. Upon completion the student will progress to an Associate of Applied Science in Information Technology (IT), followed by a Bachelor of Applied Science degree in IT: Secure Application Development. This program will integrate instruction and student services to meet the needs of first generation, low-income and at risk students seeking professional and technical careers. The K-12 consortium that Green River Community College will be working with includes Auburn and Kent school districts.

4c) Cascadia Community College – BAS Sustainable Practices (STEM)
Cascadia Community College proposes to implement a Bachelor of Applied Technology in Sustainable Practices. This degree is designed for students who have completed the Associate of Applied Science in
Environmental Technology and Sustainable Practices who wish to transfer into a four-year technical bachelor’s degree. This program will provide students with the scientific, technical, and societal knowledge they need to make informed decisions for themselves and for the community in which they live. Students graduating with this degree will have career options in government agencies, utility companies, energy efficiency businesses, nonprofit organizations, and auditing organizations. The K-12 consortium that Cascadia Community College will be working with includes North Shore, Lake Washington, Bellevue, Edmonds, Issaquah, Mercer Island, Riverview, Shoreline and Snoqualmie Valley school districts, and Tech Prep College Connections.

4d) Renton Technical College – BAS Application Development (STEM)
Renton Technical College proposes to develop a Bachelor of Applied Science degree in Application Development. Renton’s efforts to align curriculum with local high schools has, in part, led to high completion and success rates. The implementation of the 2+2+2 model will enhance a career pathway for the IT industry and potential students in the college’s service area. The proposed degree will also broaden the professional development for faculty who have demonstrated success with diverse learning formats and effective cohort methodologies. The K-12 consortium that Renton Technical College will be working with includes the Renton and Kent school districts.

4e) Bellevue College – BAS Molecular Biosciences (STEM)
Bellevue College plans to implement a Bachelor of Applied Science in Molecular Bioscience. This degree provides the foundation needed to work in a variety of disciplines including: pharmacology, medicine, biochemistry, molecular biology, neuroscience, food chemistry, and environmental science. Students will be able to begin this pathway in high school through taking a biotechnology lab course series, as well as other core science and related instruction. These high school students can transition into the Associate of Applied Science Molecular Science Technician degree, which will prepare them for work or for progression into the BAS program. The K-12 consortium that Bellevue College is working with includes the Lake Washington and Bellevue school districts.

4f) Skagit Valley Community College – BAS Environmental Conservation
Skagit Valley Community College proposes to develop a Bachelor of Applied Science in Environmental Conservation. The degree will provide a seamless pathway from a two-year to four-year degree. This degree will prepare students for a variety of high paying jobs that are expected to experience significant growth in the coming years due to substantial environment restoration projects in the Puget Sound Region. The development of environmental conservation is generating rapid environmental and natural resources related job growth within the state of Washington. With very few options for place bound workers within the region, this BAS degree in Environmental Conservation will be an important opportunity for this workforce.

Potential Questions
- Do the college proposals for a Bachelor of Applied Science meet the vision, mission, and goals of their respective colleges?
- Do the proposed Bachelor of Applied Science degree programs serve the current and future needs of the colleges’ regions and the state?
Do the proposed Bachelor of Applied Science degree programs support the State Board for Community and Technical College System Direction goals and Mission Study action plans for sustaining economic prosperity into the future?

**Recommendation/Preferred Result**
Staff will provide a brief overview of applied baccalaureate degree proposals. Board members will have an opportunity to discuss the applied baccalaureate proposals with college representatives in the context of meeting college and system goals.

Policy Manual Change Yes ☐ No ☒

Prepared by: Edward Esparza, Policy Associate - Student Services  
360-704-4319, eesparza@sbctc.edu
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Form A

COVER SHEET
STATEMENT OF NEED

Program Information
Program Name: Bachelor of Applied Science in Computer Information Systems
Institution Name: Olympic College
Degree: BAS CIS Level: Bachelor Type: Computer Information Systems CIP Code: 11.0103
Proposed Start Date: Fall 2014
Projected Enrollment (FTE) in 2014-15: 20 20 (FTE) At Full Enrollment by 2016-17: 45 45 (FTE)
Funding Source: State FTE Self Support Other Applied Baccalaureate Grant
Mode of Delivery
✓ Single Campus Delivery: Olympic College, Bremerton Campus
✓ Off-site: not applicable
✓ Distance Learning: Hybrid – combination of onsite and online classes

Statement of Need – see attached narrative
• Relationship to institutional mission
• Employer demand
• Student demand
• Options for place-bound students

Contact Information (Academic Department Representative)
Name: Martin Cockcroft
Title: Director of Applied Baccalaureate Development
Address: 1600 Chester Avenue, Bremerton, WA 98370
Phone: 360-475-7437
Fax: 360-475-7321
Email: mcockcroft@olympic.edu

Mary Gargiulo, Vice President of Instruction 08/07/2013

Chief Academic Officer: Mary Gargiulo, Vice President of Instruction

Date
CRITERIA 1: RELATIONSHIP TO INSTITUTIONAL ROLE, MISSION, AND PROGRAM PRIORITIES

Institutional Role. The proposed Olympic College (OC) Bachelor of Applied Science Degree in Computer Information Systems (BAS CIS) reflects the role of the college by:

- Increasing the number and relevancy of professional-technical degrees available within the OC service district;
- Responding to proven industry demand through significantly enhanced education and training programs supportive of an increasingly technological workforce;
- Ensuring a cooperative educational environment comprised of professional technical pathways for (i) high school students transitioning into postsecondary education and (ii) incumbent workers seeking to enrich their credentials and develop expertise that will better align with advanced workforce demands.

Olympic College Mission. “Olympic College enriches our diverse communities through quality education and support so students achieve their educational goals.”¹ The development and launch of the proposed BAS CIS advances the OC mission by recognizing and responding to the educational goals and demands of the service district. The addition of a 2nd applied baccalaureate program responds to a proven need for advanced degrees in this highly underrepresented region while simultaneously supporting a changing and expanding technology-based workplace. The BAS CIS also supports increased demand for comprehensive educational planning (K-20) and lifelong learning (incumbent workforce and career changers).

Program Priorities. Olympic College takes into consideration several priorities when developing new programs, especially those programs directly related to economic development and job growth, accreditation requirements, and other priorities identified through local, regional, state and national analysis. The development and implementation of the BAS CIS also supports the following priorities identified in OC value statements and initiatives.²

- Value Statement:
  - This project illustrates a dedication to public service and higher education by responding to identified community needs and workplace and student demand.
  - This project illustrates a commitment to lifelong learning by encouraging current and returning students to continually expand and enhance their educational capabilities.

- Strategic Initiative:
  - This project supports the implementation of enrollment management and student achievement plans focusing on accessibility and student learning by developing a program that supports economic stability, leverages prior experience and expertise for the benefit of the community and delivers program components in a format that accommodates busy schedules and varied learning styles.
  - This project strengthens relationships with our communities to understand educational needs and provide learning opportunities relevant to those needs by identifying local, regional and national workplace and educational trends and by developing sustainable programs that respond to a changing environment.

¹ Olympic College Catalog 2013-14, p. 2.
² Olympic College Catalog 2013-14, p. 2-3.
**CRITERIA 2: SUPPORT OF THE STATEWIDE STRATEGIC PLANS**

The overarching goal of the *SBCTC Mission Study* is to “find more and better ways to reduce barriers and expand opportunities so more Washingtonians can reach higher levels of education.”¹ The Mission Study provides a twenty-year, ten-step action plan to (i) meet identified challenges and (ii) assist colleges in better examining “how community and technical college education will need to change and grow to meet the needs and expectations of future learners” (SBCTC, 2010, page 2). The Mission Study builds upon much of the work presented in the *2008 Strategic Plan for Higher Education* developed by the Washington Higher Education Coordinating Board and updated in 2012. Now under the leadership of the Washington Student Achievement Council, this work continues to serve as a template for goals identified in the SBCTC Mission Study and strategies proposed in the Strategic Plan for Higher Education (SPHE). The OC BAS CIS supports the Mission Study’s (MS) ten-step action plan as follows.

**Step 2: Close the statewide skills gap for technically trained workers (MS p.6).** Information Technology (IT), identified in the Mission Study as one of five high demand fields in need of expanded workforce training program capacity, is the focus of this project. OC offers a robust IT associate’s program taught by qualified faculty. The proposed BAS CIS builds upon the existing IT program, responds to student and employer demand for higher educational attainment and provides a gateway to CIS careers across a range of industry clusters.

**Step 4: Contribute to the production of baccalaureate degrees (MS p.7).** The development and launch of the BAS CIS will provide an additional baccalaureate program in an underrepresented region and expand access to place-bound students on the peninsulas. The program is projected to accommodate 20 students its 1st year with increased capacity in later years. The BAS CIS builds upon other baccalaureate efforts underway at OC. For example, OC received an applied baccalaureate pilot grant to develop and launch the highly successful BSN (RN to BSN) in 2007. Designed to meet the needs of nurses who have multiple roles with work, family, and school, the OC BSN just graduated its fifth class of students for a total of 100 graduates. The RN-BSN program is accredited by the Commission on Collegiate Nursing Education and meets the recommendation of the Institute of Medicine’s *The Future of Nursing: Leading Change, Advancing Health* as well as the Washington State Master Plan for Nursing Education to increase the percentage of baccalaureate prepared nurses to 80% by 2020.

OC also works strategically with other colleges to increase baccalaureate access.

- A WSU and OC partnership provides a BS in Mechanical Engineering at OC- Bremerton.
- OC students may participate in an early admittance to Brandman University to complete a four-year degree in Business Administration, Criminal Justice or a variety of offerings.
- Old Dominion University provides access to bachelor’s and master’s degrees on the OC-Bremerton campus.
- Western Washington University offers a BA in Elementary Education, a BA in Human Services and a Masters of Education in Educational Administration at OC-Bremerton. Students may also enroll in Huxley College for the Environment to earn a BS in Environmental Science or a BA in Environmental Policy Studies.

**Step 5: Work with our partners in the P-20 education system to create seamless, easy-to-navigate pathways for all students (MS p.7).** OC engages in ongoing collaboration with universities, high schools and school districts to create seamless, easy to navigate pathways for

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all students. High school to postsecondary education includes a number of key strategies identified throughout the Strategic Plan for Higher Education.

- OC provides a robust Running Start program, enrolling more than 700 students in the most recently completed academic year.
- OC is a member of the West Sound Education Leadership Council made up of superintendents, presidents and other executives from Kitsap school districts, tribes, West Sound Tech, OC, and the Kitsap Economic Development Alliance (KEDA).
- OC works with 7 school districts and 15 local schools/skill center to provide Tech Prep opportunities. In the most recently completed academic year OC Tech Prep served 3,500 students.
- OC faculty, teachers and district representatives are addressing the gap between high school and college by working together to address Mathematics Common Core Standards. A 2012-2014 SBCTC Core to College grant supports this effort.

Step 7: Invest in sustaining faculty and staff excellence (MS p.8). Faculty who teach in CIS and other technology-based programs require ongoing professional development to stay current. Each year, OC expends significant professional development funds for these and other faculty.

Step 8: Build a 21st century learning infrastructure (MS p.8). The BAS CIS will support a 21st century learning environment through hybrid delivery methods that combine online delivery and face-to-face on-site classes. OC will leverage existing resources to support both delivery venues. CIS already provides online access to a number of certificates and OC links with WAOL to allow students to determine their readiness for online learning. OC also offers a General Studies course for students needing additional preparation for the online learning environment. Students may take advantage of a web accessible campus as well as open computer labs.

Step 9: Promote the adoption of web-based and mobile technology tools for eLearning and online student services (MS p.9). OC has steadily increased access to eLearning and a range of online student support systems. For example, the catalog and class schedule planner are available online. OC students and Tech Prep and Dual Credit students may register online using OC’s Online Access to Student Information System (OASIS) or link to the statewide Washington Tech Prep registration site. OC students may also take advantage of open computer labs, Wi-Fi, e-tutoring, open educational resources, and other web accessible services and support tools.

This project also aligns with other strategies outlined in the Higher Education Strategic Plan.

- OC provides professional development funding to individual faculty and groups of faculty across campus to ensure the application of technology to the teaching and learning process.
- Faculty in a Faculty Learning Community are focusing on developing and/or updating Canvas course design and maximizing the use of this learning management system.
- Several faculty members submitted and received OC funded high-impact grants to support new ways of teaching and learning to benefit at-risk and underprepared students.
- OC shortened the response time for Financial Aid assistance and refined support and processing mechanisms to serve students more efficiently and effectively. OC added online access to financial literacy and links to financial aid and scholarship resources.
- A community college MESA project funded by the National Science Foundation and a Washington STEM student support project provide mentorships, peer-to-peer support, meeting/study space and linkages across campus to assist students in the successful completion of mathematics, technology, science and engineering degrees.
• OC faculty work with industry to identify skill standards, maintain currency, project upcoming changes within industry, identify software/equipment needs and further align curriculum and teaching and learning methodologies with industry expectations for a qualified workforce.

**CRITERIA 3: EMPLOYER/COMMUNITY DEMAND FOR GRADUATES WITH BACCALAUREATE LEVEL OF EDUCATION PROPOSED IN THE PROGRAM**

In determining the need for a BAS CIS program at Olympic College, information was gathered from a multitude of sources including local employer surveys, industry roundtables, advisory committee input, labor market data, industry and trade association data, economic analysis conducted by the Kitsap Economic Development Alliance (KEDA), Economic Modeling Specialists International (EMSI) data analysis and other relevant sources. To determine the demand and supply of qualified CIS workers, OC worked with EMSI to provide an analysis of employer demand and the regional supply of graduates with relevant degrees. Employer surveys, input from trade association members, and consultation with advisory committees also assisted in identifying the gap between industry demand and qualified applicants.

To determine the depth of expertise across a range of CIS-related career titles, OC evaluated the accumulated data and worked with employers to gauge the level of expertise needed. OC initially investigated a specific area of concentration, CIS - Cyber Security, based in part on location and the number of defense contractors and federal and state agencies located in the region. However, as OC faculty and administrators listened to the needs of employers who hire IT professionals, it became evident that employers across the region required professionals with a broad foundation in IT, knowledge of business processes and strong interpersonal skills. With the goal of meeting industry demand and maximizing existing resources, OC expanded its focus to develop a BAS CIS program to prepare graduates for baccalaureate-level preferred positions for a range of occupations including, but not limited to computer systems analyst, network system administrator, computer system administrator, programmer, web developer and other high demand occupations identified in Table 1. U.S. Bureau of Labor Statistics also noted that these jobs typically require a bachelor’s degree but little or no work experience.

Upon entering the workplace, graduates may be expected to perform duties that cross the many occupational titles listed in Table 1 or they may be expected to focus on only one area of expertise. This scale of knowledge will be met in a number of ways. BAS CIS entering students are expected to have already developed a foundation upon which to build. For example, some entering BAS CIS students may have significant expertise in a focused Information Technology (IT) area, but need the BAS CIS to take on additional responsibilities or qualify for the advancement. Other entering students may have an AAS-T in the CIS Networking/Security Pathway, the CIS Programming Development Pathway or the CIS Web Development Pathway. These students will enroll in the BAS CIS to broaden their technical skills and to gain project management, communications, teamwork and strong interpersonal skills required by employers. These same students, among other BAS CIS students, may spend extra time focusing on specific areas and working toward industry certifications—also identified as a high demand need among employers. Still others may take advantage of work-based learning opportunities and a possible capstone project that allows for concentrated areas of study.

<table>
<thead>
<tr>
<th>Occupational Title</th>
<th>Education</th>
<th>Work Experience</th>
<th>Median Annual Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Systems Analysts</td>
<td>Bachelor’s degree</td>
<td>none</td>
<td>$77,740</td>
</tr>
<tr>
<td>Information Security Analysts</td>
<td>Bachelor’s degree</td>
<td>1-5 years</td>
<td>$75,660</td>
</tr>
<tr>
<td>Computer Programmers</td>
<td>Bachelor’s degree</td>
<td>none</td>
<td>$72,380</td>
</tr>
</tbody>
</table>

*Table 1: Degree Requirements and Median Annual Pay for CIS Occupations*
Software Developers, Applications | Bachelor’s degree | none | $90,530
Software Developers, Systems Software | Bachelor’s degree | none | $97,800
Web Developers | Bachelor’s degree | 1-5 years | $75,660
Database Administrators | Bachelor’s degree | 1-5 years | $73,490
Network & Computer Systems Admin. | Bachelor’s degree | none | $69,160
Computer Network Architects | Bachelor’s degree | none | $75,660
Computer User/Network Support Specialists | College, but no degree | none | $46,260


Labor Market Data. Projected employment data for a Bachelor of Applied Science in Computer Information Systems (BAS CIS) degree has remained strong, despite fluctuating economic conditions across the nation. According to the most recent edition of Beyond the Numbers, U.S. Bureau of Labor Statistics Employment and Unemployment Report, job growth in information technology is well above the national rate of 14% across all industries. As noted in Table 2, Washington projected job growth outpaces national projections in eight of the eleven occupational titles aligned with OC’s BAS CIS program.

<table>
<thead>
<tr>
<th>Occupational Title</th>
<th>Projected Growth 2010-20</th>
<th>WA Annual openings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US</td>
<td>Washington</td>
</tr>
<tr>
<td>Computer Network Architects</td>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td>Computer Network Support Specialists</td>
<td>18%</td>
<td>26%</td>
</tr>
<tr>
<td>Computer Programmers</td>
<td>12%</td>
<td>20%</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>22%</td>
<td>27%</td>
</tr>
<tr>
<td>Computer User Support Specialists</td>
<td>18%</td>
<td>26%</td>
</tr>
<tr>
<td>Database Administrators</td>
<td>31%</td>
<td>22%</td>
</tr>
<tr>
<td>Information Security Analysts</td>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td>Network &amp; Computer Systems Admin.</td>
<td>28%</td>
<td>20%</td>
</tr>
<tr>
<td>Software Developers, Applications</td>
<td>28%</td>
<td>34%</td>
</tr>
<tr>
<td>Software Developers, Systems Software</td>
<td>32%</td>
<td>27%</td>
</tr>
<tr>
<td>Web Developers</td>
<td>22%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Total Annual Job Openings 5,426 5,193


When determining job market availability for OC BAS CIS graduates, it is essential to review both local and regional demands. According to data collected by the U.S. Census Bureau, American Communities Survey, more than 12,000 Kitsap residents commute to Seattle-King County and another 6,000 to Tacoma-Pierce County. The U.S. Census American Fact Finder data shows that almost 20% of Kitsap residents commute to jobs outside of the county. A survey conducted by the Washington Department of Transportation further defined the commuting population: 45% of Kitsap’s commuting residents are employed in professional or

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technical occupations, 15% in management and 12% in administrative support. With over 200 annual job openings in Pac Mtn/Olympic region, more than 4,000 annual openings in Seattle-King County and another 140 annual openings in Pierce County, the demand for qualified CIS personnel is significant.

Even when excluding Seattle-King County and Pierce County annual job openings, there is sufficient short- and long-term demand in both the Olympic and Pacific Mountain regions to support and sustain a BAS CIS program. A 2013 EMSI CIS Occupation Report for Kitsap and Mason counties projected well over 300 new openings by 2022 in these two counties. Projections averaged a 15% growth rate. For specific job categories such as Computer Systems Analysts, Software Developers-Applications and Software Developers-Systems Software, Database Administrators and Network and Computer Systems Administrators projections range from 20%-36% over the next ten years.

### Table 3: ANNUAL CIS Job Openings within the OC Employment Region

<table>
<thead>
<tr>
<th>Employment Regions</th>
<th>PacMtn Region</th>
<th>Olympic Consortium</th>
<th>Seattle-King County</th>
<th>Pierce County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Network Architects</td>
<td>9</td>
<td>10</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Computer Network Support Specialists</td>
<td>23</td>
<td>23</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Computer Programmers</td>
<td>15</td>
<td>11</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>21</td>
<td>23</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Computer User Support Specialists</td>
<td>31</td>
<td>30</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Database Administrators</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Information Security Analysts</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Network &amp; Computer Systems Admin.</td>
<td>24</td>
<td>27</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Software Developers, Applications</td>
<td>14</td>
<td>15</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Software Developers, Systems Software</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Web Developers</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Annual Openings by Region</strong></td>
<td><strong>154</strong></td>
<td><strong>155</strong></td>
<td><strong>45</strong></td>
<td><strong>42</strong></td>
</tr>
</tbody>
</table>


**Industry Data.** According to the Beyond the Numbers (a U.S. Bureau of Labor Statistics Employment and Unemployment Report), “Employment and output in computer systems design and related services are projected to grow rapidly over the next decade, outpacing similar professional, scientific, and technical industries and the economy as a whole.” Since 2003, employment in the Information Technology industry has grown by 37%. Even in 2009, during the worst of the recent recession (12/07 to 6/09), the IT industry lost only 1% of its workforce. Employment has since recovered and rapid growth will continue as businesses and individuals increase their use of computer information systems. Other contributing factors include increased demand for cloud computing and cyber security services across multiple industry sectors. Employment in the IT industry is projected to continue to outpace average growth for almost all occupations across all industries.

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Evidence of the Gap between program graduates and job openings locally and regionally has been confirmed through a number of resources including: (i) employer surveys, (ii) professional association and economic development research, and (iii) an EMSI comparison of job openings and educational level completions using 2012 Department of Education, National Center for Education Statistics - Integrated Postsecondary Education Data System (IPEDS).

In a November 2012 survey, 79% of the West Sound Technology Association (WSTA) respondents confirmed a need for a baccalaureate level program in Computer Information Systems at OC. When asked to rank areas of specialization among five choices: (1) a broad background, (2) cyber security, (3) network administration, (4) informatics or (5) a combination of network and systems administration, 92% of all respondents selected CIS-broad background as the most critical focus area to address regional workforce demands. Sixty-nine percent of these respondents ranked the broad background category as their 1st choice; followed by 14% as their 2nd choice, 11% as their 3rd choice and 6% as their 4th choice. The second highest response, with 78% of all respondents, continued the trend of demand across a broad spectrum by selecting a combination of network and systems administration. Of these, 31% ranked this category as their 1st choice.

Olympic College CIS Advisory Board members have consistently voiced support to develop a BAS CIS program. Ty Walker, CIS Advisory Board member and Harrison Medical Center Chief Information Officer, recently summed up employer support for offering the BAS CIS. “It is very difficult to compete with Seattle salaries. There are real advantages to training and retraining talent that is already in the area. The new program could benefit people who are place bound or simply enjoy the local lifestyle and want to work close to home.”

OC hosted a Baccalaureate Industry Roundtable (December 2012) to hear directly from local employers who hire IT professionals. All industry participants voiced support for OC to develop the BAS CIS. The most persuasive outcomes from the small group discussions were the common themes that arose for each of the groups:

- **Recruitment** - It is a challenge for employers to recruit and retain qualified information technology professionals. Local organizations have difficulty competing with companies like Microsoft, Amazon and Google. The possibility of “growing our own” IT professionals who want to live and work in the area would be very positive for local employers.

- **Employer Needs** - Employers prefer graduates with a general CIS degree. A combination of broad technical skills and well-developed soft skills are important. In addition to a range of technology skills, employees need strong skills in project management, communications, teamwork and analytics as well as the ability to adapt to a changing work environment and quickly learn the specific software used by their employer.

- **Employer Value** - The biggest benefit to employers is greater access to qualified information technology professionals.

Evidence of a Demand for a BAS CIS Degree. OC conducted a more comprehensive industry survey of Kitsap and Mason Counties in July 2013. Eighty-one (81) survey recipients were selected from among employers that hire IT personnel, with a response rate of 46%. Recipients were contacted via email and completed the survey online using Survey Monkey.

Table 4 shows the critical results from the survey—results that again underscore the viability of a local BAS CIS program. Among the most compelling statistics:

- Nearly 65% of respondents indicated they prefer to hire bachelor’s-level candidates for IT positions—yet nearly 60% of those respondents admitted having trouble hiring qualified personnel. “Location” was cited as the number one hiring difficulty for these employers and 50% said education was a “major challenge” in finding qualified IT professionals.
Of the 35% of respondents who preferred to hire associate-level candidates over bachelor’s degree holders, almost 64% would be interested in hiring BAS CIS graduates from OC, while more than 45% would be interested in having current employees enroll in OC’s BAS CIS program to update certificates and degrees.

Both employers that prefer associate-level candidates and those that prefer bachelor’s noted that they find most of their IT employees (64% and 63%, respectively) outside Kitsap and Mason counties—numbers that confirm the lack of qualified candidates within this service district.

Employer projections for new IT hires within the next 5 years are encouraging, and by far (144 versus 27), most of these openings will require the bachelor’s degree as the preferred level of education. Reasons for hiring CIS professionals included employee turnover (74%), employee retirement (43%), growth in business (35%) and changing processes (17%).

<table>
<thead>
<tr>
<th>Table 4: Kitsap/Mason County Employer Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSOCIATE DEGREE</strong></td>
</tr>
<tr>
<td>Percent of employers who prefer to hire associate-level IT professionals</td>
</tr>
<tr>
<td>Percent of employers who prefer associate-level but would be interested in hiring OC BAS CIS graduates</td>
</tr>
<tr>
<td>Percent of employers who prefer associate-level but would be interested in having current employees upgrade to BAS CIS</td>
</tr>
<tr>
<td>Percent of IT employees at these (prefer associate-level) organizations drawn from outside Kitsap or Mason Counties</td>
</tr>
<tr>
<td>Number of expected new IT hires in the next 5 years from organizations that prefer associate’s-level candidates</td>
</tr>
<tr>
<td><strong>BACHELOR’S DEGREE</strong></td>
</tr>
<tr>
<td>Percent of employers who prefer to hire bachelor’s-level IT professionals</td>
</tr>
<tr>
<td>Percent of these (prefer bachelor’s) employers who have had trouble hiring qualified candidates</td>
</tr>
<tr>
<td>Percent of these (prefer bachelor’s) employers who have had trouble hiring qualified candidates due to employer’s location</td>
</tr>
<tr>
<td>Percent of these (prefer bachelor’s) employers who have had trouble hiring qualified candidates due to candidate’s education</td>
</tr>
<tr>
<td>Percent of IT employees at these (prefer bachelor’s) organizations drawn from outside Kitsap or Mason Counties</td>
</tr>
<tr>
<td>Number of expected new IT hires in next 5 years from organizations that prefer bachelor’s-level candidates</td>
</tr>
</tbody>
</table>

| Total number of expected new IT hires in the next 5 years in Kitsap and Mason | 171 |

*One local respondent identified a need for 100 new hires at two King County office locations; bringing the number of bachelor’s level hires to 244. This number has been omitted to reflect Kitsap/Mason data only.*

A Lack of Baccalaureate Access in the Region. The Kitsap Economic Development Alliance commissioned a baccalaureate research project to verify the need for increased baccalaureate production in Kitsap County. Among the general occupations listed, the “most needed four year majors” were identified as business and computer sciences (includes a range of CIS degrees as well as higher-level computer science degrees). Research found that:

- 52% of employers believed business would grow with access to a more educated workforce. Kitsap firms then identified the education levels needed for this growth:
  - 26% need employees with graduate degrees
  - 56% need employees with four-year degrees
17% need employees with an associate degree.

- Employers ranked computer skills, business skills and soft skills as most in demand.
- 85% of employers reporting having difficulty filling positions.

These findings were subsequently confirmed by a regional needs assessment conducted by the Northwest Education Research Center. According to a release by the HECB (April 2012), “The report, like other past studies of regional needs, found that baccalaureate participation rates (in the Olympic Region) were well below the state average and that students had limited access to baccalaureate institutions and programs.” The report noted that despite these limitations, nearly 1,000 students were enrolled in bachelor and graduate degree programs from 10 providers. However, these students, with the exception of those enrolled in applied baccalaureate programs, were in non-state funded (self-sustaining programs).

EMSI data reports for Kitsap and Mason counties (immediate service district) and for Kitsap, Mason, Jefferson, Clallam, King and Pierce counties (immediate employment region) illustrate significant gaps between the degree required (Table 1) and the related job openings. Using the most recently available completion data (IPEDS 2012), it is evident that a number of students are pursuing and completing a wide range of industry-related certificates. However, it is equally evident that far too few individuals are acquiring an associate degree and then, more importantly, moving on to the next level to attain an industry preferred baccalaureate degree. In 2012, there were no CIS-related baccalaureate degrees awarded in Kitsap or Mason counties.

Table 5 illustrates the gap between Computer Information Systems baccalaureate degrees awarded and applicable job openings within the OC employment areas. These findings do not reflect OC university partners with a primary location outside of Washington and/or those partners who have not graduated students as of 2012.

<table>
<thead>
<tr>
<th>Table 5: Educational Gap for BAS CIS Employment Demands</th>
<th>PacMtn WDA</th>
<th>Olympic WDA</th>
<th>King, Pierce</th>
<th>WA State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional CIS Baccalaureate Preferred Job Openings in identified occupations, (2013)</td>
<td>200</td>
<td>34</td>
<td>3,418</td>
<td>4,926</td>
</tr>
<tr>
<td>Regional Program Completions—Associate Degree</td>
<td>65</td>
<td>23</td>
<td>475</td>
<td>812</td>
</tr>
<tr>
<td>Regional Program Completions—Baccalaureate Degree</td>
<td>0</td>
<td>0</td>
<td>44</td>
<td>67</td>
</tr>
<tr>
<td>Regional Program Completions—Master’s Degree</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Regional Completions—Certificates less than 1 acad. yr</td>
<td>23</td>
<td>43</td>
<td>142</td>
<td>343</td>
</tr>
<tr>
<td>Certificates greater than 1 yr. but less than 2 academic years</td>
<td>6</td>
<td>10</td>
<td>210</td>
<td>329</td>
</tr>
<tr>
<td>Award of at least 2 but less than 4 academic years</td>
<td>12</td>
<td>0</td>
<td>5</td>
<td>17</td>
</tr>
</tbody>
</table>


10 The U.S. Department of Education’s National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS) compiles completion data from every college, university, and technical and vocational institution that participates in the federal student financial aid programs.
CRITERIA 4: APPLIED BACCALAUREATE PROGRAM BUILDS FROM EXISTING PROFESSIONAL AND TECHNICAL DEGREE PROGRAM OFFERED BY THE INSTITUTION

Existing program to be used as the foundation for the applied baccalaureate. The proposed BAS will build upon OC’s Associate in Applied Science Degree – Transfer, Information Systems Specialist (AAS-T). The AAS-T Degree prepares students for immediate job placement in business-oriented systems environments or for transfer to university baccalaureate programs.

OC began offering an associate degree in Information Systems in the early 1980s. OC continually updates or expands the AAS-T Information Systems Specialist Degree and a wide range of accompanying certificate programs to meet the rapidly changing field of information technology. Four talented and dedicated full-time, tenured CIS faculty bring unique expertise and experiences to the teaching and learning environment. To keep their technical skills current and remain knowledgeable about the latest trends in information technology, faculty members participate in a wide range of professional development activities each year.

Graduates from OC’s current AAS-T Information Systems Specialist Degree complete fifty-seven credits of core classes plus 45-53 credits in one of three pathways: Networking/Security, Web Development or Programming Development. There are 16 certificate options, each providing a pathway towards an AAS-T Information Systems Specialist degree. Much of the coursework aligns with industry certifications.

<table>
<thead>
<tr>
<th>Pathways</th>
<th>Certificate of Proficiency</th>
<th>Certificate of Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networking/Security (110)*</td>
<td>Network Support Technician (58)</td>
<td>ASP Server Development (14)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CIS Core Knowledge (17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT Project Mgmt Essentials (18)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Info. Systems Security (17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Credits earned (18)</td>
</tr>
<tr>
<td>Programming Development (102)</td>
<td>Technical Support (60)</td>
<td>Applications Server Support (19)</td>
</tr>
<tr>
<td>Web Development (104)</td>
<td></td>
<td>CIS Certified Network Associate (16)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CIS Core Skills (18)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Software Application Development (18)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Open Source Systems (15)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Web Client-Side Development (18)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Technical Support (19)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Small or Home Office Associate (18)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Web Page Design (16)</td>
</tr>
</tbody>
</table>

How long has the program been in existence? The program began more than 50 years ago when OC launched the Data Processing Technology for Systems Programmers in 1963-1964. The program has undergone significant changes over the years, constantly striving to meet the latest industry trends and workforce demands. The associate degree in Information Systems first appeared in the early 1980s, and as noted, has continually evolved to maintain currency while simultaneously preparing for projected industry changes.

What has been the enrollment history of the program over the past five years? The program has experienced robust enrollment drawing from the general student population as well as those students seeking a certificate or degree in computer information systems. To provide an accurate analysis of the degree program, and thus a better foundation for enrollment in the proposed BAS CIS program, the following 5-year enrollment reflects only those students enrolled in the associate degree program. Even when omitting enrollments from the general student population, CIS remains the college’s third-largest professional technical program (following the Puget Sound Naval Shipyard & Intermediate Maintenance Facilities Apprenticeship program and OC’s highly rated Nursing program).
### Table 7: Computer Information Systems 5-year Enrollment History

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Unduplicated FTE</th>
<th>Associate Degrees</th>
<th>Certificates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-2009</td>
<td>185</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>2009-2010</td>
<td>251</td>
<td>12</td>
<td>57</td>
</tr>
<tr>
<td>2010-2011</td>
<td>260</td>
<td>23</td>
<td>34</td>
</tr>
<tr>
<td>2011-2012</td>
<td>244</td>
<td>21</td>
<td>20</td>
</tr>
<tr>
<td>2012-2013</td>
<td>275</td>
<td>17</td>
<td>21</td>
</tr>
</tbody>
</table>

---

**Criteria 5: Student demand for program within the region**

Evidence of student demand is exemplified in a 2012-2013 survey of 160 students enrolled in at least one CIS course.

a. **86% of respondents were very interested in a BAS CIS program** at OC.

b. When selecting among three program delivery methods, hybrid was overwhelmingly favored. Daytime classes were the preferred choice in terms of scheduling.

<table>
<thead>
<tr>
<th>Preferred Program Delivery</th>
<th>1st Choice</th>
<th>2nd Choice</th>
<th>3rd Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid, with both online and face to face</td>
<td>62%</td>
<td>37%</td>
<td>7%</td>
</tr>
<tr>
<td>Face to Face</td>
<td>20%</td>
<td>43%</td>
<td>35%</td>
</tr>
<tr>
<td>Online Only</td>
<td>18%</td>
<td>20%</td>
<td>59%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Schedule of Class Offerings</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
<td>57%</td>
<td>21%</td>
<td>28%</td>
</tr>
<tr>
<td>Evening</td>
<td>36%</td>
<td>56%</td>
<td>9%</td>
</tr>
<tr>
<td>Weekend</td>
<td>7%</td>
<td>23%</td>
<td>63%</td>
</tr>
</tbody>
</table>

c. **73% of respondents would prefer to enroll full time (12 or more credits per quarter).**

d. In response to general preferences for a BAS program, the following were identified:

<table>
<thead>
<tr>
<th>Preferred Program Delivery</th>
<th>Very Important</th>
<th>Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location in Bremerton</td>
<td>77%</td>
<td>21%</td>
<td>2%</td>
</tr>
<tr>
<td>Lower cost than universities or other colleges</td>
<td>79%</td>
<td>20%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Opportunity to continue education at OC</td>
<td>79%</td>
<td>17%</td>
<td>4%</td>
</tr>
<tr>
<td>Campus Resources – libraries, labs, tutoring</td>
<td>60%</td>
<td>36%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Demand in excess of opportunity to enroll in related traditional bachelor’s programs. When reviewing current offerings in the Olympic Region, all of which are available only through online universities or colleges, and comparing survey responses regarding program delivery, the demand for a hybrid BAS CIS is highly evident. In a number of responses to the question, “What other thoughts do you have regarding a new BAS degree at OC?” students repeatedly stated that they were unlikely or unwilling to relocate to enroll in a traditional bachelor’s program. Others cited the cost of attending other colleges, increased living and travel expenses, and the need to change jobs or relocate their families as a hindrance to continuing their education elsewhere. Many believed that their ability to commute to campuses outside of the immediate region was limited. Others considering enrollment in the online/satellite offerings at other colleges stated that they would “greatly prefer” to continue their pursuit of a baccalaureate at OC. These findings are in keeping with the Washington Higher Education Coordinating Board (HECB) Regional Needs Analysis Report (2011), which found that college participation rates were higher in counties where institutions with resident students are located.
Changes in industry standards. Among students currently enrolled in OC information systems classes, many welcomed the opportunity to expand their knowledge across rapidly changing standards and new technologies. They also responded positively to acquiring new skills that would enhance future job opportunities and ongoing workplace advancement.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Academic Year</th>
<th>FTES</th>
<th>Degrees Awarded</th>
<th>Retention Rate by Cohort*</th>
<th>Total BAS Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2014-15</td>
<td>20</td>
<td>-</td>
<td>1 - 75%</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>2015-16</td>
<td>25+19=44</td>
<td>10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>2016-17</td>
<td>25+20=45</td>
<td>5</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>2017-18</td>
<td>25+20=45</td>
<td>6</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>2018-19</td>
<td>25+20=45</td>
<td>6</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>2019-20</td>
<td>25+20=45</td>
<td>6</td>
<td>14</td>
<td>20</td>
</tr>
</tbody>
</table>

*Allows for completion over 2 to 3 Academic Years

**CRITERIA 6: EFFORTS TO MAXIMIZE STATE RESOURCES TO SERVE PLACE-BOUND STUDENTS**

How the program will serve place-bound working adults. Commuting time and costs are major obstacles for Olympic Region students seeking a bachelor’s degree. Students who choose to commute from Bremerton to the Seattle area must overcome a 2-hour round trip ferry ride and additional drive time or bus fares. Long lines, tight schedules and fares ranging from $7.00 (walk on) to $26.00 (driver and vehicle round trip) add additional time and expense. While the cost of driving across the Tacoma Narrows Bridge may reduce ferry costs, toll road charges and the 66-mile round trip drive can still add 1½ to 2 hours to a commute if driving conditions are clear. Working students and those with families are even less likely to take on this burden. The OC BAS CIS format of hybrid instruction combined with a full range of student support services and campus attributes meets the needs of working students, families and other students with limited resources, time restrictions and lack of scheduling flexibility. A local BAS CIS also meets the needs of employers. The HECB Regional Needs Analysis found that place bound students are more likely to seek employment locally after college (p.7) – a key finding that illustrates why regional employers prefer local access to a BAS CIS degree program.

Similar programs offered by public or independent institutions. There are no similar programs available on the Kitsap Peninsula. While three public or independent institutions offer a similar degree, these offerings are exclusively online or a combination of online and satellite. Brandman University (Irvine, California) offers a BS, Computing Technology, Information Technology; Old Dominion University (Norfolk, Virginia) offers a Bachelor’s in Business Administration, Information Systems and Technology. However, these programs are only available as online and/or satellite options, a teaching and learning style that does not necessarily meet the needs of the diverse community of learners that depend upon OC to meet their educational goals. Online only programs do not provide the support services and active face-to-face learning opportunities greatly preferred by OC students as evidenced under Criteria 5 of this document.

Options explored for collaboration in the development of the proposal. OC is continually exploring public baccalaureate options, as evidenced by the college’s many university partnerships as well as the WSU BS in Mechanical Engineering at OC-Bremerton and the upcoming WWU degree to be offered at OC-Poulsbo. These opportunities are carefully
reviewed to ensure that programs are complimentary, not competitive, and to ensure that the needs of the community are being met. As exemplified under Criteria 3, the proposed BAS CIS illustrates these primary considerations.

The Kitsap Economic Development Alliance (KEDA) has been instrumental in promoting baccalaureate expansion, especially as it relates to proven industry demand such as the proposed BAS CIS. Most recently, KEDA assisted in developing a list of key industry leaders in need of qualified computer information systems personnel. Business and industry have provided input (and will continue to provide expertise) in the development of CIS-related programs at OC. As noted under Criteria 3 of this document, business and industry representatives have participated in roundtables with CIS faculty and OC personnel, served on advisory committees, identified curriculum/program needs and advocated for the launch of this program.

Unique aspects of the proposed program that differentiate it from similar programs. The BAS CIS proposed by OC will be the only CIS baccalaureate degree offered on the Kitsap and Olympic peninsulas that delivers a combination of face-to-face and online teaching and learning opportunities. The OC BAS CIS will also be the only program to provide students with the opportunity to collaborate, study and problem-solve with faculty and other students while taking advantage of the comprehensive resources available on a college campus. The BAS CIS program will be developed to meet the needs of local and regional employers, align with high school to college pathways unique to this region, and support the preferred learning styles and methodologies identified by students and faculty alike. The communities served by this degree program are significantly underrepresented in terms of baccalaureate completion. Only those communities showing a much higher median income level (Bainbridge Island, Poulsbo, etc.) or easier access to Seattle have educational attainment levels equivalent to or higher than the overall State average.

**CRITERIA 7: HIGH SCHOOL PARTNERSHIPS**

“*Educational Institutions should employ multi-faceted strategies that move students seamlessly through their computing education studies from the secondary level through the associate degree to the baccalaureate degree.*” – Association for Computing Machinery (ACM) and National Science Foundation (NSF), p. 4.11

High school program(s) and the community college prof- tech program alignment. In addition to a robust Running Start program, OC maintains over fifty Computer Information Systems, Digital Media and Business Technology Tech Prep articulation agreements with six school districts and fifteen high schools. Faculty members, teachers, and career technical education personnel work together to identify and resolve issues and to review and align curriculum. Program quality is verified using a number of parameters. Teachers disseminate tests, examples of project-based learning experiences, textbooks, assignments, table of contents, etc. for faculty review and confirmation of alignment. Participating faculty and teachers conduct this review process every three years to ensure up to date curriculum and continuous alignment. The review process also occurs if there is a change in faculty and/or teacher. Annual articulation events among discipline-specific faculty and teachers provide an opportunity for ongoing review and evaluation. Faculty and teachers maintain an open door policy to answer questions, or address potential issues. OC and participating high schools are also working with the Washington Career Pathways Web Tool to provide up-to-date overviews of these articulated programs.

Using this web-based tool, high school counselors and students, as well as OC faculty and career technical education staff, will be able to review educational programs, employment and wage data, starting options and considerations, certificate opportunities, degrees, contact information and other relevant material. Other transition practices currently in place include:

- OC Transition Tours provide high school students with an opportunity to attend employer/faculty presentations, visit labs and classrooms, tour the campus and acclimate to OC’s Student Services Division (enrollment, advising, financial aid, etc.)
- College and Career Fairs at area high schools and OC campuses present a range of options and encourage further investigation
- Annual Counselor Breakfasts provide an overview of OC programs and an opportunity for high school counselors and OC faculty and staff to meet and update one another on respective programs and activities.
- Monthly CTE Directors meeting and the monthly Career Counselor meetings provide additional opportunities to discuss seamless transition and aligned opportunities.

Through the "Direct Transcript of Tech Prep Credit" agreement, high school and college credit may be earned concurrently. High school students earning a "B" grade (3.0 GPA) or higher in specific Tech Prep courses may submit an application for college credit through their school career center counselor. Articulated courses are matched to OC prof-tech courses and added to the student’s transcript for college credit. These articulation agreements require an 80% match across the curriculum. By establishing a history of earning college credit and gaining a solid foundation of skills and knowledge in a Program of Study, students are more aware of their education and career opportunities and are better prepared to make sound decisions that lead to success in education and careers. Students typically enter college-level work prepared to complete the next step in the educational continuum. Struggling students may access support from faculty and through open labs, study groups, tutoring services and more. In 2012-13, there were 3,500 duplicated Tech Prep registrations or 2,568 unduplicated registrations. Of these, 1,664 students enrolled in CIS (362), Business Technology (301) or Digital Media (1,001).

Table 9 lists the high school classes that align with OC’s current Information Systems Specialist (AAS-T) degree and may conclude with the BAS CIS. Articulations that currently conform to 2+2 guidelines are identified within the table. There is significant cross over between CIS, Digital Media and Business Technology, thus the inclusion of all three areas in the table. For example, in 2013-14, Digital Media will be integrated into Olympic College’s Computer Information Systems. This configuration more closely aligns with the skill sets identified by industry as well as the evolving/expanding CIS program. Transition of DMA to CIS will include a review of the current articulation agreements as well as any necessary revisions and updates.

Further, some OC/high School articulation agreements are tied together for high school computer application classes at Olympic, Kingston and North Kitsap High Schools. Specifically, students who enroll in one of these computer applications classes receive credit for CIS 150 as well as the listed Business Technology classes. Students successfully completing North Mason High School’s Digital Tools class receive credit in OC’s CIS 107 as well as listed Business Technology classes.
### Table 9: Alignment of High School and OC Courses

#### A. COMPUTER INFORMATION SYSTEMS ACTIVE HIGH SCHOOL TO COLLEGE COURSES

<table>
<thead>
<tr>
<th>District</th>
<th>School**</th>
<th>High School Class</th>
<th>OC Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRAL KITSAP</td>
<td>CKHS, OHS</td>
<td>CISCO Academy Yr 1; CISCO Academy Yr 2</td>
<td>CIS 270, 271, 272 and 273 Internetworking I, II, III, IV (2+2)</td>
</tr>
<tr>
<td></td>
<td>CKHS</td>
<td>Computer Repair</td>
<td>CIS 107 Intro to Personal Computers</td>
</tr>
<tr>
<td></td>
<td>OHS</td>
<td>Computer Applications</td>
<td>CIS 150 Survey of Computing</td>
</tr>
<tr>
<td></td>
<td>OHS</td>
<td>Computer Repair</td>
<td>CIS 107 Intro to Personal Computers</td>
</tr>
<tr>
<td></td>
<td>OHS</td>
<td>Web Page Design</td>
<td>CIS 125 Intro to Dreamweaver</td>
</tr>
<tr>
<td>NORTH KITSAP</td>
<td>KHS, NKHS</td>
<td>Computer Applications I</td>
<td>CIS 150 Survey of Computing (2+2)</td>
</tr>
<tr>
<td></td>
<td>KHS, NKHS</td>
<td>Computer Service Repair</td>
<td>CIS 176 PC Technical Support Essentials</td>
</tr>
<tr>
<td></td>
<td>KHS, NKHS, STS</td>
<td>Web Design 2</td>
<td>CIS 125 Intro to Dreamweaver (2+2)</td>
</tr>
<tr>
<td>SHELTON</td>
<td>OBJH, SHS</td>
<td>Computer Applications</td>
<td>CIS 150 Survey of Computing</td>
</tr>
<tr>
<td>SOUTH KITSAP</td>
<td>CH-, JS- &amp; , MW Jr. High</td>
<td>IC3 Internet Computing</td>
<td>CIS 150 Survey of Computing</td>
</tr>
<tr>
<td></td>
<td>SKHS</td>
<td>Digital Media Web Design</td>
<td>CIS 125 Intro to Dreamweaver</td>
</tr>
</tbody>
</table>

#### B. DIGITAL MEDIA ACTIVE HIGH SCHOOL TO COLLEGE COURSES

<table>
<thead>
<tr>
<th>District</th>
<th>School**</th>
<th>High School Class</th>
<th>OC Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAINBRIDGE</td>
<td>BIHS</td>
<td>Digital Photography 1, 2</td>
<td>DMA 136 Beginning Digital Photography</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DMA 137 Intermediate Digital Photography</td>
</tr>
<tr>
<td>CENTRAL KITSAP</td>
<td>CKHS, KSS, OHS</td>
<td>Photography, Photography, Adv.</td>
<td>DMA 136 Beginning Digital Photography</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DMA 137 Intermediate Digital Photography</td>
</tr>
<tr>
<td>CENTRAL KITSAP</td>
<td>KSS</td>
<td>Cartooning Animation, Beginning Flash</td>
<td>DMA 130 Beginning Flash</td>
</tr>
<tr>
<td></td>
<td>KSS, OHS</td>
<td>Intro to Graphics</td>
<td>DMA 120 Beginning Photoshop</td>
</tr>
<tr>
<td>NORTH KITSAP</td>
<td>NKHS</td>
<td>Digital Graphics Studio I, II, III</td>
<td>DMA 130 Beginning Flash</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DMA 137 Intermediate Digital Photography</td>
</tr>
<tr>
<td>NORTH MASON</td>
<td>NMHS</td>
<td>Digital Photography</td>
<td>DMA 136 Beginning Digital Photography</td>
</tr>
<tr>
<td>SOUTH KITSAP</td>
<td>SKHS</td>
<td>Digital Media Flash Animation</td>
<td>DMA 130 Beginning Flash</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DMA 137 Intermediate Digital Photography</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Photoshop - Intro to</td>
<td>DMA 120 Beginning Photoshop</td>
</tr>
</tbody>
</table>

#### C. BUSINESS TECHNOLOGY ACTIVE HIGH SCHOOL TO COLLEGE COURSES

<table>
<thead>
<tr>
<th>District</th>
<th>School**</th>
<th>High School Class</th>
<th>OC Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRAL KITSAP</td>
<td>CKHS</td>
<td>Accounting I</td>
<td>BSTEC 130 Practical Accounting</td>
</tr>
<tr>
<td></td>
<td>CKHS, EAHS, OHS</td>
<td>Business English</td>
<td>BSTEC 250 Business Correspondence</td>
</tr>
<tr>
<td></td>
<td>OHS</td>
<td>Computer Applications</td>
<td>BSTEC 114 MS Outlook</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BSTEC 116 MS Word</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BSTEC 117 MS Excel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BSTEC 119 MS Access</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BSTEC 118 MS Power Point</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BSTEC 121 MS Publisher</td>
</tr>
</tbody>
</table>
An important component of this project will be to review the current CIS and Business Technology articulation agreements as well as those articulation agreements that are not currently active. Inactive agreements exist for variety of reasons such as adding/deleting courses to better support community and educational needs; responding to identifiable gaps; or a need for additional reviews to ensure that program outcomes and learning objectives are aligned. Inactive or eliminated programs may also be the result of low enrollments, budget cuts, changes in course syllabi or the absence of faculty and/or teachers who initially developed the articulation. Among the 72 CIS, Business and Technology, and Digital Media articulation agreements not listed in Table 9: (a) 6 are expired (b) 4 cannot be articulated (c) 35 are inactive and (d) 27 have been eliminated at OC or the participating high school.

Faculty, teachers and career technical education staff will work together to uncover problem areas, adjust curriculum if needed and determine if additional articulation agreements or renewal of lapsed articulation agreements are warranted. Many of the tools already identified in the review process may also be applied during the review of lapsed agreements.

**Key to Participating Schools:**
- Bainbridge Island High (BIHS)
- Cedar Heights Junior High (CHJS)
- Central Kitsap High School (CKHS)
- East Alternative High School (EAHS)
- John Sedgwick Junior High (JSJH)
- Kingston High School (KHS)
- Klahowya Secondary School (KSS)
- Marcus Whitman Jr. High (MWJH)
- North Kitsap High School (NKHS)
- North Mason High School (NMHS)
- North Kitsap High School (NKHS)
- Olympic High School (OHS)
- Shelton High School (SHS)
- South Kitsap High School (SKHS)
- Suquamish Tribal School (STS)
- Oakland Bay Jr. High School (OBJH)

Faculty, teachers and career technical education staff will work together to align curriculum and pathways for the 2+2+2 program. The proposed BAS CIS will build upon the college’s Associate in Applied Science Degree – Transfer, Information Systems Specialist (AAS-T) as well as the many

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**Criteria 8: Program Design Efforts**

“Stakeholders should collaborate to produce clear and consistent guidance regarding the breadth and depth of computing education and careers.” – ACM and NSF, p. 3.

“Faculty should make certain that their graduates are prepared to adapt their computing education to an ever-changing employment environment by ensuring that their curricula and learning activities equip students with strategies and techniques for acquiring and synthesizing information.” – ACM and NSF, p. 14.

How the college and local high school(s) will work together to align curriculum and pathways for the 2+2+2 program.
articulations identified under Criteria 7. The BAS CIS Degree will be the only CIS baccalaureate degree offering hybrid instruction on the Kitsap and Olympic Peninsulas.

The curriculum will provide a broad based foundation in computer information systems and it will align with in-demand industry certifications. Local employers have been very clear about the skills they need from their employees and they have been equally clear that these needs have changed over time. Today, graduates must possess strong basic computer skills as well as excellent problem-solving, communication and teamwork skills. Graduates are also expected to be agile and able to learn specific software used by individual companies. To meet this demand, the BAS CIS foundation topics will include business processes, software design, networking, cyber security, fiscal responsibility, analytics, communication, teamwork and leadership.

Curriculum will be competency-based to ensure that students can demonstrate successful mastery of required knowledge, skills and abilities (KSA). The KSAs will be closely aligned with specific industry certifications, including CompTIA A+, Network+ and Security+. In addition to drawing from the incumbent workforce, returning students, and recent associate degree graduates, this new program will emphasize high school to college associate degree and baccalaureate degree transition.

In late summer and/or early fall of 2013, OC professional technical staff will meet with superintendents, principals and CTE directors to elaborate on the BAS CIS program and launch a series of meetings and workshops to solidify collaboration around this important opportunity for the Olympic region. BAS CIS updates will be provided at regularly scheduled meetings of the West Sound Education Consortium and the West Sound Education Leadership Council.

OC will host a 1-day Information Technology (IT) Summit to provide employers and educators with an opportunity to expand upon the need for the BAS CIS program. The IT Summit will better connect employers, faculty and teachers to their roles as economic and workforce development leaders in the community.

- Employers will inform educators of the necessary skills and educational background needed to fulfill current and future CIS-related job openings.
- The future of computer information systems jobs and careers will be discussed.
- Educators will provide updates on the changes underway to better align high school to BAS curriculum with industry expectations.

Following the IT Summit, high school and college faculty will continue to collaborate to enhance curriculum and formalize articulation agreements for specific courses and programs. As noted under Criteria 7, this will include the review of current and lapsed articulation agreements for improved alignment from the high schools to OC and on through to the BAS CIS program. These ongoing collaborations, to take place at regularly scheduled meetings, will serve to better inform college faculty about secondary school programs and capabilities and help faculty in the development of Program of Study/Career Pathway templates.

Other key elements of program design will include research of best practices in a broad range of relevant topics, consensus on the adaptations and/or application of these practices, ongoing curriculum alignment and finally the development and launch of the new degree program.

### Key components to be addressed during the development phase include:

- Ongoing discussion among faculty and teachers to ensure student preparedness
- Review of industry certifications to determine viability of certifications for pathway development
- The possibility of aligned assessment practices for improved transition
- Consistency in the transfer of credits

_Olympic College BAS CIS Statement of Need, Page | 18_
• Significant involvement of high school counselors and college advisors
• Increased awareness of opportunities and workforce demands
• Effective use of web tools such as Program of Study sites and Washington Career Pathways
• Increased student awareness, including assistance in using education and career planning tools and better preparing for transition to college
• Maximizing program marketing and educational planning tools
• Ongoing input from Professional Technical Advisory Committees
• Industry updates
• Resolving access and completion barriers
• College and career readiness
• System connectivity supporting aligned standards, curriculum, assessments and data systems.

Activities to support these efforts will include:
• Scheduled articulation meetings for high school and OC instructors
• Formalizing networks between faculty and advisors; teachers and counselors
• Ongoing involvement of Advisory Committee members
• Outreach activities including, but not limited to, workshops, college and career fairs, transition to college workshops, financial aid workshops, etc.

Other efforts to address the incumbent workforce and returning students will include:
• Prior learning assessment and credit for prior learning for individuals returning to education
• Marketing materials and outreach to employers and incumbent
• Outreach to community college graduates of related associate degrees: OC’s Information Systems Specialist (AAS-T); Peninsula College’s Information Tech, Network Infrastructure Specialist (AAS) and other applicable IT degrees/programs from Grays Harbor College.

Criteria 9: Industry Support for the Program

Two-year colleges should further leverage their partnerships with local business and industry to provide employers with a diverse candidate pool with computing expertise, business process awareness, a sense of professionalism, and “soft skills,” including the ability to communicate and work effectively as team members.” – ACM and NSF, p. 15.

Industry will support the success of the BAS CIS program development and student success through a number of one-time and ongoing activities including:

- Identification/review of required skills and other additional input necessary to develop and implement the BAS CIS
- Input regarding BAS CIS program objectives and outcomes
- Providing job descriptions and required skill sets, educational background, experience, etc.
- Identification of equipment and software needs that will better prepare program graduates
- Identification of industry trends
- Classroom presentations by key personnel employed in the identified occupations and supervisors of CIS personnel
- Curriculum review to ensure currency with industry needs
- Internships and/or mentorships for qualified students
- Input on the use of assessment and evaluation materials for the overall program
- Input on the use of assessment and evaluation materials regarding students and graduates
- Periodic review of program graduates to assist in refining and continually updating the program to better meet industry needs
- Scholarships and/or tuition assistance
- Employee awareness to encourage employees to enroll in the BAS CIS program.

While the CIS Advisory Committee will conduct many of the activities listed above, other industry representatives have already identified their willingness to participate in these efforts. For example, 26% percent of West Sound Technology Association survey respondents noted that they are interested in continuing to work with OC in the development of new degrees. Another 42% noted that they may be available to participate in this process.

Executive Director, CIO of Harrison Medical Center Ty Walker has agreed to help identify the necessary skills and competencies for the program, assist with program development and curriculum design, and work with OC to define strategies and goals. He will also work with OC to articulate new internship and work-based training opportunities.

The new BAS CIS program will also provide the opportunity to expand on the long-standing partnership between OC and the Puget Sound Naval Shipyard (PSNS). As one of the largest employers in the college service district, employing over 10,000 civilian and 800 military personnel, PSNS currently employs 138 IT professionals. However, PSNS often has difficulty in finding qualified IT personnel, especially among the local population. As such, PSNS fully supports OC in developing the new BAS CIS. Currently, PSNS hires about eight new IT employees each year. This number is expected to increase over the next few years as significant numbers of PSNS employees reach retirement age. Positions require a broad background in CIS and usually a bachelor’s degree. Job titles include Server Administrator, Network Administrator, Storage Administrator, Database Administrator, Applications Administrator, Cyber Security, Telecommunications specialists, IT Financial Analysts, and General IT Customer Service.

PSNS will support the success of the BAS CIS through an expanded partnership with OC. A critical component of the expanded partnership could be participating in Pathways to Federal Service, a program that would allow PSNS to hire OC interns. An internship job description is currently being created by PSNS to facilitate this new collaborative opportunity for BAS CIS students. Students in their last few quarters of the BAS CIS program would have the opportunity to apply for paid Pathways internships. Students accepted into the program would gain hands-on IT experience in the workplace and be considered for ongoing employment.
Green River Community College
Applied Baccalaureate Degree Program

Bachelor of Applied Science in Information Technology:
Secure Application Development

Statement of Need

Forms A and B
Form A
COVER SHEET
STATEMENT OF NEED

Program Information

Program Name: Bachelor of Applied Science in Information Technology: Secure Application Development

Institution Name: Green River Community College

Degree: Bachelor of Applied Science in Information Technology

Level: Bachelor Type: Applied Science CIP Code(s): 11.0201

Proposed Start Date: Winter 2015

Projected Enrollment (FTE) in Year One: 16 At Full Enrollment by Year Three: 48

Funding Source: State FTE X Self Support ___ Other ______________

Mode of Delivery

Single Campus Delivery: Green River Community College, Auburn Main Campus

Off-site: N/A

Distance Learning: Some courses may be hybrid or online.

Contact Information

Name: Derek Brandes
Title: Vice President of Instruction
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Telephone: (253) 833-9111 ext. 2565
Fax: (253) 288-3448
Email: dbrandes@greenriver.edu

Chief Academic Officer: Derek Brandes, Vice President of Instruction Date

____________________

Chief Academic Officer: Derek Brandes, Vice President of Instruction Date
Form B

APPLIED BACHELOR DEGREE
STATEMENT OF NEED CRITERIA

Introduction
Green River Community College (Green River) proposes to develop a Bachelor of Applied Science (BAS) degree in Information Technology: Secure Application Development to meet the high demand for qualified Information Technology (IT) workers with bachelor’s degrees, in jobs such as computer programmers, systems analysts, data administrators, or information managers.

The proposed BAS degree will provide graduates with technical expertise in areas such as algorithms and data structures; programming methodology and languages; and computer elements and architecture. In addition, graduates will have knowledge of software engineering, computer networking and communication, database systems, distributed computation, computer graphics, and operating systems.

Green River Community College proposes to develop this degree for many reasons, including:

• The proposed degree supports the college’s role, mission, and priorities.
• The proposed degree supports and advances the SBCTC’s mission goals and the Washington Student Achievement Council’s strategic plan.
• The proposed degree will help to meet the regional demand for qualified IT workers with bachelor’s degrees. The current demand greatly exceeds available supply.
• The proposed degree builds on the college’s existing IT associate’s and bachelor’s degree programs.
• The proposed degree will satisfy demand from students with IT associate’s degrees earned at Green River and other nearby colleges.
• The proposed degree provides place-bound students with a convenient, affordable, and high-quality applied baccalaureate degree.

Criteria 1: Relationship to Institutional Role, Mission, and Program Priorities
The proposed BAS degree supports Green River’s role, mission, and priorities.

Institutional Role of Green River
“Green River Community College is a two-year public college that offers degrees and certificates in academic and professional and technical programs, as well as courses in continuing education and basic skills” to people within service area District 10. The proposed BAS degree supports this by increasing the number of career and technical education (CTE) degrees offered by Green River.

1 Green River Community College, Green River Community College Catalog 2011 — 2013, p. 7.
Mission of Green River

Green River’s mission is to: “Ensure student success through comprehensive educational programs and support services responsive to our diverse communities.” The proposed BAS degree advances Green River’s mission by providing a high-quality applied baccalaureate degree that is in demand within Green River’s service area.

Program Priorities of Green River

One of Green River’s core themes is “Career and technical education,” defined as to “provide programs and services that prepare learners for professional and technical career readiness, transitions and advancement.” As information technology grows more complex, employers are demanding a more skilled IT workforce. The proposed BAS degree trains students to master the competencies required by today’s employers. The proposed BAS degree further supports this theme by offering a new educational pathway for terminal associate’s degree students to gain the applied baccalaureate degrees required by many IT employers.

A core objective of the above theme is to “increase student access through availability of needed classes, advising, collaboration among programs and alternative educational strategies with special attention to diverse student populations.” Currently, there are few options for obtaining a baccalaureate degree in information technology in District 10. The high cost and restrictive entry requirements of the existing programs are roadblocks for many residents of this diverse area. The proposed BAS degree will provide an affordable alternative to fill this gap.

Criteria 2: Support of the Statewide Strategic Plans

The proposed BAS degree in IT: Secure Application Development advances the SBCTC’s mission study goals and the Washington Student Achievement Initiative’s strategic plan.

SBCTC Mission Study Goals

The Washington State Board for Community and Technical Colleges (SBCTC) asserts that “our state’s most urgent need is to educate more people to higher levels of skill and knowledge. This is the only way we can hope to sustain a prosperous economy that will provide opportunities for all of us, and for our children.” The proposed BAS degree is a step toward this goal. It provides future workers with a higher level of skill and knowledge than can currently be obtained through associate’s IT degree programs.

According to the SBCTC, “Washington… needs more people with baccalaureate and graduate degrees. Community and technical colleges must expand their contribution to help meet this need.” The SBCTC’s twenty-year action plan responds to this need by urging us to “contribute more to the production of baccalaureate degrees.” Recognizing that many students are place-bound and “cannot leave their jobs and families behind to pursue bachelor’s degrees,”

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3 Ibid, p. 20.
6 Ibid, p. 4.
8 Ibid.
SBCTC concludes that “we will also expand community and technical college programs that lead to applied baccalaureate degrees.” The proposed BAS degree answers this by expanding associate’s IT degree programs and allowing students to earn an applied baccalaureate degree.

**Washington Student Achievement Council Strategic Plan**

In its strategic plan, the Washington Student Achievement Council states that “To realize our state’s potential and avoid the risks of inaction, we must acknowledge that: (1) large numbers of current students are failing to meet requisite standards for the new economy and lack access to the training and education they will need; (2) we cannot presently fulfill the growing demands by our employers for a skilled workforce from among our graduates; (3) demographic and economic forces have produced significant education and employment gaps, particularly for Washingtonians of color and, if no changes are made, these gaps will likely become greater over time…”. The proposed BAS degree will increasing the number and diversity of college graduates ready to meet industry needs.

**Criteria 3: Employer/Community Demand for Graduates with Baccalaureate Level of Education Proposed in the Program**

IT is a growing sector, both nationally and within Green River’s service area. IT professionals are in high demand, and this is expected to accelerate over both the short- and long-term. The Bureau of Labor Statistics considers a bachelor’s degree the entry-level education requirement for this occupation. Green River has assessed current and projected employer demand for IT workers with bachelor’s degrees through a local employer survey, advisory committee input, and analysis of employment and occupational data at the local, state, regional, and national levels.

**Local Employer Survey**

Green River’s service area, District 10, is home to many large and small businesses, governmental agencies, and non-profit organizations. Major employers include Auburn Regional Medical Center, The Boeing Company, the U.S. Federal Aviation Administration, Flow International, the U.S. General Services Administration, IKEA, PACCAR, and REI.

In September 2012, Green River surveyed local employers on their educational preferences for IT employees. The survey targeted IT hiring managers at businesses, governmental agencies, and non-profit organizations in the South Puget Sound and Seattle areas. In response to the question, “What is your organization’s preferred level of education for new IT employees that will fulfill roles such as network and computer systems administrator or security administrator,” 67% of respondents indicated a bachelor’s degree.

While local employers prefer that their new IT employees have bachelor’s degrees, 17% frequently have difficulty finding qualified IT employees with bachelor’s degrees. 57%
sometimes have difficulty finding qualified IT employees with bachelor’s degrees. As Exhibit 1 shows, 74% have some difficulty finding qualified IT employees with bachelor’s degrees.\textsuperscript{14}

\textbf{Exhibit 1}

\begin{center}
\begin{tabular}{c}
\textbf{Have You Experienced Difficulty Finding Qualified IT Employees With Bachelor’s Degrees?}\\
Yes, frequently 17% \\
No, never 9% \\
Yes, sometimes 57% \\
Do not prefer bachelor’s degree 17% \\
\end{tabular}
\end{center}

Source: Green River Community College Employer Survey, September 2012.

The survey reveals the changing landscape of educational requirements for IT employees. In addition to most respondents preferring that \textit{new} IT hires have bachelor’s degrees, 50% indicated a need for a pathway for their organizations’ \textit{existing} IT employees to earn bachelor’s degrees.\textsuperscript{15}

\section*{Traditional Labor Market Data}

Employment of IT professionals is expected to grow 22% from 2010-2020, faster than the average of all occupations.\textsuperscript{16} The Washington State Employment Security Department reports that computer programmers are in demand statewide, with 500+ projected annual job openings (82% of these in King County) at an average annual wage of $93,504, and an annual growth rate of 1.9% from 2010-2020.\textsuperscript{17}

In King County, the Workforce Development Council of Seattle-King County (WDC) estimates that information technology job openings will annually grow 2.6% between 2009 and 2019.\textsuperscript{18} However, as Exhibit 2 shows, the WDC estimates there will be an annual shortage of 3,631 qualified information technology job candidates in King County during 2014–2019.\textsuperscript{19}

\begin{itemize}
\item[\textsuperscript{14}] Ibid.
\item[\textsuperscript{15}] Ibid.
\item[\textsuperscript{17}] Washington State Employment Security Department, August 7, 2013, \url{https://fortress.wa.gov/esd/employmentdata/reports-publications/occupational-reports/occupations-in-demand}
\item[\textsuperscript{18}] Workforce Development Council of Seattle-King County, \textit{Talent Pipeline Study for Information Technology, Business Services, Finance and Insurance}, Mar 2012, pp. ii-iii.
\item[\textsuperscript{19}] Ibid, p. ii.
\end{itemize}
Within the IT industry, the gap between the projected annual supply and demand of qualified job candidates is undeniable. The WDC projects an annual supply of only 131 qualified candidates versus an estimated annual demand of 415 computer programming jobs in King County from 2014–2019, resulting in an annual shortage of 284 qualified candidates.20

The WDC further observes that “although the Bureau of Labor Statistics (BLS) associates [many of] these jobs with the Associate Degree or Postsecondary award, industry experts emphasize that they only will hire at the BA level, therefore the shortage in this industry is likely felt at the BA level (emphasis added).”21 As entry-level requirements for IT jobs increase, more students will need to continue through the bachelor’s level, and many IT professionals will need additional training and education.

**Changes in IT Industry Education Standards**

Historically, employers have hired new IT employees with technical associate’s degrees for many IT jobs. The Bureau of Labor Statistics now lists the entry-level education requirements for computer programmers as a bachelor’s degree in computer or information. Green River’s local employer survey confirmed this new education requirement. An overwhelming majority (67%) of respondents preferred that new IT hires have a bachelor’s degree.22

Increased education requirements in the IT industry are discussed by the Workforce Development Council (WDC) of Seattle-King County in its Talent Pipeline Study for Information Technology, Business Services, Finance and Insurance. The WDC states: “Although the Bureau of Labor Statistics (BLS) associates [many of] these jobs with the Associate’s Degree or Postsecondary award, industry experts emphasize that they only will hire at the BA level.”23

The proposed BAS degree will prepare graduates for the educational requirements of contemporary IT employers, and will make it easier for graduates to augment their qualifications if requirements continue to increase, following historical trends.

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21 Ibid, p. ii.
22 Green River Community College, Green River Community College Employer Survey, Sep 2012.
23 Workforce Development Council of Seattle-King County, Talent Pipeline Study for Information Technology, Business Services, Finance and Insurance, Mar 2012, p. ii.
STEM Occupations Data
Locally, the WDC of Seattle-King County states that “STEM occupations represent a significant portion of King County employment with almost 200,000 anticipated jobs for 2014…. [and a] projected annual shortage of 3,687 candidates in 2019. The bulk of this shortage is from demand in Information Technology.”24 In the field of computer science, which includes IT, 1,665 Washingtonians completed bachelor’s degrees 2010. However, as Exhibit 3 shows, 1,171 more graduates will be needed annually to meet demands from 2014-2019.25

Exhibit 3

Conclusion: Employer Demand Exceeds Regional Supply of Graduates
The data in this section demonstrate that employer demand for graduates with bachelor’s degrees in IT within Green River’s service area far exceeds the regional supply. The proposed Bachelor of Applied Science degree in IT: Secure Application Development will help to fill this gap.

The proposed BAS degree’s enrollment targets, shown in Exhibit 4, balance employer/community demand against the need to maintain excellent program quality. The headcount assumes a mix of full-time and part-time students. For example, the Year 1 headcount of 19 includes 13 full-time students, three students taking 10 credits, and three students taking five credits, for a total of 16 FTEs.

Exhibit 4

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Headcount</td>
<td>19</td>
<td>46</td>
<td>58</td>
<td>65</td>
<td>69</td>
</tr>
<tr>
<td>FTEs</td>
<td>16</td>
<td>38</td>
<td>48</td>
<td>54</td>
<td>58</td>
</tr>
</tbody>
</table>

Criteria 4: Applied Baccalaureate Program Builds From Existing Professional and Technical Degree Program Offered by the Institution

The proposed BAS degree builds upon the strong foundation of Green River’s existing AAS-T degrees in IT, as well as its new BAS degree in IT: Network Administration and Security.

Green River Community College Associate’s Degrees in IT

Green River has offered associate’s degrees in IT (previously Computer Systems Administration) since 1993. Currently, Green River offers three AAS-T degrees in IT: Computer Support Specialist, Networking, and Systems. Each of these degrees provide basic training in a range of topics. Graduates have succeeded in gaining entry-level jobs in the IT workforce. As employers’ requirements increase, however, graduates of associate-level programs must be able to progress to the bachelor’s level to retain their competitiveness.

Enrollment History

Enrollment in Green River’s IT programs has outpaced the college’s overall growth. As Exhibit 5 shows, IT program enrollment rose from 71 students in 2006-2007 to 231 in 2010-2011.

Exhibit 5

Green River Community College Bachelor’s Degree in IT

In 2013, Green River received SBCTC approval to launch a new BAS degree in IT: Network Administration and Security. The college will begin offering courses for this degree in Winter 2014. The experience and infrastructure created for the existing BAS degree will be invaluable in developing the proposed BAS degree. As the existing BAS degree will be implemented a full year prior to the proposed BAS degree, it will also identify issues in advance to be addressed by Green River and its high school partners, and will serve as a comparative reference to evaluate the proposed BAS degree’s success.

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27 Institutional Research and Planning Department, Green River Community College, Aug 2012.
Criteria 5: Student Demand for Program Within Service Area

Green River conducted a September 2012 survey to assess demand for a BAS degree in IT. Two student groups were surveyed: Green River students enrolled in IT and computer science courses, and high school students in Green River’s service area enrolled in IT-related technical courses. The survey received 311 replies: 112 from Green River students, and 199 from four local high schools. As Exhibits 6 and 7 show, respondents stated a very high level of interest:

As Exhibit 8 shows, lower tuition cost and career-focused degree content were most important:

Survey results are validated by interest in the college’s new BAS degree in IT: Network Administration and Security. Green River has received commitments from prospective BAS students well above its initial enrollment target of 12 FTEs. Even after adjusting for historical

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28 Green River Community College, 2012 Green River IT Student Survey and 2012 Green River Prospective IT Student Survey, Sep 2012.
attrition, the college’s enrollment projections have proven to be conservative, and justify
anticipating an equal or stronger response to the proposed BAS degree in IT: Secure Application
Development. The proposed BAS degree will also benefit from increased student familiarity
with the concept of Green River offering bachelor’s degrees.

Students Graduating with Technical Associates Degrees in the Region
In addition to graduates of Green River’s IT programs, Exhibit 9 shows that, in the 2010-2011
academic year, more than 500 students earned certificates or associate’s degrees in IT from
colleges in the area surrounding Green River.29 Green River will work with neighboring colleges
so their students can seamlessly transition into the proposed BAS degree.

Exhibit 9

<table>
<thead>
<tr>
<th>Institution</th>
<th>Degree(s)</th>
<th>Campus</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Washington University</td>
<td>BAS in IT/Administrative Management30</td>
<td>Des Moines</td>
<td>No significant stepwise upper-division technical content</td>
</tr>
<tr>
<td>DeVry University</td>
<td>B.S. in Computer Information Systems; B.S. in Computer Engineering Tech31</td>
<td>Federal Way</td>
<td>Course-by-course transcript evaluation; very high tuition</td>
</tr>
<tr>
<td>University of Phoenix</td>
<td>B.S. in IT/ Advanced Networking; B.S. in IT/Information Systems Security32</td>
<td>Tukwila</td>
<td>Course-by-course transcript evaluation; very high tuition</td>
</tr>
</tbody>
</table>

29 Institutional Research and Planning Department, Green River Community College, Aug 2012.
31 DeVry University, “Network and Communications Management Degree Program,” http://www.devry.edu/degree-
32 University of Phoenix, “Programs We Offer,” http://www.phoenix.edu/campus-locations/wa/western-washington-
<table>
<thead>
<tr>
<th>Institution</th>
<th>Degree(s)</th>
<th>Campus</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Washington Tacoma</td>
<td>B.S. in Computer Science and Systems; B.S. in Computer Engineering/Systems</td>
<td>Tacoma</td>
<td>Limited credit and course transferability; high tuition</td>
</tr>
</tbody>
</table>

Neither DeVry University nor the University of Phoenix offer clear pathways for students with technical IT associate’s degrees to enter their bachelor’s degree programs. Applicant transcripts are evaluated on a course-by-course basis, typically resulting in at least three years of additional coursework to complete the bachelor’s program. In addition, because DeVry University and University of Phoenix are private institutions, tuition costs are approximately three times that of tuition for an applied baccalaureate degree program at a Washington State community college.34

Exhibit 11 compares the total resident tuition as of September 2012 for a bachelor’s degree in an IT-related major at a Washington State community college, Central Washington University, University of Washington Tacoma, DeVry University, and the University of Phoenix.35 Comparatively high tuition, along with the fact that most students will need to take at least three years of study beyond the associate’s level, put the degree programs at DeVry University and University of Phoenix out of reach for most students seeking applied bachelor’s degrees.

Exhibit 11

<table>
<thead>
<tr>
<th>WA Community College</th>
<th>Central WA University</th>
<th>UW Tacoma</th>
<th>DeVry University</th>
<th>University of Phoenix</th>
</tr>
</thead>
<tbody>
<tr>
<td>$23,024</td>
<td>$33,936</td>
<td>$47,616</td>
<td>$68,684</td>
<td>$70,200</td>
</tr>
</tbody>
</table>

Students with technical associate’s degrees also face roadblocks and limited enrollment opportunities in University of Washington Tacoma’s Bachelor of Science in Computer Science program. Transfer students’ transcripts are evaluated on a course-by-course basis, and typically lack the math and JAVA programming requirements needed to enter the program with junior standing. In addition, University of Washington Tacoma restricts transfer credit to a maximum of 15 credits of CTE courses, so many students transferring with a technical associate’s degree may be deemed to have completed only one year of this program.36 Another barrier is the limited

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34 SBCTC, Central Washington University, UW Tacoma, DeVry University, and University of Phoenix; [http://www.sbctc.edu/college/finance/2012-13UpperDivisionTuitionandFees.pdf](http://www.sbctc.edu/college/finance/2012-13UpperDivisionTuitionandFees.pdf), [http://www.cwu.edu/registrar/tuition](http://www.cwu.edu/registrar/tuition), [http://www.tacoma.uw.edu/enrollment-services/tuition-rates#rates](http://www.tacoma.uw.edu/enrollment-services/tuition-rates#rates), [http://www.devry.edu/assets/pdf/uscatalog/US-Catalog-tuition-chart.pdf](http://www.devry.edu/assets/pdf/uscatalog/US-Catalog-tuition-chart.pdf), and [http://www.phoenix.edu/tuition_and_financial_options/tuition_and_fees.html](http://www.phoenix.edu/tuition_and_financial_options/tuition_and_fees.html); 2012.
35 Ibid.
number of spots in the program. Finally, tuition for this program is much higher than the tuition for students in a BAS degree program at a Washington State community college.37

Central Washington University’s BAS in IT and Administrative Management degree is useful for students who desire a management capstone to their technical associate’s degree. However, because this degree does not provide significant stepwise upper-division technical training, it does not meet the needs of students preparing to entering the workforce as programmers.

The proposed BAS degree will help to satisfy the unmet student demand for bachelor’s degrees in Information Technology in the Green River service area.

Criteria 6: Efforts to Maximize State Resources to Serve Place-bound Students
The proposed BAS degree in IT: Secure Application Development will provide place-bound students in Green River’s service area with access to a convenient, affordable, industry-based, and high-quality applied baccalaureate degree.

There are many place-bound students in Green River’s service area. In a student survey, 37% indicated that one of their top three reasons for wanting to earn a bachelor’s degree at Green River is that they have a job and/or family here and would like to stay local.38 In a survey of prospective students, 30% wanted to complete their education locally because they have a job and/or family here.39

Similar Programs in the Region
As previously discussed in Criteria 5, and as shown in Exhibit 10, there are four traditional and one applied bachelor’s degree programs offered by universities near Green River Community College that are similar to the proposed BAS degree. Each program poses specific challenges to place-bound students in Green River’s service area. Green River’s proposed BAS degree is a superior option because it offers:

- Extensive stepwise lower- and upper-division technical, academic, and soft skills content.
- Ease of transferability of previously earned technical associate’s degrees, resulting in the shortest possible time to bachelor’s degree completion.
- Lowest tuition costs.
- Convenient location and accessibility for public transportation.
- Extensive student support services for veterans, first-generation and/or low-income students, and students with disabilities.

Options That Have Been Explored for Collaboration

Green River Community College is committed to working with other area educational institutions to offer students the best possible articulation and educational opportunities. Green River is also committed to ongoing collaboration with local employers to ensure that graduates have competitive qualifications.

Collaboration with Educational Institutions

Green River’s IT department has successfully collaborated with local baccalaureate-granting institutions since 2005. Green River established articulation agreements for its AAS-T degrees in Information Technology with Central Washington University and University of Washington Tacoma shortly after each institution began offering bachelor’s degrees in IT. Green River continues to work with these institutions to ensure that Green River graduates can transfer the most possible credits to these institutions.

In September 2012, several Green River administrators and faculty met with instructional teams from Bellevue College, Highline Community College, and Tacoma Community College to discuss potential impacts of a Green River BAS degree in IT. The meetings produced no opposition. Also discussed were options for articulation, collaboration, and mutual support in the degree development process.

The positive expectations generated by these meetings has since been realized, as Green River’s implementation of its BAS degree in IT: Network Administration and Security has been welcomed by peer colleges and integrated into the statewide list of applied baccalaureate degrees. Green River faculty and administrators are continuing to meet with representatives of area educational institutions to implement or improve articulation agreements, and to work collaboratively to develop new degrees.

Green River will ensure that the proposed BAS degree has a selection and admission process consistent with an open-door institution. Green River will develop the proposed BAS degree’s curricula to minimize the preparatory coursework needed by students transferring with a technical associate’s degree in IT.

Collaboration with Local Employers

Green River’s IT department has collaborated with local employers for many years. Green River’s IT Advisory Committee is robust, active, and includes representatives from many local and regional businesses. The advisory committee meets several times annually to discuss courses, degrees, skill sets, and changes in the IT industry. The committee’s input ensures that Green River fully prepares its students to compete for high-demand, high-wage IT careers.

Unique Aspects of the Proposed BAS Degree

Green River’s proposed BAS degree has many unique aspects that set it apart from other IT bachelor’s degree programs in the local area:

- **Campus Services for Place-Bound Students:** Green River provides resources including child care, ready access to public transportation, free or discounted bus vouchers, counseling, and classes in multiple formats and at convenient times for working students.
Critical Thinking: Problem-solving and critical thinking are emphasized throughout the curriculum, so that students learn to plan, implement, and troubleshoot hardware and software solutions in simulated real-world environments.

Exceptional Faculty: All full-time faculty in the Green River IT department have master’s degrees in IT or engineering, as well as industry experience. In addition, many full-time and part-time IT faculty maintain industry certifications from Microsoft, Cisco, and CompTIA. This combination of education, work experience, and industry certifications uniquely qualify Green River faculty to offer superior education in state-of-the-art technology.

Extensive IT Program Resources: The Green River IT program has extensive hardware, software, classroom, and industry association resources to enable hands-on learning of all topics in the proposed BAS degree. Hardware and software include Cisco routers and switches, multiple virtualization servers capable of hosting hundreds of virtual machines, and new desktop computers in the IT classrooms. The Green River IT department maintains current memberships in the Microsoft IT Academy, CompTIA Education to Careers (E2C), and Cisco Networking Academy.

Extensive Student Services: Green River students have access to high-quality student services, including privately funded scholarships and emergency aid; veterans’ services, and TRiO Student Support Services for students who are first-generation, low-income, and/or have disabilities.

Soft Skills: Teamwork, communication, and presentation skills are integrated into the curriculum, as these are prized by today’s IT employers.

Strong Links to Industry: Many Green River IT courses are taught by instructors who work in the IT industry. These instructors ensure that students are exposed to current industry best practices, technologies, and standards. The IT Advisory Committee is also an ongoing source of industry news and expertise.

Strong Technical Content: The proposed BAS degree will have significant stepwise upper-division technical coursework in programming topics of greatest interest to IT employers. With input from its IT Advisory Committee, Green River ensures that its curriculum is vital, relevant, and frequently updated to be state-of-the-art.

Student Technology Club: Green River students have a Technology Club that maintains a PC repair shop on the college’s main campus. The shop provides hands-on extracurricular technical and work experience for students. The Technology Club has toured local IT businesses, including Integra Telecom and Watchguard, and hosts industry speakers and high school PC repair competitions.

Testing Centers for Industry Certifications: Green River has Prometric and VUE testing centers for students to pursue coursework-related industry certifications.

Criteria 7: High School Partnerships
Green River has a long record of successful collaboration with area K-12 schools. The partnership to create a 2+2+2 degree pathway, titled Expanding Career and Educational Learning in Information Technology (EXCEL-IT), will initially focus on the Auburn and Kent school districts. In addition to being the largest in Green River’s service area, these districts are diverse and enroll many low-income and under-represented students, as is shown in Exhibit 12:

Exhibit 12

<table>
<thead>
<tr>
<th>Student Population of Auburn and Kent School Districts</th>
<th>May 2012 Student Count</th>
<th>Minority (non-White)</th>
<th>Transitional Bilingual</th>
<th>Free or Reduced-Price Meals</th>
<th>Section 504/Special Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auburn</td>
<td>14,469</td>
<td>47.6%</td>
<td>12.6%</td>
<td>53.6%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Kent</td>
<td>26,975</td>
<td>58.6%</td>
<td>14.1%</td>
<td>51.9%</td>
<td>15.7%</td>
</tr>
</tbody>
</table>

Student preparedness for STEM careers is a grave concern in both school districts. Less than 40% of 10th-graders in Auburn met statewide standards in math and science proficiency in 2010-2011.\(^{41}\) Less than 50% did so in Kent. Without a coordinated effort to engage and support these students, they will continue to fail, and will never have the opportunity to join our region’s IT workforce.

District leadership have committed to full participation in the EXCEL-IT project, demonstrated by their signatures on the attached assurances page. The project will involve all three high schools in the Auburn School District and all five high schools in the Kent School District. These schools have a significant number of experienced, well-qualified teachers able to participate in the EXCEL-IT project, as shown in exhibit 13.\(^{42}\)

Exhibit 13

<table>
<thead>
<tr>
<th>Student and Teacher Population of Participating High Schools</th>
<th>Students</th>
<th>Classroom Teachers</th>
<th>Avg. Years of Experience</th>
<th>% with at least a Master’s Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auburn High School</td>
<td>1,474</td>
<td>93</td>
<td>15.5</td>
<td>65.6%</td>
</tr>
<tr>
<td>Auburn Mountainview High School</td>
<td>1,465</td>
<td>69</td>
<td>14.2</td>
<td>66.7%</td>
</tr>
<tr>
<td>Auburn Riverside High School</td>
<td>1,596</td>
<td>77</td>
<td>14.1</td>
<td>72.7%</td>
</tr>
<tr>
<td>Kent Phoenix Academy</td>
<td>364</td>
<td>41</td>
<td>12.6</td>
<td>26.8%</td>
</tr>
<tr>
<td>Kentlake High School</td>
<td>1,700</td>
<td>86</td>
<td>10.5</td>
<td>60.5%</td>
</tr>
<tr>
<td>Kent-Meridian High School</td>
<td>1,986</td>
<td>108</td>
<td>9.7</td>
<td>71.3%</td>
</tr>
<tr>
<td>Kentridge High School</td>
<td>2,137</td>
<td>115</td>
<td>11.9</td>
<td>68.7%</td>
</tr>
<tr>
<td>Kentwood High School</td>
<td>1,992</td>
<td>99</td>
<td>12.7</td>
<td>71.7%</td>
</tr>
</tbody>
</table>

Green River will also partner with the Puget Sound Skills Center (PSSC). The PSSC offers high college preparatory and career education in 16 fields to high school students, on state-of-the-art equipment and taught by instructors with industry experience. Relevant PSSC programs of study are Digital Media Arts, DigiPen Animation Academy, and DigiPen Video Game Programming.

Criteria 8: Program Design Efforts

Through the EXCEL-IT project, Green River and participating high schools will develop a 2+2+2 degree pathway in which high school students will earn college credit via a “concurrent education” model. Students will progress to an Associate of Applied Science degree in IT at Green River, followed by the proposed BAS degree in IT: Secure Application Development.*

\(^{41}\) Ibid.
\(^{42}\) Ibid.
Concurrent education, 2+2+2 degree pathways, and other “early college” programs have a major and lasting benefit to students. A nine-year comparative study revealed that early college students were 5% more likely to graduate from high school, 9% more likely to enroll in college, and 11 times more likely to complete a college degree. Benefits were even greater for female, minority, and low-income students.43

The project will integrate instruction and student services to meet the needs of first-generation, under-served, and/or part-time students who are interested in professional and technical careers. This population is not served by familiar dual-enrollment programs such as Running Start, which attract students seeking university transfer degrees.

The Puget Sound Skills Center will advise the EXCEL-IT project on how to design concurrent education which is appropriate and effective for CTE programs. The project will adopt evidence-based best practices from the University of Washington’s “UW in the High School” (UWHS) program. UWHS qualifies high school instructors to award college credit in 89 high schools, including four high schools in the Auburn and Kent school districts.44

To guarantee the 2+2+2 degree pathway’s enduring quality, EXCEL-IT will pursue accreditation from the National Association of Concurrent Enrollment Partnerships (NACEP). The NACEP accreditation process is a valuable model because it requires applicants to conduct a thorough self-study of their concurrent education plans, policies, and infrastructure.45 While the EXCEL-IT 2+2+2 degree pathway will not be eligible for NACEP accreditation until the first cohort of students complete their degrees in the proposed BAS degree, the process of developing and documenting policies and procedures, as well as gathering and reporting evidence of student performance, will ensure sustained quality and focus. Resources gained from Green River’s membership in the national Achieving the Dream initiative will help the college to collect and analyze student performance data.

The program development process for the proposed BAS degree and the 2+2+2 EXCEL-IT degree pathway will include representatives from Green River’s Career & Technical Education, Enrollment Services, Information Technology, Instructional Council, Running Start, Student Affairs, South King County Tech Prep, and Workforce Education offices. It will also include three representatives each from the Auburn and Kent school districts, and two representatives from the Puget Sound Skills Center.

This working group will meet monthly from October 2013 – June 2014. Group members will perform individual project-related tasks between meetings, such as revising curricula or reviewing applicable policies. Experience has shown that such a broad, participatory process is essential to resolve the multitude of details in developing a 2+2+2 degree. The EXCEL-IT project’s manager will be Green River’s BAS Program Manager. This is an existing 0.5 FTE position that oversees the college’s BAS degrees in IT.

* The college’s existing BAS degree in IT: Network Administration and Security may eventually be incorporated into the 2+2+2 EXCEL-IT degree pathway. However, the focus of this project will be upon the proposed BAS degree in IT: Secure Application Development, to avoid diffusing and thereby exceeding EXCEL-IT project partners’ capacity.

**Criteria 9: Industry Support for the Program**

The proposed BAS degree in IT: Secure Application Development is amply supported by private industry. As has been stated, Green River’s IT Advisory Committee fully endorses this project, and will pursue opportunities to support students and graduates through professional networking, site visits, internships, and more. Committee members are listed in Exhibit 14.

**Exhibit 14**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony Davis</td>
<td>Senior Systems Engineer</td>
<td>Omax Corporation</td>
</tr>
<tr>
<td>Kevin Eckstrom</td>
<td>Information Assurance Manager</td>
<td>U.S. Navy</td>
</tr>
<tr>
<td>Brian Globerman</td>
<td>Network Engineer</td>
<td>Global Market Insite, Inc.</td>
</tr>
<tr>
<td>Robert Oesch</td>
<td>Assistant Director of Information Services</td>
<td>South Sound 911</td>
</tr>
<tr>
<td>Terry Patane</td>
<td>Director of Information Technology</td>
<td>Costco Wholesale, Inc.</td>
</tr>
<tr>
<td>Michael Raine</td>
<td>Senior Escalation Engineer</td>
<td>The Boeing Company</td>
</tr>
<tr>
<td>Lorrie Rempher</td>
<td>Chief Technology Officer</td>
<td>South Credit Union</td>
</tr>
<tr>
<td>Tim Vader</td>
<td>Process Information, Diagnostics, and Control Manager</td>
<td>Weyerhaeuser Company</td>
</tr>
<tr>
<td>Travis Weger</td>
<td>Information Assurance Technician</td>
<td>U.S. Navy</td>
</tr>
</tbody>
</table>

Green River’s IT program has secured commitments from large and small IT employers such as Cochran, Inc.; MultiCare Health Systems; Praece Strategic Technology Consulting; and Omax Corporation. These companies, which collectively 1,000+ IT professionals in Green River’s service area, have offered to provide the following assistance:

- Identifying skills and competencies, such as common scenarios and professional certifications, to improve students’ learning outcomes and skills.
- Hosting and supervising student interns, who will receive academic credit for planned, structured, time-limited, and relevant learning experiences.
- Providing feedback on project activities, such as new curricula or demonstrations of students’ competency performing critical tasks.
- Facilitating work-based training opportunities for current employees to expand and update their IT skills.
- Giving full consideration for job openings or internal promotions to program graduates who demonstrate the required skills and experience.

IT faculty at Green River college and at partner high schools participate in professional conferences, such as those hosted by the Washington State Center of Excellence for Information
and Computing Technology at Bellevue College, to keep abreast of national and global industry trends in the IT field which will impact the design of the EXCEL-IT 2+2+2 degree pathway and the proposed BAS degree. Green River’s IT program works with professional associations, such as the Washington Technology Industry Association, to connect IT students and graduates with mentorships, internships, and job openings at 600+ IT companies statewide.

**Conclusion**

Green River Community College proposes to develop a Bachelor of Applied Science (BAS) degree in IT: Secure Application Development.

The proposed BAS degree:
- Supports the role, mission, and priorities of Green River.
- Supports and advances the SBCTC’s mission goals and the Washington Student Achievement Initiative’s strategic plan.
- Will help to meet the regional demand for qualified IT workers with bachelor’s degrees.
- Is a natural extension of the AAS-T and BAS degrees in IT offered by Green River.
- Will satisfy demand from students with technical associate’s degrees in IT from Green River and other nearby colleges.
- Provides place-bound students with a convenient, affordable, and high-quality applied baccalaureate degree.
Form A
COVER SHEET
STATEMENT OF NEED

Program Information

Program Name: Bachelor of Applied Technology
Institution Name: Cascadia Community College
Degree: Sustainable Practices
Level: Bachelor
Type: Env Science
CIP Code: 03.01.03
Proposed Start Date: Fall 2013 (Planning Year)
Projected Enrollment (FTE) in Year One: 0
At Full Enrollment by Year: 2015 – 66 FTE
Funding Source: State FTE X Self Support ____ Other X (College Reserves, Grants & Local Funds)

Mode of Delivery
Single Campus Delivery 18345 Campus Way NE, Bothell, WA 98011-8205
Off-site N/A
Distance Learning Hybrid and On-Line

Statement of Need
• Relationship to institutional mission
• Employer demand
• Student demand
• Options for place-bound students

Please see criteria and standard sheet FORM B

Contact Information (Academic Department Representative)
Name: Ron Wheadon
Title: Dean for Student learning
Address: 18345 Campus Way NE, Bothell, WA 98011-8205
Telephone: 425-352-8168
Fax: 425-352-8177
Email: rwheadon@cascadia.edu

Date: 8/8/13
BACHELOR OF APPLIED TECHNOLOGY IN SUSTAINABLE PRACTICES (BATSP)
CIP Code 03.01.03

GENERAL DESCRIPTION: The Bachelor of Applied Technology in Sustainable Practices (BATSP) degree is a baccalaureate degree designed with three distinct audiences in mind: Cascadia Community College (Cascadia) students, who have completed the Associate of Applied Science degree in Environmental Technology and Sustainable Practices (ETSP) and are looking to augment their technical coursework with related academic coursework; students from other institutions, who have completed similar programs, and wish to transfer into a four-year technical degree program in order to add to their general education competencies; and working professionals, who are in search of career-ladder opportunities.

The BATSP is interdisciplinary in nature, and will provide students with the scientific, technical, and societal knowledge that they will need to make informed decisions for themselves and for the communities in which they live, with regard to measuring, monitoring, and recommending strategies to reduce and innovate around resource use. Upon successful completion of this degree a student will be able to:

- Understand patterns and make connections among different disciplines and schools of knowledge, and to integrate studies with personal experience.
- Learn actively and gain comprehensive understanding.
- Think critically, creatively, and reflectively in order to solve problems.
- Communicate with clarity and originality for both personal growth and productive work.
- Interact in diverse and complex environments, and respond to complicated, dynamic and ambiguous situations.
- Design and execute environmentally sensitive and sustainable practices.

Cascadia has a reputation for being innovative, and is linked tightly with sustainable initiatives, as illustrated by its LEED Platinum building. The college is well known in the community and technical college system as being a leader in implementing integrated learning and collaborative teaching strategies, and in the development of assessment and outcomes. Currently, Washington SPI has partnered with Cascadia, funded through the MSP Program, to design sustainable-related curriculum across the state; a big part of the build-out involves aligning the resources with the K-12 Framework for Science education. An additional benefit is that school districts can create sustainable design courses aligned with Cascadia’s ETSP 101, which would potentially increase its enrollment and exposure.

Cascadia is hearing from local industries that they desire bachelor level graduates, as well as opportunities for current workers to upgrade their educational levels in order to qualify for promotions or to move into management levels in sustainability-related fields. Cascadia’s present two-year ETSP program is designed to get students into the workforce at a technician level. They exit the two-year program with specific technical skills, some project management skills, and a basic understanding of Sustainable Practices. The BATSP student will leave the program with the ability to manage complex projects, operate at the management level, and effectively communicate change needed at a company and regional level regarding how sustainable practices are interwoven at all levels of the community.

A student graduating with a BATSP will have career options in government agencies, utility companies, energy efficiency businesses, non-profit organizations, consulting and auditing organizations, water and agriculture industries, sustainable building/construction management firms, and educational institutions.

FORM B: APPLIED BACHELOR DEGREE STATEMENT OF NEED CRITERIA
1. Relationship to institutional role, mission, and program priorities.
Cascadia is known for its strong cultural value of living the basic tenets of a learning college, which are imbedded throughout the curriculum, teaching strategies, academic structures, and operations, and which are reflected in the mission statement: “Transforming lives through integrated education in a
learning-centered community.” A central theme for Cascadia has always been sustainability and green practices. What Cascadia learned from the research regarding the potential offering of a bachelor’s degree is that it is viable and is needed both locally and regionally, and that there is a void that is a perfect fit with Cascadia’s commitment to sustainability and to the mission of transforming lives. Cascadia has the opportunity to bring interested students through the completion of a bachelor’s degree; more importantly, it has an even stronger opportunity to substantially improve the quality of life of incumbent workers through promotional opportunities within their workplace, or the ability to pursue a higher level position outside their current company upon attaining the BATSP. The BATSP degree aligns with Cascadia’s Core Themes:

- Integrated Education: the connection of disciplinary and interdisciplinary ideas to complex contexts, the building of knowledge across the curriculum and co-curriculum, and the application of this education to situations on and off campus.
- Collaboration: The curriculum will be designed to integrate business and industry into the student experience, as well as collaboration across the course offerings. Internships will be built into the core requirements.
- Learning-centered community: provides educational opportunities that engage and support learners and promotes lifelong learning. To foster that engagement and culture the word “learner” includes students, staff, faculty, and community stakeholders.
- Pathways: While the Bachelor-level degree attainment will be beneficial to our graduates in the workforce, it also provides a springboard to move on to the Masters and Doctoral degree pathways.

In February 2013, the Cascadia Faculty Assembly discussed a proposal to offer the BATSP; it was fully endorsed by the Cascadia faculty, including its founding faculty members. On May 20, the Cascadia Board of Trustees approved a motion to offer the BATSP. On May 24, the ETSP Advisory Committee made a motion to approve the offering of the BATSP at Cascadia.

An incredibly rich resource for the college to draw upon for the development of this degree is the Washington Center for the Improvement of Undergraduate Education. Jean MacGregor is the Project Director for the “Curriculum for the Bioregion,” (CfB), an initiative of the Washington Center that aims to prepare undergraduates to live in a world where the complex issues of environmental quality, community health and wellbeing, environmental justice, and sustainability are paramount…Healthy ecological and human communities and a sustainable future world-wide are the greatest challenges facing humanity…” A key leverage point for creating this kind of understanding and citizenship is the college classroom. To reach large numbers of students, the CfB initiative is enabling college faculty to build sustainability concepts and place-based learning into a wide array of undergraduate courses.

The work that has resulted from this center has profoundly impacted the thinking about sustainability and curriculum in the community and technical college system. Cascadia Community College is a partner in this initiative. John VanLeer, Founding Faculty at Cascadia, has been engaged in the CfB program as a member of its steering committee since its inception in 2005. During those eight years, he and many of Cascadia’s faculty have been involved in many CfB initiatives, including faculty learning communities in Biology, Philosophy, English, Anthropology, Chemistry, Sociology and Geosciences. As a result of those learning communities, as well as other partnerships involving mathematics and sustainability, many Cascadia faculty from across disciplines have added and refined connections to sustainability within their existing courses. In light of this, and in recognition that sustainability plays an ever increasing role in academics and throughout society, VanLeer led an initiative to create a sustainability designation (SU) for courses taught at Cascadia.

Statement on Sustainability: Sustainability has multiple interpretations. At Cascadia, sustainability specifically pertains to how humans, acting within their cultural systems, examine how behaviors impact the ability of all world citizens to live healthy and prosperous lives without destroying the environmental systems that are necessary for their existence. It also pertains to the examination of the interplay of personal habits,
cultural norms and natural processes, and the development of the ability to identify unsustainable behaviors as well to envision and implement innovative ways to guide human civilization toward a sustainable future.

At Cascadia, sustainability is a concern and an endeavor that permeates all aspects of the institution. It is closely tied to the College’s mission of being environmentally sensitive and globally aware, as well as to its core values of community, diversity, and environmental stewardship. As a result, Cascadia has implemented a special “Sustainability Designation,” denoted by a capital ”SU” in those course descriptions that identify courses as deliberately including sustainability in the course’s content material. This designation allows students interested in sustainability to self-select courses that will help develop and enrich their understanding of how sustainability impacts people, prosperity, and the planet. The value of the SU designation to the proposed BATSP degree is that coursework necessary for that degree would necessitate additional courses from the humanities, social sciences, and natural sciences, and the SU designation would identify those specific courses that would add relevancy to the program of study.

2. Support of the statewide strategic plans.
The State Board for Community and Technical Colleges (SBCTC) has stated that the community and technical college system will need to increase the number of students who transfer to a baccalaureate program by 20,400, which includes increasing the number of students attending applied baccalaureate programs by 1,400 in the same time frame. SBCTC has also recognized that adding this educational pathway for students would necessarily expand the workforce mission of the system in order to serve the needs of local, state, and regional employers.

Early studies during the creation of Cascadia also delineated the lack of access for four-year degrees for the citizens of North King and Snohomish Counties. Transfer students are comprised of a large portion of the workforce population that is place-bound with jobs and families. Offering this degree aligns with the college’s initiative of “Earning While Learning: An Integrated Path to Higher Education.” The BATSP curriculum will link projects, credits, and experiences with the student’s work site, and with local and regional businesses/industries to give students a realistic picture of the broad concepts of sustainability. With stackable certificates and portable credentials for credibly tested competencies leading to a four-year degree, incumbent workers can “earn as they learn” on the job, making them more valuable to their employer, and more attractive as candidates for higher-level positions. The BATSP is a pathway to Master’s and Doctorate degrees available in the state. Cascadia has developed a partnership with Antioch University, which offers a Master’s program for “Environment and Community.”

In July 2012 the WACTC Education Committee built a position paper that addressed applied baccalaureate needs based upon workforce demand. Their recommendations—and Cascadia’s status—include:

- **Enrolling an average of 22 students per year:** Cascadia’s first BATSP cohort of 33 students maximum would be accepted at the junior level beginning fall 2015. A second cohort will be accepted fall 2016, for a total of 66 students each year.
- **Maintain flexibility to respond to regional high demand-high wage employment needs:** In a 7/22/13 search on the Washington State Employment Security Department (ESD) website, [https://fortress.wa.gov/esd/wilma/wdclists/WDAArea.aspx?area](https://fortress.wa.gov/esd/wilma/wdclists/WDAArea.aspx?area), Snohomish County listed 45 “in demand green” jobs of 168 total in-demand jobs in all occupations, or 27%. King County listed 44 “in demand green” jobs of 179 total in-demand jobs in all occupations, or 25%. The median wage of $46,457 for Washington’s clean economy jobs is higher than the overall statewide median wage of $43,322 (WSU Extension Energy 2011 Study).

- **Coordination with similar industry cluster BAS program staff to minimize duplication and allow greatest transferability:** There is no currently fully approved Bachelor Degree which is on the state board website which is in this industry cluster. However, there is a bachelor’s degree related to Green Buildings which is in the approval process. The Vice Presidents have conferred about the degrees and agree they reach different student audiences, as this degree is designed to educate students...
broadly about sustainable practices and the South Seattle Community College prospective degree is focused on green building and construction, therefore do not duplicate one another. The two colleges plan to create an articulation for students to transfer between the degrees, once the curriculum is shaped.

- **Center of Excellence support:** The Pacific Northwest Center of Excellence for Clean Energy (PNCECE) is a nationally recognized sector strategy model providing strategic coordination for the energy industry’s skilled workforce within five states of the Pacific Northwest. Centers of Excellence serve as a point-of-contact and resource hub for industry trends, best practices, innovative curriculum, and professional development opportunities. PNCECE will be an excellent resource for program and industry review. **PNCECE has committed** the much needed transfer opportunities for students in community and technical college terminal energy programs across the state, and will be an excellent resource for program and industry review. PNCECE’s website ([http://cleanenergyexcellence.org](http://cleanenergyexcellence.org)) lists all energy programs in the state and the five-state Northwest region that we can recruit from.

- **Build program from existing professional and technical programs and pathways in emerging occupational areas:** Cascadia’s BATSP will build on its existing ETSP two-year degree. In 2009, the National Center for O*NET Development (O*NET) identified **45 O*NET-SOC occupations to qualify as Green New and Emerging (N&E) Occupations.** O*NET defines Green N&E occupations as those in which the **impact of green economy activities and technologies is sufficient to create the need for unique work and worker requirements, resulting in the generation of a new occupation relative to the O*NET taxonomy.** This new occupation could be entirely novel or “born” from an existing occupation. **Additionally, 46 candidate N&E occupations in the green economy were found to qualify as Green N&E occupations.**

A resource for Cascadia, the American Association of Community Colleges (AACC) SEED Center Green Genome Framework is designed to help community colleges expand their local green economies by aligning green-focused workforce education programs with other campus and community sustainability initiatives. The framework also supports the recommendations of the AACC’s 21st-Century Commission on the Future of Community Colleges to increase access and completion on college campuses.

**In summary, we can contribute to wage progression for our incumbent workers, create a viable career path for local high school and community college students, and allow our current ETSP students to finish a four-year degree without having to relocate.** With a sector strategy approach, we can create a resilient system of career pathways driven by industry partnerships and their expressed needs, ultimately creating better lives for residents, increased productivity and profitability for business, and economic vitality for the region. By doing this, we are responding to the SBCTC statewide strategic plan of educating more people to higher levels of skill and knowledge, and focusing on collaboration and innovation to improve both student access and success for high school, transfer and place-bound students.

3. **Employer/community demand for graduates with baccalaureate level of education proposed in the program.**

Corporations, factories, farms, small business, giant enterprises are affected by national trends of increasing legislation, regulations, and trends in business practices including the sustainability concerns, an emerging job market that cuts across many industries. Our research has produced a wide array of positions connected with the skills and outcomes envisioned in the BATSP. These positions demonstrate the need for this unique four-year sustainability degree, and these jobs are the leading edge of what is to come in this developing world.

We have been in partnership with local and regional industries as we developed and marketed our two-year ETSP degree. **They have been very supportive of our ETSP Program, but they are also telling us that they desire to hire bachelor level graduates, and they have a need for their current workers to upgrade their educational levels in order to qualify for promotions or to move into management levels. They have encouraged our efforts** to build a four-degree and have expressed interest in collaborating with us to incorporate relevant work experiences and internships into the program. Some of these local companies and organizations include, but are not limited to, Puget Sound Energy, Meng Analysis, City of Bothell, King County
Waste Water Division, Seattle City Light, Veterans Affairs – Washington State, McKinstry, King County Department of Transportation, Avista, ATS Automation Inc., Google, Microsoft, and Silicon Mechanics. The BATSP degree is flexible enough to complement any industry sector where workers’ employability and upward mobility would be enhanced by a sustainability-related bachelor’s degree.

In 2009, as part of its efforts to keep up with the changing world of work, O*NET investigated the impact of green economy activities and technologies on occupational requirements and the development of New and Emerging (N&E) occupations. In conducting the research, over 60 publications on various workplace topics relevant to the green economy were collected and reviewed, including established academic journals, commissioned reports, industry white papers, and governmental technical reports. Additionally, numerous internet sources on the world of work were reviewed. After reviewing existing lists of major green economy sectors, 12 sectors were chosen based on those areas typically discussed in the extant literature: Renewable Energy Generation, Transportation, Energy Efficiency, Green Construction, Energy Trading, Energy and Carbon Capture, Research, Design, and Consulting Services, Environment Protection, Agriculture and Forestry, Manufacturing, Recycling and Waste Reduction, Governmental and Regulatory. Drilling down, results also identified and differentiated these green occupations:

- **64 O*NET-SOC occupations qualify as Green Increased Demand Occupations.** The impact of green economy activities and technologies is an increase in the employment demand for an existing occupation. However, this impact does not entail significant changes in the work and worker requirements of the occupation. The work context may change, but the tasks themselves do not.

- **62 O*NET-SOC occupations qualify as Green Enhanced Skills Occupations.** The impact of green economy activities and technologies results in a significant change to the work and worker requirements of an existing O*NET-SOC occupation. This impact may or may not result in an increase in employment demand for the occupation. The essential purposes of the occupation remain the same, but tasks, skills, knowledge, and external elements, such as credentials, have been altered.

- **45 O*NET-SOC occupations qualify as Green New and Emerging (N&E) Occupations.** O*NET defines Green N&E occupations as those in which the impact of green economy activities and technologies is sufficient to create the need for unique work and worker requirements, resulting in the generation of a new occupation relative to the O*NET taxonomy. This new occupation could be entirely novel or “born” from an existing occupation.

- **Additionally, 46 candidate N&E occupations** in the green economy were found to qualify as Green N&E occupations.

On 1/29/13, Cascadia searched one of many job websites, www.washington.greenjobs.net, for jobs requiring a bachelor’s degree in sustainability related fields. There were 34 separate “green” job categories listed, with “Environmental Jobs” the most populated job-listing category followed by “Sustainability Jobs.” There were over ten web pages of job listings for each of these categories alone.

A 7/22/13 search on the ESD website, https://fortress.wa.gov/esd/wilma/wdclists/WDAArea.aspx?area, Snohomish County listed 45 “in demand green” jobs of 168 total in-demand jobs in all occupations, or 27%. King County listed 44 “in demand green” jobs of 179 total in-demand jobs in all occupations, or 25%. ESD defined “green” as those jobs that promote environmental protection and clean energy, identified by their SOC Codes.

As evidenced in a 2011 study by WSU Extension Energy, and according to the Brookings Institute, "The clean economy grew more slowly in aggregate than the national economy between 2003 and 2010, but newer ‘clean tech’ segments produced explosive job gains and the clean economy outperformed the
nation during the recession.” “…if we accept findings from the Brookings report as one indicator of progress, it appears that early clean tech initiatives have paid off for the state:

- Washington's clean economy ranks 10th nationally among all states.
- Washington’s clean economy makes up 2.8 percent of all jobs in the state, putting it 10th in the nation on this measure
- The median wage of $46,457 for Washington’s clean economy jobs is higher than the overall statewide median wage of $43,322”.

About the Pacific Northwest utility industry, Senator Maria Cantwell has stated: “Our nation is embarking upon the greatest economic opportunity of this century, transitioning to a clean energy economy. Washington State has tremendous potential to lead the nation and the world in this effort… In order to reap the benefits of smart-grid technology, we must have a workforce trained and ready to help us transition to a clean-energy economy…”

4. Applied baccalaureate program builds from existing professional and technical degree program offered by the institution.

Cascadia offers an Associate in Applied Science degree, ETSP. The program provides an excellent pipeline of students who are uniquely positioned to take advantage of the curriculum in the BATSP Degree. These students will have the advantage of early exposure to sustainable practices in the first two years. The two programs (ETSP and BATSP) will share equipment and industry relationships, thereby strengthening degrees. Faculty in ETSP can teach in both degrees, which supports communication between the areas and a smooth transition from the two-year degree into the four-year program.

The two-year ETSP Program degree options (Business, Technology, and Water Quality) are designed to get students into the workforce at a technician level. Students exit the two-year program with specific technical skills, some project management skills, and a basic understanding of Sustainable Practices. The Bachelor degree level student will leave the program able to manage complex projects and to operate at the management level, and will have a deep understanding of Sustainable Practices. The BATSP four-year graduate will also be able to effectively communicate change, needed on a company and regional level, regarding how sustainable practices are interwoven at all levels of the community.

The ETSP Program has completed three full years and has completed spring quarter of the fourth year. As of the last enrollment report, spring 2013, the enrollment surpassed the enrollment for summer quarter a year ago, and in comparison to the same time last year, we are over 100% enrolled.

Big picture 2009-2012:

- There have been 1,099 course enrollments in ETSP courses since 2009; 1,028 have completed (94%), 984 students (90%) have passed with an average GPA of 3.51 for a 96% success rate (2.0 or better).
- There have been 212 individual students enrolled in the ETSP Program since 2009; 42 have earned an academic award (20%).
- At-a-glance student profile for 2009-2012 is:
  - White = 71%, Students of Color = 15%, and Unknown = 15%
  - Employed = 29%; dislocated workers = 35%; unemployed = 37%
  - High school grads = 30%; some college = 45%; degree or cert = 18% (6% have a bachelor's degree), and the remaining reported as other/no response.
ETSP Quarterly Enrollments and Completion 2011-12

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<tr>
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<th>ETSP Courses</th>
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<td>Enrollments</td>
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<td>68</td>
<td>98%</td>
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<td>Winter</td>
<td>52</td>
<td>94%</td>
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<tr>
<td>Spring</td>
<td>73</td>
<td>97%</td>
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5. **Student demand for program within the region.**
There have been 1,099 course enrollments in the two-year Cascadia ETSP courses since 2009; 1,028 have completed (94%), 984 students (90%) have passed with an average GPA of 3.51 for a 96% success rate (2.0 or better). There have been 212 individual students enrolled in the ETSP Program since 2009; 42 have earned an academic award (20%). The at-a-glance student profile for 2009-2012 is: White = 71%, Students of Color = 15%, and Unknown = 15%; Employed = 29%, dislocated workers = 35%; unemployed = 37%; High school grads = 30%, some college = 45% degree or cert = 18% (6% have a bachelor’s degree), and the remaining reported as other/no response.

**Adults with “some college but no degree”** who would like to “close the loop” and complete a bachelor’s degree – there are 26 million Americans in this demographic, who would benefit on a national scale from a postsecondary degree or credential. According to the US Census Bureau, there are over one million adults in Washington State (or, 25% of our population) **who fit this demographic; with just over 400,000 adults in Snohomish and King Counties combined. According to the US Census Bureau, there are over 150,000 adults in Snohomish and King Counties who possess Associate’s Degrees as their highest level of educational attainment.** Specifically, in the Washington State Community and Technical College system there are at least fifteen programs across the state in energy and sustainability related programs whose graduates could easily transition to this degree.

**PNCECE** will provide the much needed transfer opportunities for students in community and technical college terminal energy programs across the state, and will be an excellent resource for program and industry review. PNCECE’s website ([http://cleanenergyexcellence.org](http://cleanenergyexcellence.org)) lists all energy programs in the state and the five-state Northwest region that we can recruit from.

We also have a good draw from our area high schools; many of these students want an early jump on high-demand skills, certifications, internship experiences, and clear pathways to postsecondary degrees. In 2010, Bothell High School alone had 500+ graduating seniors. Cascadia continues to increase visibility for this group in open houses, and in presidential connections to superintendents, principals, and parent teacher associations. In 2011, a committee of stakeholders led by **OSPI in partnership with E3 Washington** (Education, Environment, Economy) released “The Environmental and Sustainability Literacy Plan”. The E3 Washington plan defines a 10-year vision that will increase K-12 students’ environmental and sustainability literacy and enhance their academic achievement. These types of initiatives encourage and educate K-12 students in sustainable principles and peak their interest in pursuing higher education.
This bachelor’s degree also attracts adults with associate’s degrees in a variety of fields, who desire upward mobility and organizational advancement. Workers already employed in fields concerned with sustainability would benefit from a series of courses focused on high-demand, promotable skills. This group of students would comprise a new targeted set of students for Cascadia. Cascadia has added recruiting staff which allows a greater contact with the area high school. Given our excellent STEM pipelines which are already established, we expect an increased number of high school graduates who will be entering this education track.

Another strong group of new students are incumbent workers in fields associated with sustainability. According to the US Census Bureau, of the 3,000,000 workers currently employed in Washington State, more than 1,000,000 are employed in fields directly concerned with sustainability issues, such as agriculture, forestry, mining, construction, manufacturing, transportation, waste management, recreation, and other science-related fields. If there is currently no degree offered in “sustainability” within Washington State, but there is a rising tide of accountability issues related to sustainability within the economic, ecological and social sectors of our communities, it is conceivable that there is a growing demand (if not pent-up demand) for workers with sustainability skills and mindsets. Veteran students are not a large part of our student body, currently, and this degree may draw more to our college. Of the 4,400 US Veterans living in the cities of Bothell, Kenmore and Woodinville combined, a significant percentage of this adult population would likely benefit from further education within a professional-technical field, and could be poised for greater upward mobility via training in sustainability skills.

Cascadia is confident that there are significant numbers of potential students from a variety of settings, both educational and workplace. The chart below illustrates a short five-year projection for enrollments with Student/Faculty ratios. More detail on the five year budgets are included in Appendices 3 and 4.

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<td>Student/Faculty Ratio</td>
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<td>17.5</td>
<td>19.3</td>
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Five Year Plan: The financial sustainability of the BATSP is undergirded by the simple fact that while the program’s cost structure is that of a community college, students participating in the program will pay university level tuition. This means that the program is financially viable with relatively modest levels of enrollment. The table in Appendix 3 details the financial results of the planned level of enrollment. Appendix 4 shows the filled capacity potential. The plan includes an additional full-time faculty, Associate Faculty, library staff support, and a half-time advisor. The advisor would assist current staff in recruitment and retention of students. The Vice President and Dean’s positions would be impacted the most during program development, and as the program was implemented, the program lead function would be shifted to the full-time faculty or create a new Director position for the program (depending on enrollment, additional curriculum development, and overall impact). The potential increased revenue could provide funding to add to student support services as needed, most likely in the admissions area as students apply and are accepted and, as enrollment increases more help in advising and program coordination.

The program will be considered successful when the enrollment numbers match or exceed the planning numbers, when graduates meet the program learning outcomes (demonstrated by passing grades and degree attainment), but the ultimate measure of success will be successful placement in jobs or promotions for the incumbent worker graduates. The program will be assessed on these criteria quarterly with regular reports to the Executive Team for the first three years.

The marketing plan will include:
- The development of materials: a program brochure describing the program requirements and potential positions upon graduation; a plan for mailing in area; inclusion in statewide resources at the State Board
for Community and Technical College website, Center of Excellence for Clean Energy, and WASTEM. We are researching other sites for possible use.

- A series of planned in-person visits (with publication materials) to feeder program schools in Washington, Idaho, and Oregon. We will use technology to do virtual visits as well.
- The development of a website page for the program.
- The creation of a paid advertising campaign to include digital mail, online click-through ads in major papers, ads in business journals, ads in Google search.
- The development of pitches for unpaid advertising in print and radio.
- In-person meetings with area industry and feeder colleges to introduce the program and recruit for employees who may be seeking advancement or other educational opportunities.

6. **Efforts to maximize state resources to serve place-bound students.**

In a January 2013 STEM survey, it was reported that Governor Jay Inslee had embraced improving STEM education as a part of his plan to create jobs in Washington State, which ranks first in the country in the concentration of STEM jobs, but which also lacks the homegrown candidates to fill many of those positions. An estimated 30,000 STEM jobs will go unfilled in the next five years due to a lack of qualified candidates. Addressing STEM education with layering of sustainability embedded in the curricula maximizes resources and provides opportunities for place-bound students who need further STEM education to move forward.

Cascadia’s ETSP and BATSP Programs will share equipment and industry relationships, thereby strengthening degrees. Faculty in the ETSP Program can teach in both degrees, which supports excellent communication between the areas and a smooth transition from the two-year degree into the four-year program, and which, again, maximizes resources.

Transfer students are comprised of a large portion of the workforce population who are place-bound with jobs and family responsibilities. The BATSP curriculum will link projects, credits, and experiences with the student’s own worksite wherever feasible, and with local and regional businesses and industries to give students a realistic picture of the broad concepts of sustainability.

The degree will be aimed at the working student population, and the curriculum will be delivered via online and hybrid formats. The courses will be taught in an integrated manner, both within the core requirements and integrated with area industries related to the degree concepts. We expect that at least 20% of our students will be incumbent workers, with a goal of moving up within their current organization. The curriculum will be designed to link projects, credits, and experiences with the student’s worksite. With stackable certificates and portable credentials for credibly tested competencies driving toward the four-year BATSP, incumbent workers can “earn as they learn” on their job, making them more valuable to their employer, and more attractive candidates for higher-level positions. The BATSP Degree also provides a pathway to masters and doctoral programs available in the state. Cascadia has developed a partnership with Antioch University, which offers a master’s level program in “Environment and Community.”

Job seekers, including place-bound workers, are looking for careers that earn a family wage. More and more, this translates into jobs requiring post-secondary education. Today’s modern workforce never stops learning new skills. Baccalaureate degrees for professional/technical associate degree graduates offer career advancement opportunities that meet the needs of both workers and their employers. Increasing “professionalization” partly explains employer interest in bachelor’s options for technical workers in some fields. As occupations mature, certification requirements expected for career advancement often increases. Several management pathways exist in the private baccalaureate sector in Washington, but at this time no management sustainability pathways exist at public institutions in this state. The Cascadia BATSP Degree will fill this gap.
7. **High school partnerships - College may partner with more than one high school.**
Cascadia has several well-established relationships with area high schools, who will partner with us to increase the STEM enrollments in our region. **Our high school partners are not just one high school, but whole school districts, comprising many high schools.** These deep relationships will serve the college well in being able to build a strong STEM pipeline from area high schools to Cascadia to complete both an Associate of Science degree and a Bachelor’s degree. **Our market penetration for area high schools is excellent and we are continuing to actively recruit students, having hired a new position dedicated to this task.**

**Cascadia has an ETSP Program Advisory Committee** comprised of veterans, industry, union, government, and education. Along with the University of Washington and Tech Prep College Connections, the school districts of Northshore and Lake Washington/Redmond High School are members. These educational partners and advisory members will work closely with Cascadia to identify, build and market pathways to the BATSP. This committee has been instrumental in shaping the proposed Bachelor of Applied Technology in Sustainable Practices. The high schools will play a role in developing and implementing the proposed Bachelor’s degree.

**The Northshore School District** has been an impressive leader in building and offering STEM sustainability-related courses, along with strong industry partnerships. A partial listing of courses and awards includes:

- Council of Educational Facilities Planners awards Environmental and Sustainability Education Teacher for Mobile Green Learning Lab where high school students teach elementary students about energy
- Secondary Academy For Success (SAS) wins first ever 2012 US Department of Education Green Ribbon Schools Award
- SAS wins $10,000 National Environmental Education Foundation Award
- SAS awarded OSPI STEM Lighthouse School Award
- NSD Career and College Readiness program award through STEM for the development and implementation of a Junior High Sustainable Design program.
- NSD Career and College Readiness department awarded STEM grant through OSPI for the Sustainable Engineering & Design program.

Northshore’s flagship program, Sustainable Engineering and Design Course, offered as a part of the district’s SAS Career and Technical Education program, is well known for its cutting edge connection with Industry partners such as McKinstry and Dykeman, Inc., and its mobile green learning lab, the Green Machine, that teaches elementary students about energy. Cascadia has a partnership with North Shore School District for high school students who complete their Sustainable Engineering class with a grade of B or better to receive credit for ETSP 101, “Introduction to ETSP.” There are also several other opportunities for Cascadia and Northshore to identify pathways from the high school to Cascadia’s ETSP and BATSP – 2+2+2.

**Another STEM-related partnership with Northshore School District has been operating for five years.** Megan Luce, full-time faculty member, and Michelle Gruber from the Northshore School District have fostered faculty conversations about math curriculum alignment and standards. The outcome is that high school students are accomplishing math skills remarkably well and are able to move into college level math classes earlier. They also reported on the numerous grants they have been able to secure, which has assisted in their obtaining release time to complete the project. Another positive outcome for students and advisors is that students are now allowed to use their transcript for math placement when enrolling at Cascadia, instead of completing math placement testing.

**Cascadia’s Dr. Jessica Ketcham-Weber, Associate Dean for Student Learning, works directly with STEM School faculty** to develop curriculum and align programs and courses. Dr. Ketcham-Weber facilitated workshops with faculty cohorts in 2012-2013, drawing upon Cascadia’s approach to integrated learning and curriculum design for integrative assignments to create a distinct pedagogical pathway for students moving from the STEM School to Cascadia. **STEM School Principal Cindy Duenas** says that if it means more opportunities for program development and more defined pathways for students, “I totally support this degree!!”
Another strong partner is the Lake Washington School District. By 2014-15, all Lake Washington School District High Schools will offer “Signature Programs,” which are thematic, interdisciplinary three-period instructional blocks organized around career clusters and pathways. These courses combine rigorous academics and “real world” application of learning with student academic credits. Dr. Traci Pierce, Superintendent, cited the demand for workers trained in the STEM fields as one of the reasons for this approach. The first programs will launch in the 2013-14 school year at Redmond High School, Juanita High School, Emerson High School and the STEM School, in the following areas:

- Emerson High School: Sustainability
- Juanita High School: Global Health
- Redmond High School: Global Health: Policies, Problems & Solutions
- STEM: Environmental Engineering & Sustainable Design; Digital Media and Game Design; Forensics/Psychology

Cascadia finalized an articulation agreement on June 13, 2013, with the Lake Washington School District. Mike Town’s class, “Environmental Engineering and Sustainable Design (EESD) 2013 and ETSP 101 are now linked. Students need to earn a grade of B or better for the course to be placed on the college transcript.

ETSP Advisory Committee Member and Redmond High School environmental science teacher Mike Town was inspired to create the Cool School Challenge. Schools that take the challenge are reducing the carbon footprint of their campus through classroom-by-classroom competitions. The Cool School Challenge provides another opportunity to build a 2+2+2 pathway to the BATSP and to support increasing the STEM enrollments in high school and college in our region.

ETSP Advisory Committee Member Tanya Rettinger is the Director for the Tech Prep College Connections program housed at Bellevue College – North Campus. The Connections program (the old Tech Prep initiative) develops articulation agreements with school districts and community colleges. We have an agreement with Lake Washington School District and Northshore School district for the ETSP 101 class and if the student finishes the corresponding class at the high school with a grade of B or better they are awarded credit for the ETSP 101 which is 5 credit hours. The school districts she works with are: Bellevue School District, Edmonds School District, Issaquah School District, Lake Washington School District, Mercer Island School District, Northshore School District, Riverview School District, Shoreline School District, and the Snoqualmie Valley School District. The community colleges she networks with are Cascadia, Bellevue College, Lake Washington Institute of Technology, and Shoreline Community College.

We will, as a part of this grant, develop more articulations with the listed schools related to the Bachelor’s degree curriculum, paralleling the work, building upon the structures and relationships we have already long established. Students from area high schools already transition into the two year ETSP program, so this will simply be a stronger link with more options for students.

8. Program design efforts
Northshore School District and Lake Washington School District/Redmond High School are ETSP Advisory Committee members who will work closely together to align curriculum and pathways. These members have already reviewed the research data for the bachelor’s degree, so are already familiar with the material. As noted, there are many opportunities for high schools and Cascadia to build critical and relevant pathways to this 4-year degree. Northshore is exemplary in its focus on both STEM and sustainability curriculum, and will be a great asset to Cascadia in advising and collaborating on curriculum development and pathways for the 2+2+2 program. In 2012, Northshore School District’s Secondary Academy for Success (SAS) was named a Lighthouse school by OSPI. Lighthouse schools “serve as resources and examples of how to combine the following best practices” – practices that will also be built into the Cascadia BATSP:

- Small, highly personalized learning communities;
- An interdisciplinary curriculum with a strong focus on science, technology, engineering and mathematics, delivered through a project-based instructional approach; and
• Active partnerships with business and local community to connect learning beyond the classroom.

These best practices are already imbedded into the teaching culture at Cascadia such that our faculty and administration regularly develop and deliver integrative education trainings, lead workshops on interdisciplinary and STEM/Humanities partnerships, and present regionally and nationally on our high-impact approaches. Both the SU designation, as well as growing relationships between STEM and Humanities faculty at Cascadia and UWB will provide more opportunities for BATSP students to receive a nationally recognized education.

Cascadia has been chosen by The Advanced Technology Environmental and Energy Center (ATEEC, at www.ateec.org) to conduct a conceptual DACUM / JTA technical assistance project. Five colleges this year have been selected to participate in the DACUM / JTA Project and receive ATEEC’s assistance in facilitating workshops to analyze an occupation for new program development or to update/validate an existing program. Cascadia was chosen in the national competition to receive this assistance. We are working with Jeremy Pickard, PhD from Eastern Iowa Community Colleges. International Education Director and ATEEC Associate Director and is located in Davenport, Iowa.

Cascadia was a partner in an NSF Grant, which concluded this year, with the outcomes of producing Skills Profiles for Program/Project Managers and Profile was with Commercial Building Analysis professionals, all with professionals working in the industry. Cascadia included approximately 75 industry professionals from the Sustainable Practices workforce in this process. The groups determined the Critical Work Functions, the Key Activities and the Core Knowledge and skills for each Critical Work Function, which enables the college to accurately develop curriculum which meets industry needs. This data will also be included in the collaborative design process. The industry contacts made during this process were invaluable.

As a part of the design process during 2013-2014, representatives from each of the high schools will be included in the meetings planned for Fall quarter 2013 to identify topics, create courses, and to refine outcomes for courses and program-level work (including capstone activities and internships). Faculty will collaborate on curriculum alignment from the beginning, so students will have smooth transitions from high school to college. Part of the articulations in the future will include using high school transcripts for evidence of progress on sustainable practices and related subjects, reducing the barriers for students. Cascadia is setting up a DACUM (Developing A Curriculum) process to work with industry, which will include high school personnel, and college personnel from Bellevue College, Lake Washington Institute of Technology, and Shoreline Community College, which will result in the formation of the curriculum topics, sequence, articulation agreements, and detail out the high school pathways.

9. Industry support for the program.
Cascadia’s ETSP Advisory Committee, comprised of veterans, industry partners, union representatives, government agencies, and educators, provides the following: a vehicle to employ a sector strategy approach to address the emerging skills gap within the sustainability field, a means to listen, respond, and collaborate with industry, and a means to facilitate alignment with county and local government programs and resources. The overall goal is to effectively integrate supply-side and demand-side agendas for regional economic competitiveness.

Several industries serve on the ETSP Advisory Committee including Puget Sound Energy, Seattle City Light, McKinstry, and MENG Analysis. Government is represented with King County DOT, King County WW Treatment Division, City of Kirkland, and City of Bothell. Veterans Conservation Corps, NW WA Electric JATC, IBEW Local 46 and Tech Prep College Connections also serve on the committee. Their collective input will ensure that the curriculum is designed to respond to business and industry needs. A complete list of members and industries they represent is included in the appendix.
A solid example of sector strategies at work, OSPI and Northshore School District recently praised McKinstry for its partnerships with K-12 schools. McKinstry has played an active role in helping students acquire the necessary life-skills training to participate in the emerging green economy. Additionally, the company has been a driving force behind curriculum development for the Northshore SAS Environmental Technology and Design course, which will be used this fall to erect a new SAS building.

Industry has been very supportive of our ETSP, and they are encouraging our efforts to build a four-year degree. They include, but are not limited to, Puget Sound Energy, Meng Analysis, City of Bothell, King County Waste Water Division, Seattle City Light, Veterans Affairs – Washington State, McKinstry, King County Department of Transportation, Avista, ATS Automation Inc., Google, Microsoft, and Silicon Mechanics. They have expressed interest in collaborating with us to incorporate relevant work experiences and internships into the program. **The program and curriculum as a whole will be tightly linked with industry in order to give students a realistic picture of the broad concepts of sustainability in many forms: water resources, smart grid, energy auditing/monitoring, and construction.** ATS Automation Inc., is an Energy Management Control System and Facilities Systems Contractor that provides innovative HVAC solutions, building technologies and integration solutions and energy services in the region. Their CEO has expressed interest in being part of our team to run the conceptual DACUM.

The Pacific Northwest Center of Excellence for Clean Energy (PNCECE) is a nationally recognized sector strategy model providing strategic coordination for the energy industry’s skilled workforce within five states of the Pacific Northwest. Centers of Excellence serve as a point-of-contact and resource hub for industry trends, best practices, innovative curriculum, and professional development opportunities. PNCECE will be an excellent resource for program and industry review.

To support both Cascadia and industry as we collaborate to build the BATSP Degree, organizations such as the Association for the Advancement of Sustainability in Higher Education, and the Disciplinary Associations Network for Sustainability will be valuable. Cascadia is already a partner of the highly rated Workforce Development Council Snohomish County (WDCSC). This large group of connected professionals can assist in identifying sector partners and collaborations while building the BATSP. The Washington Clean Technology Alliance (WCTA) is the sole provider of the unified voice of the clean tech business sector to public policy makers and advocates for policies that are supportive of clean tech businesses, jobs and products. WCTA works with educational institutions, workforce development councils, and members.
2013-2014
Applied Baccalaureate Grant

Renton Technical College
BAS Application Development

Washington State Board for Community and Technical Colleges
1300 Quince St. SE
P.O. Box 42495
Olympia, WA  98504-2495
Form A

COVER SHEET
STATEMENT OF NEED

Program Information

Program Name: Application Development
Institution Name: Renton Technical College
Degree: BAS Application Development Level: X Bachelor Type: Science
CIP Code: 11.0103

Proposed Start Date: Fall 2014
Projected Enrollment (FTE) in Year One: 10 At Full Enrollment by Year: 20
(# FTE) (# FTE)
Funding Source: State FTE X Self Support Other

Mode of Delivery
Single Campus Delivery Renton Technical College, main campus

Off-site (enter locations)
Distance Learning: Some courses offered either fully online or hybrid

Statement of Need
- Relationship to institutional mission
- Employer demand
- Student demand
- Options for place-bound students

Please see criteria and standard sheet FORM B

Contact Information (Academic Department Representative)
Name: Dante Leon
Title: Dean, Automotive/Technical Programs
Address: 3000 NE Fourth Street
Telephone: 425-235-5831
Fax: 425-235-5832
Email: dleon@rtc.edu

[Signature]
Chief Academic Officer

Date 8/8/13
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Criterion 9: Industry Support of the program. ................................................................ 18
Program Description

Renton Technical College (RTC) proposes to develop a Bachelor of Applied Science (BAS) degree in Application Development, a rapidly evolving discipline in computer science and software development. This STEM discipline has consistently shown high demand for qualified workers. The program is a 90+ -credit-hour degree designed to meet the educational goals of students who have earned an AAS in IT or Computer technology from RTC or from another regionally accredited institution. Funding from this grant will enable RTC to expand its connections with the Renton and Kent School Districts and provide a seamless transition from their STEM computing programs into our AAS and proposed BAS. This proposed BAS degree will provide graduates with a deep technical foundation in administration and advanced computer science topics, such as software development, enterprise application, database design, web development, and systems analysis. In addition to a strong technical foundation, graduates will have received instruction in general education topics in science, communications, and quantitative reasoning; and have gained extensive experience working in teams, making presentations, and authoring documentation for software development. The degree will prepare a graduate to work as an applications analyst, database administrators, applications developer, computer systems analyst, software designer, and in some cases lead developer or manager, in a wide range of organizations and industries. Traditional course delivery and online-hybrid learning formats will be used. RTC is prepared to enroll junior level students beginning in Fall 2014.

Criterion 1: Relationship to institutional role, mission, and program priorities

College Profile: Renton Technical College (RTC) is one of 34 colleges in the State of Washington operated by the State Board for Community and Technical Colleges; 53% of our students are working adults and 28% are immigrants. Our service area encompasses Central and Southeast Seattle and South King County. Our mission is to prepare a diverse student population for work, fulfilling the employment needs of individuals, business and industry. A dedicated and talented team of 88 full-time and 161 part-time faculty prepare students for immediate employment, as well as provide a foundation for higher learning and career advancement on the job, in formal apprenticeships, and at four-year institutions.

Significantly, 400 industry leaders serve on 40 program advisory committees to recommend instructors, assess the adequacy of curriculum, educational materials and equipment, assist in placement, evaluate programs and specify training needs.

RTC offers 80 Certificate and 36 Associate Degree programs, plus 11 transfer associate degrees. STEM occupations have been a focus for RTC and we currently offer an Associate of Science – Transfer (AS-T) in Electrical and Computer Engineering Technology MRP and an Associate in Science in Technology (DTA/MRP). Long recognized as a leader in apprenticeship training, RTC also houses the Washington State Construction Center of Excellence, which has responded to industry changes by
adopting a focus on Green Building. Programs are continually improved based on emerging disciplinary knowledge, student needs and regional workforce needs.

From its roots as a World War II training facility, and through decades of partnerships with leading employers and labor unions, Renton Technical College’s core mission has been to serve individuals and industries through high-quality professional/technical programs that constantly evolve to meet the changing employment needs of the community. Current programs reflect the range of demand industries in the Puget Sound region: RTC prepares students for occupations in Allied Health, Information Technology, Manufacturing, Product Service, Culinary Arts, Business and Education;

RTC provides training, retraining and upgrading for persons seeking marketable job skills or upgrading current skills. Mathematical, scientific, communication and human relation skills are integrated into practical instruction. The College has one of the highest program completion rates in the state; and is the only technical college in Washington to have achieved “Leader College” status from the Achieving the Dream initiative.

In August 2011, the RTC Board of Trustees approved 5 core themes for the college that represent the fundamental aspects of the college mission: Workforce Education, Academic Education, Basic Skills, Student Access and Diversity, and College Stewardship. The BAS degree program in Applications Development supports these themes, as it expands the college’s capacity to support students from diverse backgrounds and starting points through a viable career pathway, using innovative instructional methods. For example, the alignment between the Workforce Education Core Theme objectives can be seen in this chart:

<table>
<thead>
<tr>
<th>Core Theme</th>
<th>Objectives</th>
<th>BAS in Applications Development Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce Education</td>
<td>1. Students complete workforce programs</td>
<td>• Articulates with partner high schools and AAS programs.</td>
</tr>
<tr>
<td></td>
<td>2. Workforce programs are viable based on continued student enrollment</td>
<td>• Hybrid delivery increases accessibility and engagement.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• UDL, Reading Apprenticeship methods support success for diverse learners.</td>
</tr>
<tr>
<td></td>
<td>3. Workforce programs are viable based on industry demand and standards</td>
<td>• Industry partnerships ensure relevance of curriculum to workplace, facilitate job placement.</td>
</tr>
<tr>
<td></td>
<td>4. Workforce completers obtain jobs in appropriate industries at a competitive salary</td>
<td>• BAS degree provides pathway to a high wage career.</td>
</tr>
</tbody>
</table>

The College is committed to going even deeper to ensure academic achievement and career success in the global economy. The BAS in Application Development is the right next step for the college and the students we serve.
Criterion 2: Support of the statewide strategic plans.
Standard 1: Describe how the program will support SBCTC Mission goals outlined in the Mission Study and WSAC policies and goals for higher education as articulated in the Strategic Master Plan for Higher Education.

The proposed BAS degree in Application Development is fully aligned with and advances the SBCTC Mission Study goals and the Washington Student Achievement Council Call To Action for higher education.

SBCTC Mission Study Goals:
The Washington State Board for Community and Technical Colleges emphasizes that “our state’s most urgent need is to educate more people to higher levels of skill and knowledge.” 1
The Twenty-year Action Plan includes a call to (#2) “Close the statewide skills gap for technically trained workers; 2 (#4) Contribute more to the production of baccalaureate degrees; 3 (#9) Promote the adoption of web-based and mobile technology tools for eLearning and online student services. 4 Additionally the SBCTC Strategic Technology Plan urges a focus on adults who are already in our workforce, including immigrants, mid-career students seeking new skills; while addressing the needs of place-bound students, and those uncomfortable in traditional classrooms.

WSAC Strategic Action Plan:
The ten-year roadmap to overcome obstacles to education in Washington state outlined in the Washington Student Achievement Council document, Critical Crossroads: A Call for Action encourages levers for fundamental change in 5 areas; readiness, affordability, institutional capacity student success, capturing the potential of technology, and stable and accountable funding. The stated timeline for achieving definitive progressive steps in these areas is April-Sept 2013. And the initiative alerts us that “despite comparatively high completion rates among those who enter our institutions, Washington still lags the nation in overall degree production. Washington ranks 42nd in baccalaureate degree production and 36th in graduate and professional degree production;” 5 and significantly “The Council believes that online learning can play an important role in addressing the barriers of affordability and student readiness. The Council recognizes the need for institutions to integrate these learning products into their curriculum and to ensure that they offer quality content.” 6

The RTC proposed BAS degree in Application Development responds to the “call to action” expressed in both strategic plans. The design includes online components, and will provide future workers with a higher level of skill and knowledge than can currently be obtained through an AAS in Computer Science from RTC. In this program RTC will build capacity in STEM fields, work collaboratively with high schools to support college readiness and establish career pathways in high demand occupations. e-Learning formats will support place-bound and working students. This BAS in Application Development will increase the number of baccalaureate educated students, and serve workforce needs. It does this by using personalized learning formats, (cohort classes, UDL, evening and hybrid classes), that have a track record of success breaking down barriers of geographic isolation, cost, and special learning needs. Graduates will be able to use their advanced skill and knowledge to provide vital technology services for our region’s businesses, governmental agencies, and non-profit organizations, strengthening our state and local economy. All of which will help to position Washington state for preeminence in the global economy.

Criterion 3: Employer/community demand for graduates with baccalaureate level of education proposed in the program.

Standard 1: Employer demand must exceed regional supply of graduates with relevant degrees.
Standard 2: Demand must be based on data sources including but not limited to local employer survey, traditional labor market data, industry data, trade association data, and other transactional data. Please provide evidence of the gap between the number of program graduates versus the number of job openings locally and regionally.

Renton Technical College used a number of different sources to examine the demand for baccalaureate degrees in application development. The college assessed both current demand and projected growth of demand through the following:

- Use of EMSI analytic data for field occupations requiring a similar degree
- Conducting a series of surveys aimed at gauging interest from current students and recent graduates of computer science and networking programs at RTC as well as surveying advisory committee members for field expert testimony of need.
- Analyzing short and long-term employment opportunities through the Bureau of Labor Statistics and the Employment Security Department

Results of these queries is demonstrated in the below graphs and charts.

I. According to the Washington Department of Employment Security, the following occupational titles that would require a degree similar to our proposed BAS are in demand (i.e. growing at faster than average rates) in our geographic region.

<table>
<thead>
<tr>
<th>Demand</th>
<th>SOC#</th>
<th>Occupation title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>151121</td>
<td>Computer Systems Analysts</td>
</tr>
<tr>
<td>Demand</td>
<td>151141</td>
<td>Database Administrators</td>
</tr>
<tr>
<td>Demand</td>
<td>151132</td>
<td>Software Developers, Applications</td>
</tr>
<tr>
<td>Demand</td>
<td>151133</td>
<td>Software Developers, Systems Software</td>
</tr>
</tbody>
</table>

II. Upon further research, we have found demand for software developers with Bachelors degrees in our area. The following information was retrieved from [http://www.burning-glass.com/index.html](http://www.burning-glass.com/index.html). Burning Glass is a research firm that “supplements BLS data with real-time jobs data” and through analytic tools determines “the experience, education, knowledge, and skills in supply and demand” in any given region.
III. Data from EMSI for our service areas (King, Pierce, Thurston and Snohomish Counties) indicates a growing trend in both the demand for educational programs and qualified candidates for employment in the Application Development field.

Table 3: Labor Market Demand

Table 4: Regional Trends

<table>
<thead>
<tr>
<th>Region</th>
<th>2012 Jobs</th>
<th>2022 Jobs</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>King, Pierce, Snohomish, Thurston</td>
<td>58,075</td>
<td>74,189</td>
<td>27.7%</td>
</tr>
<tr>
<td>Nation</td>
<td>1,595,534</td>
<td>2,014,437</td>
<td>26.3%</td>
</tr>
</tbody>
</table>
In addition, The Employment Security Department’s employment projections indicate a continued growth of jobs in this field in both King and Pierce Counties.

**Table 6: Long Term Employment Projections**

**Employment projections, May 2013 King County**

**Source:** Employment Security Department/LMEA

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15-1121</td>
<td>Computer Systems Analysts</td>
<td>9,741</td>
<td>11,241</td>
<td>12,237</td>
<td>2.9%</td>
<td>1.7%</td>
</tr>
<tr>
<td>15-1132</td>
<td>Software Developers, Applications</td>
<td>32,921</td>
<td>38,301</td>
<td>42,600</td>
<td>3.1%</td>
<td>2.2%</td>
</tr>
<tr>
<td>15-1133</td>
<td>Software Developers, Systems Software</td>
<td>12,459</td>
<td>13,976</td>
<td>15,350</td>
<td>2.3%</td>
<td>1.9%</td>
</tr>
<tr>
<td>15-1141</td>
<td>Database Administrators</td>
<td>1,629</td>
<td>1,829</td>
<td>1,953</td>
<td>2.3%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>
### Occupational Employment Projections, May 2013

**Pierce County**

*Source: Employment Security Department/LMEA*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15-1121</td>
<td>Computer Systems Analysts</td>
<td>544</td>
<td>587</td>
<td>618</td>
<td>1.5%</td>
<td>1.0%</td>
</tr>
<tr>
<td>15-1132</td>
<td>Software Developers, Applications</td>
<td>787</td>
<td>849</td>
<td>873</td>
<td>1.5%</td>
<td>0.6%</td>
</tr>
<tr>
<td>15-1133</td>
<td>Software Developers, Systems Software</td>
<td>180</td>
<td>200</td>
<td>222</td>
<td>2.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>15-1141</td>
<td>Database Administrators</td>
<td>104</td>
<td>115</td>
<td>122</td>
<td>2.0%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

* Data was suppressed due to confidentiality or one of employment estimations is less than 10

---

IV. The data indicates that though there is a growing demand for qualified Computer Scientists and Application Developers in our area, there is a gap between jobs available and qualified graduates in this area. According to EMSI, it is estimated that there are approximately 2,930 job openings annually in our area, but only 1,778 candidates who have completed the educational programs necessary to qualify.

**Works Cited**


Criterion 4: Applied baccalaureate program builds from existing professional and technical degree program offered by the institution.
Standard: Describe the existing professional and technical degree program that will be used as the foundation for the applied baccalaureate program.
How long has the program been in existence?
What has been the enrollment history of the program over the past five years?

The BAS degree in Application Development will be developed as a follow on to the Computer Science AAS degree. This is a 2 year, 166 credit degree which has been in existence since 1991 (over 22 years). In its beginning it covered mainframe based languages such as COBOL and FORTRAN; and over the years it has evolved to cover the most modern PC based programming languages such as C# and Java, and also includes web development and database management and design.

Table 7: The ASS Degree enrollment history for the past five years is shown in the table below.

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Snapshot</th>
<th>Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-2008</td>
<td>Fall</td>
<td>83.921</td>
</tr>
<tr>
<td>2008-2009</td>
<td>55</td>
<td>82.033</td>
</tr>
<tr>
<td>2009-2010</td>
<td>62</td>
<td>99.109</td>
</tr>
<tr>
<td>2010-2011</td>
<td>67</td>
<td>109.576</td>
</tr>
<tr>
<td>2011-2012</td>
<td>73</td>
<td>127.048</td>
</tr>
<tr>
<td>2012-2013</td>
<td>82</td>
<td>118.246</td>
</tr>
</tbody>
</table>

The program operates on a cohort system and enrolls student in the fall and winter quarters; the students in a cohort continue their studies together until completion. There are four cohorts in session at any given point throughout the year. At the end of their studies the students can opt for a certificate of completion or an AAS degree which requires 20 credits of General Education courses. The enrollment demand has been strong as shown by the above numbers and this also provides us with an ample supply of potential enrollments among current and past students. RTC will visit other colleges in our area with strong IT/computing offerings to develop partnerships that offer our BAS degree to their graduates. The administration has initially contacted Green River, Clover Park and South Seattle in this regard; additional area colleges will also be contacted.

The Computer Science program is very effective in retaining underrepresented student populations; the retention rates for the following groups are consistently high: African American 52%, Asian 77%, Latino/ Hispanic 70% Native American 100%, White 67%. The retention by gender is very even, female 67% and male 68%.

The program faculty consists of 3 F/T instructors that are highly qualified with an average of 20 or more years of experience each. Among themselves they have set up areas of specialization in programming, web development, and database administration. The program budget include significant amount of funding for industry training which is used to stay up to date with current developments in the field.
Renton Technical College has a large number of current and former students to draw on in order to build and maintain this program. Student interest in a BAS in Application Development was gathered and recorded with a survey administered to both current and former students. Of the 74 respondents, 51 were former students of the AAS/Certificate in Computer Science program and 23 are current students enrolled in the Computer Science programs. The summary of results indicates that an overwhelming majority of students surveyed are interested in this type of degree option at Renton Technical College. Figure 1 displays RTC current and former student responses after reading a description of the program and answering a question about whether or not they would be interested in this program.

Surveyed students also indicated a preference for flexibility in the scheduled offerings of classes in the proposed BAS program. A majority of students surveyed prefer some combination of evening face-to-face and hybrid course options. Figure 2 displays the scheduling preference of survey responses to the question, “What is your scheduling preference?”
Standard 2: Provide enrollment projections for each year over the next five years.

The BAS degree program will also operate on a cohort approach with an entry point every fall quarter. Once fully established, the program will have two cohorts in attendance throughout the year. We intend to develop Prior Learning Assessment processes later on to better accommodate incumbent workers that need a BAS to advance in their careers.

The enrollment projections below show the first and second year curriculum cohorts as they flow through the system. Based on our experience with the cohort model the figures listed are attainable.

Table 8: Enrollment Projections

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Total BAS enrollment</th>
<th>FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>2014</td>
<td>10</td>
<td>10</td>
<td>13.0</td>
</tr>
<tr>
<td>Fall</td>
<td>2015</td>
<td>12</td>
<td>8</td>
<td>26.0</td>
</tr>
<tr>
<td>Fall</td>
<td>2016</td>
<td>15</td>
<td>10</td>
<td>32.5</td>
</tr>
<tr>
<td>Fall</td>
<td>2017</td>
<td>15</td>
<td>13</td>
<td>36.4</td>
</tr>
<tr>
<td>Fall</td>
<td>2018</td>
<td>15</td>
<td>13</td>
<td>36.4</td>
</tr>
</tbody>
</table>

Criterion 6: Efforts to maximize state resources to serve place-bound students.
Standard 1: Describe how the program will serve place-bound working adults.

To address the scheduling needs of working adults and other “place-bound” learners, the BAS program will be a hybrid program with a significant on-line components. A comparison of student success rates
in RTC courses offered in traditional, online and hybrid formats, the hybrid courses had the highest success rate. With the funding from this grant we will able to set up a server rack to host Virtual Machines dedicated to this program, so that students can perform lab work remotely thus removing barriers to distance.

Table 9: Gen Ed/Dev Course Success Rates

<table>
<thead>
<tr>
<th>RTC Gen Ed/ Dev Ed Course Success Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen Ed/Dev Ed Courses (2007-8 thru 2011-12)</td>
</tr>
<tr>
<td>% Classroom Success</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>79%</td>
</tr>
<tr>
<td>N= 13,576</td>
</tr>
</tbody>
</table>

Standard 2: Identify similar programs offered by public or independent institutions in the region.

There are several college options, either public or private, for students pursuing a bachelor’s degree in information technology or computer science. In either case students from Community and Technical Colleges face challenges transferring their previous coursework into those bachelors offerings as each institution requires several other non-technical requirements. The time to completion increases and the cost per credit is higher than what they would pay in our BAS.

DeVry University Bachelor of Science in Computer Information Systems (9 specializations available.)
Generally no Junior status admission, individual transcript evaluation; and very high tuition costs

University of Phoenix Bachelor of Science in Information Technology with a concentration in Software Engineering or in Web Development. Generally no Junior status admission, individual transcript evaluation; and very high tuition costs

University of Washington Tacoma Bachelor of Science in Information Technology and Systems
Generally no Junior status admission, individual transcript evaluation; and tuition costs are also high

Central Washington University Bachelor of Applied Science in Information Technology and Administrative Management
Individual transcript evaluation. This degree is mostly geared to technical management.

From the sampling above, it is important to note that not only our AAS graduates will be able to complete a BAS in only two more years; but also that our partner High School students will have completed some of the AAS coursework while in school, thus shortening their time to completion. As we progress with the content development, we will also work on developing Prior Learning Assessment options for incumbent workers.
Standard 3: Describe options that have been explored for collaboration with other public baccalaureate institutions, businesses, and/or community organizations considered in the development of the proposal.

RTC has a long collaborated with several colleges within its service area. In the IT arena the most recent partnership has been with Green River CC when they developed their BAS in Network Administration and Security. The respective deans and instructors held meetings that culminated in an articulation between RTC’s Computer Network Technology AAS and Green River’s BAS. Along the same lines we have reached out to Green River CC, South Seattle CC, and Clover Park TC to present our BAS as an option for their IT students interested in a career in programming or web development. We have also contacted the Center of Excellence for Information and Computing Technology to take advantage of the technical content they have developed and also of their instructor support.

Standard 4: Describe unique aspects of the proposed program that differentiate it from similar programs and/or describe why expansion of an existing program would be desirable or necessary.

RTC has a track record of success working with adult students who have not traditionally succeeded in post-secondary education. Student success is supported by: hands-on training in classrooms that mirror the workplace, embedded competencies in communication, applied math and human relations; and, the systematic deployment of innovative instructional techniques. Many RTC instructors, including the Computer Science faculty involved in developing this BAS program, have been trained in the Universal Design for Learning (UDL) paradigm, which takes research-based approaches for helping learning disabled students, customizes them for the specific program curriculum, and applies them classroom-wide. Similarly, RTC has trained many instructors in Reading Apprenticeship (RA), a research-based framework for content area literacy instruction which makes the “invisible” process of reading accessible to students. In the coming year, RTC’s new Director of eLearning will be training faculty in applying UDL, RA and other research-based methods to online instruction, allowing us to further expand access to quality workforce education including: eLearning design principles, the Quality Matters rubric, Reading Apprenticeship and UDL for online courses, and building community/inclusiveness. The Application Development BAS program will apply this proven expertise in implementing its instructional innovations to support the success of diverse learners in this STEM career pathway.

On the technical side, the AAS in Computer Science is a program with up to date content in programming, database, and web development. The students receive intensive training in these areas using the latest software tools and development environments. The lab facilities are first rate with workstation class computers that are refreshed on a three-year cycle or more frequently as needed. The faculty has many years of experience in the field and their educational credentials include a MBA - Information Systems specialization and a MS in Electrical Engineering; their involvement in teaching also include co-authoring a textbook on Building Applications with Microsoft Office and Visual Basic and developing curriculum for the Northwest Center for Emerging Technologies. The faculty take advantage of our Return to Industry program to stay abreast of current practices in business. The program is also a member of the CompTIA Education to Careers program, Microsoft IT Academy, and the Microsoft Developers Network Academic Alliance.
With regards to student services, RTC has a Student Learning Center which provides support for students in professional technical programs, the center includes a math lab, writing lab, and a computer lab, where tutoring help is available. RTC received a Title III grant in 2012 which enabled the college to establish a more thorough pathway to completion success. Over the five-year grant period, the College is maximizing the success of new students by: adopting a comprehensive developmental advising system; supporting intentional academic planning; implementing early warning systems for intervention when students are struggling academically; making registration and advising and the financial aid process easier to understand and access; establishing clear, consistent assessment and placement protocols that include a precollege quarter for those who need college success, computer literacy, reading, writing or math support to create structures that get more students off to a strong start. Redesigning services based on this proactive and holistic developmental advising model so that students receive timely front-end services (e.g., orientation, advising, financial aid rules, financial literacy, career assessment etc.) reduces the need for later intervention. Beginning to develop learning modules for successful personal responsibility; financial literacy; degree, career and life planning; and a graduated system of interventions for struggling students creates flexible, and just-in-time access to crucial information and needed support for students. Implementing these changes supports more first year students success in achieving their academic and career goals. Title III funding has supported, the College’s efforts to improve engagement and tracking of high school students, connection with marginalized young adult learners and persistency generally for low-income students, most of whom are working adults.

Criterion 7: High school partnerships

Initially we will partner with two School Districts in our service area, the Renton SD and the Kent SD. As the BAS curriculum development starts to unfold, we will be extending our reach to several other schools in our area.

The Renton School District offers a comprehensive computer science program that includes courses in Computer Program Design 1-2, Computer Technologies 1-8, IT Academy, and AP Computer Science. Several of these courses are currently articulated with RTC through the South King County Tech Prep Consortium and all the curriculum is aligned with industry credentialing criteria which is reflected by the number of their students that have earned related certifications.

In addition to the traditional business partnerships/advisory committee relationships, the Renton School District is also a designated TEALS high school. In the Technology Education And Literacy in Schools program Microsoft employees work with partner High Schools to help teach computer courses.

The Kent School District has a series of four courses in the computer science area:

- Introduction to Java
- Game Programming
- Advanced Java
- AP Computer Science
Each of these courses is part of their Information Technology career pathway and three of those four are currently articulated with RTC through Tech Prep. All the above mentioned High School courses are a very good match for some of the courses in our AAS in Computer Science which will be the basis for the BAS in Application Development. By aligning our common offerings, the students in the Kent and Renton SD will be provided with the opportunity to have a seamless education experience that will allow them to finish their associates or applied baccalaureate degree in a shorter period of time if they can get a head start on their college courses while they are still in high school with dual-credit.

**Criterion 8: Program design efforts**

**Standard:** Describe how the college and local high school(s) will work together to align curriculum and pathways for the 2+2+2 program.

RTC is an active member of the South King County Tech Prep Consortium, which provides us with the framework for building dual credit opportunities with area high schools. RTC is an active member of the South King County Tech Prep Consortium, which provides us with the framework for building dual credit opportunities with area high schools. In addition to Renton and Kent, RTC currently has Computer Science course articulations in place with the Auburn, Federal Way, Puyallup, Sumner and Tahoma School Districts, as well as with the Puget Sound Skills Center and we will work to expand the existing partnerships resulting in a seamless transition from High School into college. The table below shows the number of Tech Prep credits that we have awarded to consortium High Schools in the IT areas of computer networks and computer science over the past six years.

### Table 10: Consortium IT Credits

<table>
<thead>
<tr>
<th>Year</th>
<th>Computer Network</th>
<th>Computer Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>294</td>
<td>476</td>
</tr>
<tr>
<td>2008-09</td>
<td>316</td>
<td>350</td>
</tr>
<tr>
<td>2009-10</td>
<td>304</td>
<td>364</td>
</tr>
<tr>
<td>2010-11</td>
<td>242</td>
<td>147</td>
</tr>
<tr>
<td>2011-12</td>
<td>188</td>
<td>63</td>
</tr>
<tr>
<td>2012-13</td>
<td>124</td>
<td>119</td>
</tr>
</tbody>
</table>

This grant will provide the resources needed in the form of teacher stipends so that the high school teachers and college staff can have the opportunity to work closely together. We also expect our college staff to join the High School advisory committees to provide a broader perspective on the current workforce trends and the skills and knowledge that students need to be successful.

In our partner School Districts, the Career & Technical Education professional learning community teachers are continually updating their curriculum to make sure they are meeting the needs of our local workforce. The teachers and college staff will meet regularly to align curriculum and create secondary to post-secondary pathways, this joint work is critical to the success of this BAS project.
Criterion 9: Industry support for the program
Standard: Describe how the industry(ies) that will hire graduates of the program will be involved in supporting the program’s success.

Our current Computer Science and Computer Network Advisory committee consists of representatives from a wide range of IT commerce, including Accenture, an accounting conglomerate, municipalities such as the City of Renton, and Northwest global giants such as Boeing and Microsoft. The committees are instrumental in reviewing curriculum content for database administrators, software application developers, and the other STEM careers, to ensure that our program competencies align with industry needs. Several of these current members will join the initial Advisory Committee for the BAS degree.

RTC will build on these strong current partnerships with industry leaders to support development and implementation of the proposed BAS degree. The key areas of participation will be:

1. Help garner support and participation in the development of the BAS program from local companies in our service area.
2. Recruiting new industry experts that will work with faculty designers to ensure our 2+2+2 model aligns with current and forecasted industry needs.
3. Establish and maintain an advisory committee that will continuously advance the BAS program.
4. Participate in quarterly meetings and targeted DACUM events during the development phase.
5. Help expand internship and co-op opportunities for BAS students to place them at industry leading companies.

**Advisory Committee membership**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bobzien, Bruce</td>
<td>Recruiter and Social Media Strategist</td>
<td>Accenture</td>
</tr>
<tr>
<td>DeVos, Jeff</td>
<td>Program Manager</td>
<td>Microsoft</td>
</tr>
<tr>
<td>Fleming, Ron</td>
<td>Principal Consultant</td>
<td>Starcrest NW</td>
</tr>
<tr>
<td>Hansen, Karl</td>
<td>Consultant</td>
<td>Strategy LLC</td>
</tr>
<tr>
<td>Yip, Gordon</td>
<td>Software Development (also SPEEA Treasurer)</td>
<td>BOEING</td>
</tr>
<tr>
<td>Young, Yoon</td>
<td>IT Service Desk Supervisor</td>
<td>City of Renton</td>
</tr>
</tbody>
</table>

**Computer Science**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hansen, Ron</td>
<td>Network Systems Manager</td>
<td>City of Renton</td>
</tr>
<tr>
<td>Hodge, Mark</td>
<td>IS Manager</td>
<td>LIHI Low Income Housing Institute</td>
</tr>
<tr>
<td>Kapponman, Brett</td>
<td>Network and Security Analyst</td>
<td>Lyon Technical Services</td>
</tr>
<tr>
<td>Myers, Mark</td>
<td>Principal Program Manager</td>
<td>Microsoft</td>
</tr>
<tr>
<td>Nichols, Ron</td>
<td>Security Specialist</td>
<td>AAA Washington</td>
</tr>
<tr>
<td>Skripek, Mike</td>
<td>Sales Engineer</td>
<td>IXIA</td>
</tr>
<tr>
<td>Wagy, Rob</td>
<td>Senior Account Executive</td>
<td>Rain Networks</td>
</tr>
<tr>
<td>Wood, Jerri</td>
<td>Labor Liaison –</td>
<td>IBEW/ Qwest (retired)</td>
</tr>
</tbody>
</table>

**Computer Network**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goe, Todd</td>
<td>Sales Engineer</td>
<td>All Phase</td>
</tr>
<tr>
<td>Hansen, Ron</td>
<td>Network Systems Manager</td>
<td>City of Renton</td>
</tr>
<tr>
<td>Kappenman, Brett</td>
<td>Network and Security Analyst</td>
<td>Lyon Technical Services</td>
</tr>
<tr>
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</tr>
<tr>
<td>Wood, Jerri</td>
<td>Labor Liaison –</td>
<td>IBEW/ Qwest (retired)</td>
</tr>
</tbody>
</table>
In addition to consultations with our Advisory Committee on the proposed BAS, RTC did a targeted poll of staffing companies, that gave feedback overwhelmingly supportive of the BAS Application Development degree concept.

“...please find the latest IT unemployment rates. These rates are on a National Basis. Locally, unemployment is under 4% collectively in the IT arena. I think this makes a case for the need for Application Developers and Web Development as well, that is also an extremely desired skill set right now (Java/Open Source or .NET).”

IT Unemployment Rates
- Web developers: 1.8%
- Computer network architects: 2.2%
- Software developers, applications and systems software: 1.8%
- Database administrators: 5.4%
- Network and computer systems administrators: 1.1%
- Computer and information systems managers: 3.4%
- Computer systems analysts: 5.8%
- Computer programmers: 4.6%”

Refawne Acarregui, Division Dir. Robert Half Technology

The BAS in Application Development is the right next step for Renton Technical College in our mission to: prepare a diverse student population for work, fulfilling the employment needs of individuals, business and industry.
Form A

COVER SHEET

STATEMENT OF NEED

Program Information

Program Name: Molecular Biosciences  Institution Name: Bellevue College
Degree:  BAS Molecular Biosciences  Level:  Bachelor  Type:  Science
CIP Code:  26.0210  
(e.g. B.S. Chemistry)  (e.g. Bachelor)  (e.g. Science)
Proposed Start Date: Fall 2015
Projected Enrollment (FTE) in Year One:  20  At Full Enrollment by Year:  3 (2018) 50 FTE  
(# FTE)  (# FTE)
Funding Source:  State FTE  Self Support  X  Other

Mode of Delivery

Single Campus Delivery  Bellevue College, Bellevue WA  
(enter locations)
Off-site  
(enter locations)
Distance Learning  Some courses will be hybrid, synchronous distance or online  
(enter formats)

Statement of Need

- Relationship to institutional mission
- Employer demand
- Student demand
- Options for place-bound students

Please see criteria and standard sheet FORM B

Contact Information (Academic Department Representative)
Name: Thomas Nielsen
Title: Vice President of Instruction
Address: 3000 Landerholm Circle SE, MS A202, Bellevue, WA 98007-6484
Telephone: (425) 564-2442
Fax: (425) 564-6163
Email: tom.nielsen@bellevuecollege.edu

[Signature]
Chief Academic Officer  
[Signature]  
Date  
July 30, 2013
Introduction to degree program

Bellevue College (BC) plans to implement a bachelor’s of applied science (BAS) in Molecular Biosciences (MoB). Molecular Biosciences encompasses the study of molecules that build living cells and organisms and the complex network of chemical reactions and physical processes connecting them. This field provides the foundation needed to work in a variety of disciplines including pharmacology, medicine, biochemistry, molecular biology, neuroscience, food chemistry and environmental science.

Students will be able to begin this pathway in high school through taking a biotechnology lab course series, as well as other core science and related instruction. These graduates will be well prepared for the Associate of Applied Science Molecular Science Technician degree, which will prepare them either for work or for progression into the BAS.

Baccalaureate graduates will be prepared to work as entry-level laboratory scientists in bioscience research with employers such as the Fred Hutchinson Cancer Research Center; in pharmaceutical development with companies such as Amgen; and in life sciences product development with companies such as Phillips. Graduates will have a thorough understanding of the scientific disciplines of molecular biosciences, and applied science skills with state-of-the-art equipment. They will bring understanding of the complex regulatory environment surrounding biosciences as well as business skills needed to manage a project and/or the purchasing and tracking for a lab or a study.

Feedback from local employers and employment predictions led to the college’s focus on molecular biosciences. This applied degree differs significantly from a traditional undergraduate science degree in the following ways:

1. develops solid scientific background as the foundation for applied laboratory skills;
2. fosters independent laboratory research skills through extensive laboratory work with state-of-the-art technologies;
3. offers exposure to project management and general business skills for laboratory settings;
4. provides specific coursework on molecular biosciences regulatory and legal environments;
5. requires internship in applied science setting;
6. prepares for immediate employment through project-based capstone course.

BC draws on its strong science faculty and unique STEM programs to develop the BAS MoB. One of BC’s flagship programs is the Community College Genomics Research Initiative (COMGEN),¹ through which students do original primary research on genome sequencing, analyze research results, and present at professional conferences. Science courses in the BAS degree will build on this applied model, in which students do research, analyze data, and communicate findings.

COMGEN was founded with funding from the National Science Foundation and is now being disseminated through an ATE grant, proposal # 1225857
BC’s STEM to Stern cohort provides college success services to underrepresented students enrolled in STEM pathways. The BAS MoB provides a four-year option for students in the STEM cohort. By expanding college success services through all four years of the degree, BC expects to contribute more STEM graduates, and a more diverse group of graduates ready for employment.

Students may enter the BAS MoB from several two-year feeder programs, available at BC and other colleges. BC is launching a new Molecular Sciences Technician AAST, fall quarter, 2013. Graduates of this two-year degree will be well prepared to progress into the BAS in MoB. Shoreline Community College and Bates Technical College have two year degrees in biotechnology and Lake Washington Technical Institute has a two-year degree in energy technology science that all prepare students for work or progression into this degree.

1) Relationship to institutional role, mission and program priorities

Bellevue College requires every new program to align to its mission, which states:

Bellevue College is a student-centered, comprehensive and innovative college, committed to teaching excellence, that advances the life-long educational development of its students while strengthening the economic, social and cultural life of its diverse community. The college promotes student success by providing high-quality, flexible, accessible educational programs and services; advancing pluralism, inclusion and global awareness; and acting as a catalyst and collaborator for a vibrant region. (Approved by Board of Trustees, June 11, 2008.)

Science, Technology, Engineering and Mathematics (STEM) programs are an institutional priority for Bellevue College. In fall quarter, 2012, the college launched a new external advisory committee focused solely on STEM education. This advisory group, which consists of CEOs and COOs from research, technology, and healthcare fields, is focused on employment knowledge and skills critical in all STEM fields. It complements the program specific advisory committees and provides a higher-level view of hard and soft skills that need to be incorporated across all STEM programs. Bellevue College is committed to undergraduate scientific research, and is expanding its applied research model to other science classes, revolutionizing the way students learn science.

Transitions are another key Bellevue College initiative. The Transitions Committee, an official component of college shared governance, focuses on removing barriers to transition into, through and from Bellevue College. The proposed BAS in MoB builds on existing connections with high schools. This proposal strengthens those relationships and aligns curriculum to smooth the transition from high school to technical degree to applied baccalaureate degree, helping students move into the college, through the two-year degree, and on to a bachelor’s degree or into the workplace.

Developing baccalaureate degrees is a fully integrated component of Bellevue College’s strategic planning. Applied Baccalaureate Development is a president’s cabinet-level priority, with goals assessed annually. In addition to continuing education, certificates, professional/technical degrees
and transfer degrees, baccalaureate degrees are a means for Bellevue College to meet the levels of education required by local employers and citizens.

The BAS in Molecular Biosciences offers a new option for place bound students who cannot afford more expensive programs, need a career-focused degree, and have an interest in science. Place bound students are more likely than geographically mobile students to be from underrepresented groups and are disproportionately women and minorities, both of which are underrepresented in STEM fields in particular.

2) Support of the statewide strategic plans
A Bachelor’s of Applied Science in Molecular Biosciences supports the goals outlined in the State Board for Community and Technical Colleges (SBCTC) Mission Study and the Washington Student Achievement Council (WSAC) Strategic Action Plan for Educational Attainment. These plans identify the need to increase the number of baccalaureate educated adults as a means to strengthen the economy and serve workforce needs for more highly educated, “locally grown” workers that will:

- Strengthen state and local economies by meeting the demands for a well-educated and skilled workforce;
- Achieve increased educational attainment for all residents across the state, including place bound students who are disproportionately underrepresented groups such as minorities and women;
- Use technology, collaboration and innovation to meet the demands of the economy and improve student success.

The proposed BAS in Molecular Biosciences increases production of a baccalaureate-prepared workforce, thus addressing “institutional capacity”, a key concern of the Washington Student Achievement Council’s “Critical Crossroads: Call for Action” report. In addition to increasing the percentage of people with a baccalaureate degree, which will decrease the need to import employees from outside the state, the BAS in Molecular Biosciences (BAS in MoB) will meet local and regional needs for baccalaureate-level laboratory scientists.

3) Meet the demand for a skilled workforce
Employer and community demand
On the state level, Governor Inslee designated “Life Sciences” as one of seven key sector areas forming the backbone of the state’s economy. The governor also prioritized Science, Technology, Engineering and Mathematics (STEM) programs from K-12 through college and university education. The Bachelor of Applied Science in Molecular Biosciences exemplifies a focus on STEM education that leads to career-ready workers in a growing field. The focused effort to engage high school students in this STEM pathway through the Tech Prep College Connections and into community college and 4 year degree options is consistent with the Governor’s Working Washington Agenda on Educating a 21st Century Workforce that calls for a talent pipeline from

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2 http://www.wsac.wa.gov/publications-library/master-plans 02.11.13
3 http://www.governor.wa.gov/issues/economy/default.aspx 05.06.13
4 http://www.governor.wa.gov/issues/economy/default.aspx 05.06.13
high school to community and technical college to career by expanding industry-developed high school skills programs and allow credits earned to transfer to college.

Local businesses and municipalities are investing heavily in a science-based future. King County has 160 life science companies that employ 22,000 individuals. These companies need entry-level scientists with applied skills, such as those who will graduate from the BAS in Molecular Biosciences, to work alongside masters and doctoral level scientists leading research teams in the biosciences.

Major area bioscience employers of laboratory scientists include: Amgen, Benaroya Research Institute, Dendreon, Fred Hutchinson Cancer Research Center, Novo Nordisk, Phillips, Seattle Children’s Hospital, and University of Washington. Many smaller companies and jurisdictions in Puget Sound also employ laboratory scientists. In Eastern Washington, Pacific Northwest National Laboratory (PNNL) in Richland and WSU in Pullman are also large bioscience employers.

BC assessed area employer demand through multiple methods, including in-person interviews with hiring authorities, telephone interviews with hiring authorities, and a needs survey developed with assistance from the Washington Bioscience and Biotechnology Association (WBBA), a major professional society. The WBBA president and staff have stated there is a need for baccalaureate level scientists across many bioscience sectors. The college established, through employer interviews, discussion with professional organizations, and local employment postings that there is a demand for laboratory scientists at the baccalaureate level.

Longer-term employment projections (through 2020) indicate bioscience and life science careers will grow in the Puget Sound region and statewide. Table 1 below shows projected demand (through 2020) for bioscience and life science careers with baccalaureate level entry jobs.

<table>
<thead>
<tr>
<th>SOC#</th>
<th>Occupation title</th>
<th>Workforce development area</th>
</tr>
</thead>
<tbody>
<tr>
<td>194021</td>
<td>Biological Technicians</td>
<td>Statewide</td>
</tr>
<tr>
<td>194021</td>
<td>Biological Technicians</td>
<td>Snohomish WDA: Snohomish County</td>
</tr>
<tr>
<td>119121</td>
<td>Natural Science Managers</td>
<td>Seattle King WDA: King County</td>
</tr>
<tr>
<td>119121</td>
<td>Natural Science Managers</td>
<td>Snohomish WDA: Snohomish County</td>
</tr>
<tr>
<td>292011</td>
<td>Medical &amp; Clinical Laboratory Technologist</td>
<td>Statewide</td>
</tr>
<tr>
<td>292011</td>
<td>Medical &amp; Clinical Laboratory Technologist</td>
<td>Seattle King WDA: King County</td>
</tr>
<tr>
<td>292011</td>
<td>Medical &amp; Clinical Laboratory Technologist</td>
<td>Pierce WDA: Pierce County</td>
</tr>
</tbody>
</table>

6 Meeting with WBBA 3.19.12, email communication
7 [https://fortress.wa.gov/esd/employmentdata/reports-publications/occupational-reports/occupations-in-demand 04.15.13]
Gap between number of graduates and available jobs

BC evaluated local need for molecular bio scientists through an advanced search on www.indeed.com. Indeed.com pulls job postings from hundreds of online sources, including company websites, newspapers, online job boards, industry-specific recruiter postings, etc. Advanced search capabilities on indeed.com allow users to refine search data by salary, location, keywords, and date of posting. The searches on indeed.com used keyword categories, restricted to jobs located within 25 miles of Bellevue and posted within the last 15 days of the search. Jobs from staffing agencies were excluded. A search on March 4, 2013 produced more than one hundred baccalaureate-level laboratory science jobs for which graduates of the MoB degree would be eligible to apply. Table II below shows search terms used. A repeat search on April 17 generated 142 jobs within the same categories. This search included only positions posted within the previous two weeks, demonstrating a large number of new positions becoming available in these fields.

<table>
<thead>
<tr>
<th>TABLE III: Local Baccalaureate-Level Laboratory Science Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search Terms</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>Science &amp; Technician</td>
</tr>
<tr>
<td>Biology &amp; Technician</td>
</tr>
<tr>
<td>Chemistry &amp; Technician</td>
</tr>
<tr>
<td><strong>Total Jobs</strong></td>
</tr>
</tbody>
</table>

The Washington Biotechnology and Biomedical Association’s Career Center regularly posts baccalaureate level jobs in the biosciences. A recent listing of newly-posted local jobs that would be appropriate for MoB graduates included: Research Associate at NanoString Technologies; Research Associate at Seattle Genetics; Research Technicians I & II at Benaroya Research Institute; Histology Technician at Benaroya Research Institute; and Manufacturing Engineer I at Bio-Rad Laboratories. The representative from Fred Hutchinson Cancer Research Center stated that they typically post two vacancies for which BAS in MoB graduates would be eligible each week, which is an equivalent of 104 position postings, at this employer alone, each year.

To probe more deeply into the suitability of these jobs for graduates, we did a more advanced search on April 15. This search included a detailed reading of each position posting, along with the elimination of jobs for which extensive work experience was a requirement. This search found 20 recently posted jobs that were an excellent match with education and skills graduates of the proposed program will have. These jobs, with employers and position titles, are detailed in Table III.

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10 In person interview, Fred Hutchinson Cancer Research Center, winter quarter 2013.
<table>
<thead>
<tr>
<th>Search Terms</th>
<th>Job Title</th>
<th>Employer</th>
<th>Number of jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological &amp; Technician</td>
<td>Non-registered technician, microbiology</td>
<td>LabCorp</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Research Technician 1/2/3</td>
<td>Fred Hutchison</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Research Technician 1</td>
<td>Benaroya Institute</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Research Scientist/Research Technician</td>
<td>UW</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Laboratory technologist</td>
<td>Puget Sound Blood Inst</td>
<td>4</td>
</tr>
<tr>
<td>Biological &amp; Scientist</td>
<td>Senior Scientist</td>
<td>Lancaster Labs</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Analytical Biology Scientist</td>
<td>SNBL USA</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Research Associate</td>
<td>Novo Nordisk</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Associate Scientist II</td>
<td>A-ten</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Jobs</strong></td>
<td></td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

4) Built from existing programs

Bellevue College is launching a new Molecular Sciences Technician AAS-T, which will be available to students for fall quarter, 2013. Graduates of this new two-year degree will be well prepared to progress into the BAS in Molecular Biosciences. In addition to providing a unique opportunity for any student interested in science, the new Molecular Sciences Technician AAS-T degree will provide a degree-completion opportunity for the significant number of students who have prepared for an allied health program, but, due to the limited space available in many of those programs, have not been admitted. Many of these students have a large number of science-related credits, no two-year degree, and few or no options for transfer. Through building on the foundation of science credits they have accumulated, the Molecular Science Technician AAS-T will provide these students a pathway to work or to continued education.

Bellevue College is known for its strong physical and biological sciences, strong allied health programs, and undergraduate opportunities in life science research, exemplified by COMGEN. The college has invested in cutting edge laboratory equipment that allows students to do complex lab work, such as genome sequencing, and has procured National Science Foundation (NSF) funding to support primary research by undergraduate students.

In the first year, the majority of students in the new Molecular Science Technician AAS-T pathway will likely be those who have completed pre-requisites for allied health programs but have not gained admission due to the limited number of slots. As Bellevue College and partner high schools work closely together to develop the talent pipeline, the number of students that begin at the high school level in bioscience related classes and activities will steadily increase, leading to an increase in the number of students in the Molecular Science Technician AAS-T, from which they can move directly to employment or into the BAS degree.

Community and technical colleges with allied health programs recognize the problem of students not being admitted to allied health programs, despite meeting all admissions criteria. Many
qualified students are turned away only because places in these programs are limited. For example, Tacoma Community College has stated that it would like to refer students who apply and are not admitted to healthcare programs to the proposed Molecular Science Technician AAST-T and BAS in MoB to provide an option for the many qualified applicants who will not gain immediate admission to a healthcare pathway. Advisory committees for Bellevue College’s allied health programs strongly support the new Molecular Science Technician AAST-T degree, which will allow students to complete a meaningful two-year degree and, if they choose, move into a STEM career with the four-year BAS in Molecular Biosciences degree. Bellevue College has planned carefully to ensure that these students will be able to complete the AAST-T in Molecular Science Technician and move efficiently into the BAS in Molecular Biosciences.

In addition to determining the number of students who qualify but are not admitted to healthcare degree programs each year, BC assessed potential program enrollment by tracking students who took science-intensive courses similar to those students in the proposed degree program will take.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>FTES</th>
<th>ENROLLMENTS</th>
<th>HEADCOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-07</td>
<td>733</td>
<td>1860</td>
<td>723</td>
</tr>
<tr>
<td>2007-08</td>
<td>778</td>
<td>1945</td>
<td>791</td>
</tr>
<tr>
<td>2008-09</td>
<td>914</td>
<td>2322</td>
<td>966</td>
</tr>
<tr>
<td>2009-10</td>
<td>1052</td>
<td>2670</td>
<td>1057</td>
</tr>
<tr>
<td>2010-11</td>
<td>1089</td>
<td>2803</td>
<td>1076</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>4566</strong></td>
<td><strong>11600</strong></td>
<td><strong>4613</strong></td>
</tr>
</tbody>
</table>

Students counted in this chart expressed a clear interest in science through taking at least the second course in a biology or chemistry majors series. To date, these students have not had the option of a science-intensive AAST-T degree leading to a baccalaureate degree at Bellevue College. A subset of these students are interested in such an option, as will be indicated by analysis of students survey results in the next section.

Also, as noted above, in 2012, 473 students who had taken extensive science courses were denied admission to Bellevue College’s professional/technical degrees in health sciences, due to shortage of space. The AAST-T in Molecular Science Technician and the BAS in MoB will provide an exciting option for a subset of these students to pursue their interests and career goals. Even if only 10% of these students opted to pursue these program options, that pipeline could provide close to 50 applicants each year. Based on this data, we estimate 50 FTE and 25 graduates annually in the AAST-T Molecular Science Technician program, although these numbers could increase based on strong interest.

Graduates of the AAST-T in Molecular Science Technician are qualified for jobs as Biological and Chemical Technicians with some employers. Biological and Chemical Technicians make an average annual wage of $40,000 or an hourly wage of $19-$20, according to the WA state employment security division. Both of these jobs are “in demand” in WA state, based on a search

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11 FTES, Enrollments and Headcounts by year in Biology, Chemistry, or Environmental Science classes. Students who took at least the second course in a three-course series for science majors are counted. Courses used are: BIOL& 262, BIOL& 263, CHEM& 162, CHEM& 262, CHEM& 163, CHEM& 263, ENVS 280, 281, 282 or 283.
done 4.24.13 on the Employment Security website. When asked what level of education and/or experience they look for when hiring a bench scientist, Fred Hutchison Cancer Research Center stated that they do hire individuals with an associate degree. To progress on the career ladder, techs need to continue their education to the baccalaureate level because of the concentration of medical and biotechnology research companies in the Puget Sound, which has created an above average demand for baccalaureate level laboratory scientists. The AAS-T in Molecular Science Technician provides a career ladder for individuals who wish to pursue the BAS in Molecular Biosciences.

5) Student demand
Bellevue College assessed student demand for the BAS in Molecular Biosciences degree through an online survey of students currently enrolled in science classes at the college, as well as students enrolled in the biotechnology program at Bates Technical College. The college plans to survey high school students in fall quarter, 2013, when K-12 schools are back in session. The survey received 619 complete and unique responses, with 60% of respondents indicating that they would definitely (35%) or possibly (24%) be interested in enrolling in a science-centered applied baccalaureate degree at Bellevue College.

Fifty-four students who indicated they “might” be interested in the degree expressed intent to pursue healthcare-related careers (radiation & imaging science, nursing, physical therapy, dentistry, pharmacy, etc.). The survey did not ask students if they would consider the BAS in MoB if they were not admitted to the healthcare-related associate degree for which they were pursuing pre-requisites. But several students who chose “maybe” volunteered in the comments section that they would consider the degree. Additional detail on the student survey are in Table V, below.

<table>
<thead>
<tr>
<th>TABLE V: Student Survey Details, Fall 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Number</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Q5: Would you consider participating in this degree?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response Number</th>
<th>Nursing</th>
<th>Other healthcare</th>
<th>Other transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7: Other options you are considering? (for “Maybe” answers to Q6)</td>
<td>157</td>
<td>21 (14%)</td>
<td>33 (21%)</td>
</tr>
</tbody>
</table>

Washington State’s community and technical colleges have multiple degrees and programs that would allow students to transfer to Bellevue College and complete the BAS in Molecular Biosciences. Shoreline’s Biotechnology Laboratory Specialist, Bates Technical College’s Biomedical Laboratory Technician and Lake Washington Institute of Technology’s Energy and Science Technician programs provide excellent preparation. During the next phase of development, we will work closely with Bates, Shoreline, Lake Washington and other colleges to develop articulation agreements in order to provide clear pathways for students.
Bellevue College anticipates an enrollment of 20 FTE in Year 1 (Fall 2015), 35 FTE in Year 2 and to be fully enrolled at 50 FTE by Year 3. Years 4 and 5 will continue to be fully enrolled at 50 FTE in the BAS MoB.

6) Efforts to maximize state resources to serve place bound students

Similar programs in the area
Puget Sound is the most densely populated area of Washington State, home to more than 50% of the state’s population and four cities of over 100,000 within a 30 mile radius: Bellevue (122,363), Everett (103,019), Seattle (608,660) and Tacoma (198,397).\(^{12}\)

While students can major in science at several colleges and universities in the Puget Sound area, there is no applied degree that prepares graduates with a strong science background, advanced technology skills, and background in the legal and regulatory environments in which the molecular biosciences are embedded. One local employer noted that given a choice between a student prepared through the proposed MoB pathway and a student with a typical Bachelor of Science in biology or chemistry, the employer would prefer to hire the BAS in MoB graduate, due to the applied nature of the degree.\(^{13}\)

Although no existing program in Washington State contains the combination of applied biosciences, project management, and regulatory knowledge unique to the BAS in MoB, some programs contain portions. For example, at Washington State University, students can major in Agricultural Biotechnology, which focuses on plants. This program also prepares entry-level bench scientists; however, the content focus is agricultural, while the content focus in the MoB will be more general.

Options for collaboration
All community colleges around Puget Sound offer allied health programs, and are unable to admit all qualified students who apply annually. These colleges have good student candidates for the AAS-T in Molecular Science Technician and the BAS in MoB. Tacoma Community College has stated its intention to refer its healthcare applicants who are not admitted to the BAS in MoB. Bates, Lake Washington and Shoreline Colleges have 2-year degree programs which will prepare students to move into the applied baccalaureate degree. BC will work closely with Bates and Shoreline to ensure students who wish to transfer to BC and complete the four-year degree have necessary pre-requisites in place.

Bellevue College has worked with University of Washington and other colleges and universities to ensure students who complete an applied baccalaureate have options to continue to graduate school. BC will work with area colleges to identify appropriate graduate programs and develop transfer agreements for students who complete the MoB BAS.

Unique aspects of BAS in Molecular Biosciences
The BAS in MoB differs significantly from traditional academic science degrees. A Bachelor of Science in Chemistry includes completion of general education requirements, a series of courses in

\(^{12}\) http://2010.census.gov/2010census/data/
\(^{13}\) Employer telephone interview, 2.1.12

The main goal of the BAS in MoB is that graduates will be prepared for employment and workplace success. Unique aspects of the course work of the BAS in MoB include:

- Science courses emphasize hands-on learning with access to top of the line scientific equipment, so that graduates of the program have excellent laboratory skills;
- Business, Data Analysis and Project Management courses are offered and tailored to the lab sciences;
- Technical Writing and Communication courses prepare the students to present their ideas clearly to different audiences and in a variety of formats;
- Courses in Bioethics and Regulatory practices provide a solid understanding of the complex ethical, legal and regulatory environments in which bioscience operates;
- Students complete an internship, where they will be evaluated on the basis of their knowledge, performance and communication skills.

Some courses in the BAS in MoB that would not be found in a typical 4-year science degree include those listed in Table VI, below.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Business</td>
<td>5</td>
</tr>
<tr>
<td>Project Management</td>
<td>5</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>5</td>
</tr>
<tr>
<td>Instrumental Analysis</td>
<td>5</td>
</tr>
<tr>
<td>Special Topics Seminar (patent law, biochemical regulation, quality assurance, etc.)</td>
<td>3</td>
</tr>
<tr>
<td>Presentation Design and Delivery</td>
<td>5</td>
</tr>
<tr>
<td>Internship</td>
<td>varies</td>
</tr>
<tr>
<td>Capstone Project</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>35 - 45</strong></td>
</tr>
</tbody>
</table>

7) High School Partnerships

Bellevue College is a member of the Tech Prep College Connections consortium. Through that consortium, the college works with all member high schools and districts to articulate courses. Lake Washington School District (LWSD), which has a strong biotechnology program and a dedicated STEM high school, expressed a strong desire to partner on this 2+2+2 BAS project, as did Sammamish High School in the Bellevue School District. Pathways in each district will differ slightly, since curriculum differs; however, all will ease transitions from high school to two-year applied degree to the workplace or the BAS.
In Fall 2013, four LWSD High Schools are launching Senior STEM Concentration Labs that structure learning in three hour concentrated blocks which include not only applied science curriculum such as biotechnology lab, but also applied learning in core areas such as technical writing as part of English Composition, and Ethics within scientific endeavor as part of Social Studies. Concentration areas at the high schools include a scientific emphasis at Juanita High School, Global Health at Redmond High School, Biomedical Engineering at International Community School and Biomedical Engineering and Bioinformatics at the STEM School. Each focus area lends itself well to building articulation agreements for coursework in the high schools toward credits in the Molecular Science Technician AAS-T degree. BC currently offers college credit in LWSD for calculus and physics through College in the High School. This effort is consistent with LWSD work to increase the amount of college credit high school students complete prior to graduation.

Within Bellevue School District, was also excited to partner in this 2+2+2 effort. Sammamish High School and Bellevue College will work together to align existing science curriculum and to explore new offerings, such as the yearlong biotechnology series, to increase the number of students who select STEM pathways at Sammamish High.

8) Program Design Efforts
As a result of phone, email, and in-person meetings with the partner school districts, we propose the following activities for the 2013-2014 year and beyond.

Articulation agreements - the college and school districts will articulate new CTE classes through the Tech Prep College Connections consortium, including:
  • adapting a presentation skills class offered at BC to incorporate a scientific focus to presentation skills;
  • articulating Lake Washington’s yearlong series of biotechnology courses;
  • enhancing science-related options at Sammamish High School in Bellevue School District.

In addition to articulating CTE classes, the partnering institutions plan to discuss expansion of science-focused credit offerings in chemistry, biology, and statistics through College in the High School.

Professional development - a cross disciplinary group of high school and college faculty will meet for three professional development and collaboration days, one per quarter, to:
  • refine articulation agreements,
  • strengthen curriculum alignment,
  • plan for new curriculum development,
  • build mastery of common core standards and next generation science standards,
  • share successful project based curriculum and open source curriculum resources and
  • explore opportunities to integrate curriculum toward common assessments and achievement of appropriate industry based certificates.

This collaboration will also be a good forum for sharing and communicating about extra-curricular and co-curricular opportunities at the college such as STEM focused speakers and activities as well
as BC's STEM to Stern cohort, which provides additional supports for college students in STEM pathways. BC will pilot bioscience subscriptions as library resources to support faculty in curriculum development efforts. A minimum of one subscription will be sustained by self-support revenue after the grant period.

**CTE summer bridge program** - college and school district faculty will work together to create a week-long hands-on experience for high school students interested in the biosciences, with a planned focus on students entering their junior year. The summer bridge program will be piloted in June 2014. LWSD indicates that the WANIC Skills Center could potentially continue utilizing curriculum developed for the summer bridge program following the grant period, as an option to sustain the grant-developed program.

9) **Industry support for the program**
Puget Sound industry partners who will hire both AAST-T and BAS MoB graduates have been, and will continue to be, involved in numerous ways to support both program and student success. In addition to the existing STEM advisory board at the college, a program-specific advisory committee will be formed to provide ongoing input on curriculum relevance and oversight of quality. Several local professionals have already committed to serve on the board, and have provided input on the proposed curriculum for the AAST-T and MoB degrees.

In addition, industry representatives will engage directly with students through panel presentations and participation in mock interviews with students. Companies including MedintelliBase, Fred Hutchinson Cancer Research Center, Adaptive Biotechnologies Corp, and Amgen are actively engaged with STEM Advisory at BC and acting as panelists and will continue to engage in support of students in the MoB pathway. These opportunities will provide students with direct knowledge about what is expected in the workplace as well as practice in skills necessary for job acquisition. Industry will also be engaged in providing internships for students in the BAS MoB. The college has numerous existing internship options and will continue to develop these further.

Bellevue College (BC) plans to implement a bachelor's of applied science (BAS) in **Molecular Biosciences**. This field provides the foundation needed to work in a variety of disciplines including pharmacology, medicine, biochemistry, molecular biology, neuroscience, food chemistry and environmental science. Feedback from local employers and employment predictions led to the college's focus on the high demand field of molecular biosciences. Students will begin this pathway in high school through taking a biotechnology lab course series, as well as other core science and related instruction. This Molecular Bioscience Consortium will strengthen the MoB pathway and increase the STEM pipeline through joint work between BC and partner school districts and high schools on curriculum review, alignment, development, sharing of curriculum and open source resources, increased articulation agreements and development and pilot of a summer bridge program in Molecular Biosciences.
Program Information

Program Name: Bachelor of Applied Science – Environmental Conservation

Institution Name: Skagit Valley College

Degree: BAS in Environmental Conservation  Level: Bachelor  Type: Science  CIP Code: 030101

Proposed Start Date: Fall 2014

Projected Enrollment (FTE) in Year One: 12  At Full Enrollment by Year: 2016 20

Funding Source: State FTE Other

Mode of Delivery

Single Campus Delivery Mount Vernon, WA

Distance Learning hybrid: 40% instruction; 20% lab/fieldtrip; 40% Distance Education

Statement of Need

• Employer demand
• Student demand
• Options for place-bound students
• Improve environmental science education bottleneck

Contact Information (Academic Department Representative)

Name: Kenneth Lawson, Ph.D.
Title: Vice President for Instruction
Address: 2504 E. College Way, Mount Vernon, WA 98273
Telephone: (360) 416-7732
Fax: (360) 416-7941
Email: Kenneth.lawson@skagit.edu

Chief Academic Officer Date
### FORM B

**APPLIED BACHELOR DEGREE**  
**STATEMENT OF NEED CRITERIA**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relationship to institutional role, mission, and program priorities.</td>
<td>Describe how the proposed program reflects and supports the role and mission of the institution, and reflects program priorities.</td>
</tr>
<tr>
<td>2. Support of the statewide strategic plans.</td>
<td>Describe how the program will support SBCTC Mission goals outlined in the Mission Study and HECB policies and goals for higher education as articulated in the Strategic Master Plan for Higher Education.</td>
</tr>
</tbody>
</table>
| 3. Employer/community demand for graduates with baccalaureate level of education proposed in the program. | • Employer demand must exceed regional supply of graduates with relevant degrees.  
• Demand must be based on data sources including but not limited to local employer survey, traditional labor market data, industry data, trade association data, and other transactional data. Please provide evidence of the gap between the number of program graduates versus the number of job openings locally and regionally. |
| 4. Applied baccalaureate program builds from existing professional and technical degree program offered by the institution. | Describe the existing professional and technical degree program that will be used as the foundation for the applied baccalaureate program.  
• How long has the program been in existence?  
• What has been the enrollment history of the program over the past five years? |
| 5. Student demand for program within service area.                      | Evidence of student interest and demand from multiple sources, such as but not limited to: Students graduating with technical associate degrees in catchment-area, survey of students within region, demand in excess of opportunity to enroll in related traditional bachelor’s programs, and changes in industry standards. |
| 6. Efforts to maximize state resources to serve place-bound students.   | • Identify similar programs offered by public or independent institutions in the region.  
• Describe options that have been explored for collaboration with other public baccalaureate institutions, businesses, and/or community organizations considered in the development of the proposal.  
• Describe unique aspects of the proposed program that differentiate it from similar programs and/or describe why expansion of an existing program would be desirable or necessary. |
1. Relationship to institutional role, mission, and program priorities.

Skagit Valley College (SVC) provides opportunities for students in pursuit of their educational and employment goals, while contributing to the economic and cultural enrichment of our communities. SVC is nationally-recognized for achieving high levels of student engagement and has been rated among the best community colleges in the nation (Washington Monthly magazine rated SVC as one of the top twenty community colleges in the U.S. in 2010 and 2007). The college reflects the values and economic priorities of our community. One of those priorities is ensuring that our students contribute, locally and globally, to protect natural resources and learn to value sustainable living.

People in San Juan, Skagit and Island counties choose this place because of its natural beauty and agricultural abundance. For quality of life as well as economic reasons, residents of Skagit Valley have actively been engaged in preserving national treasures such as the North Cascade bioregion, the Skagit River watershed—which is home to all five salmon species—local farmlands, and the Salish Sea. Many stakeholders in the region participated in creating Envision Skagit 2060, a long-term planning initiative that placed a high priority on preserving and restoring the natural resources of our area. In order to positively impact recovery efforts in our imperiled ecosystems in the Pacific Northwest, we must provide highly trained ecology professionals with a depth of understanding of the unique issues facing our region.

The strong community interest in preserving the environment is echoed by the college’s strategic priority of environmental stewardship. This priority seeks to promote sound and sustainable environmental stewardship throughout the curriculum, college and community activities, and institutional practices. In addition, the College adopted a strategic priority to align educational programs with regional and state economic development strategies. Adding an applied baccalaureate in Environmental Conservation directly supports the broad-based planning efforts of Envision Skagit 2060 which identified natural resource protection as an economic development priority. Supporting a highly skilled workforce to conserve habitat and implement necessary restoration efforts will create a healthy environment and a healthy economic region.

The college’s core themes of Access, Achievement, and Community require increasing educational access and assuring that smooth transitions are readily available to help students achieve their educational goals. These core themes are in direct support of adding relevant program in response to community-identified needs.

The applied baccalaureate degree in Environmental Conservation, in particular, directly relates to the core themes of the college to create educational access and to support educational
achievement and transitions to the workplace. Since no baccalaureate in ecology is offered in Skagit, Island, and San Juan counties, the addition of this program increases access and opportunities for place bound working adults. This applied baccalaureate will increase locally accessible learning opportunities for students in our district to achieve at a higher level than had previously been available. Our long-standing environmental conservation associate degree program has provided leadership in creating a greener campus and building environmental awareness and addressing ecological issues within the community. The college has established strong partnerships with government, community, regional tribes, grassroots organizations, non-governmental agencies and businesses that look to our students for internships and employment. The applied baccalaureate in environmental conservation would be non-duplicative and would not require a transition to another institution outside the area thus meeting the needs of a pipeline of SVC environmental conservation associate degree holders who want to continue their education.

The Board of Trustees has made the development and implementation of a BAS in Environmental Conservation one of their top priorities and voted with overwhelming support and enthusiasm to move forward with the application process in November 2011. The Board sees this effort as a direct support to preserving and enhancing the precious environmental resources of our region. They see an increasing need for locally trained and educated professionals. This effort clearly aligns with the core themes and strategies of the institution.

2. **Support of the statewide strategic plans.**

The development of this baccalaureate degree in a STEM field aligns with the goals of the SBCTC mission study as well as the HECB master plan for education, which calls for dramatic increases in baccalaureate degree production especially in STEM fields. The HEC board’s ‘Focused List of Next Steps to Achieve the Master Plan Goals’ (2011, HECB) includes:

**Goal 1: Increase educational attainment (readiness, acceleration, completion)**

3. Expand opportunities for 2- to 4-year transfer. Continue to encourage transfer student retention and completion.

The proposed environmental conservation applied baccalaureate will provide a seamless pathway from 2 to 4-year completion. Many barriers that would prevent a student from transferring are removed such as relocation, admission to another institution, repetition of course work, and orientation to an unfamiliar environment. In addition, the program would offer an educational avenue to the many students who did not gain entry into Huxley College of the Environment, WWU and School of Environmental and Forest Sciences, College of the Environment, UW.

**Goal 2: Promote economic growth and innovation, responding to economic demand, pathways to career opportunities and public/private partnerships**

1. Grow capacity in high employer demand programs of study, recognizing the higher cost of these programs.

2. Provide incentives for students to enter programs in STEM/high demand degree production and areas of critical state needs.
A bachelor’s degree in environmental conservation will prepare students for a variety of high paying jobs that are expected to experience significant growth in the coming years due to substantial investment in environmental restoration projects in the Puget Sound region. In the Northwest Workforce Development Area and Snohomish County, >60 vacancies per year are projected for the next 10 years and nearly 500 statewide. (See Tables 1 & 2) There are no other applied baccalaureate programs in the field of Environmental Conservation in the state, so this program development represents a significant increase in capacity for students who would otherwise face a dead end or have to repeat substantial course work to obtain a bachelors degree. Environmental conservation is a STEM field that aligns with the Goal 2, Step 2 above. Pathways are being developed from high school to college through recognition of advanced placement credit in the environmental conservation degree. The environmental conservation program at SVC has active partnerships with high schools including an annual Youth Environmental Summit (YES-Program) and Try-A-Trade day. SVC students have completed internship projects with area school districts consulting on restoration and preservation of a wetland that is planned for use in the science curriculum of area high schools.

3. Employer/community demand for graduates with baccalaureate level of education proposed in the program.

3.1. Labor Market Dynamics

It is critical to recognize the labor market dynamics at work within this sector in order to understand the future demand for environmental scientist and natural resource workers in the northwest region of Washington. Unlike entry-level environmental conservation workers, bachelor or masters degree trained workers in this sector tend to be highly mobile. Accordingly, the labor market operates at several geographical levels from the local area to the region and up to the national level. Understanding national and regional demand allows a better understanding of local market demand.

Most students attending Skagit Valley College in the natural resource arena are typically returning older students who are place bound because they depend on a spouse to help them attend a local college. This economic dependence often prevents most students from moving on to a regional 4-year university due to tuition affordability or the costs and challenges associated with commuting. In comparison, Grays Harbor Community College and Spokane Community College have mostly young adults out of high school (Bates GHCC & Rieger SCC).

However, lifting student’s educational experience by providing them with a bachelor degree changes the opportunities. The reason behind this is that bachelor degree holding individuals are more mobile and can seek job openings regionally and even nationally. This is in large part due to the fact that their bachelor degree holders greatly improve their economic situation since natural resource and environmental science jobs hold high to very high wages. Especially after some years in the labor force, they increase their wages through increase in seniority and
experience. This changes the individual’s family status from being a dependent community college student to a major economic contributor to the family, including the family bread-winner.

As local bachelor degreed employees move around regionally and nationally\(^1\), local job openings will continue to occur more frequently. We also know that once students obtain a bachelor degree, some will gain educational momentum and obtain a master’s degree. Therefore, it is critical for place bound students to get the opportunity to obtain a bachelor degree, which will get them into a lucrative job market (Tables 1, 2, 4, &5).

Consequently, we need to look at the future demand for natural resource workers in a regional as well as a national light (Tables 2, 4, & 5). For example, a number of professional natural resource workers in Alaska are retiring because they were hired in the early 70s in response to the building of the Alaska Pipeline. This will draw people north from other regions of the Pacific Northwest- including NW Washington – creating many new job openings for years to come (typically Alaska Dept. of Fish & Game have 25-50 fish and wildlife positions open any given time). As local bachelor degreed employees move around regionally and nationally to climb their career ladder, local job openings will continue to occur more frequently\(^1\). This replacement employment is in addition to the expected increase in natural resource job creation in the future.

### 3.2. Environmental & Ecological Drivers Behind Employment

It is useful to view the employment outlook through international, national, state and regional lenses. The coarse national and international filter provides an important view of the underlying science behind employment trends. The finer regional filter from the Pacific Northwest ecoregion to northwestern Washington translates the coarse filter into specific scientific and management objectives driving the employment outlook at the local level. What are the emerging biodiversity and natural resource management issues related to the Salish Sea (greater Puget Sound) and its local watersheds? It is important to establish a national trend to ensure that the Pacific Northwest will not become the only area of employment. Such a scenario would flood our area with graduates from universities in other regions of the nation (Tables 2, 4, & 5).

The Environmental Conservation Program at Skagit Valley College (SVC) is situated in Mt. Vernon, Skagit County, the northwestern part of Washington, which is a major part of the Puget Sound. This area is currently experiencing the greatest growth in employment of environmental and natural resource related jobs (Table 1, 2, & 4) in the state. This development is expected to continue in years to come due to international, national, and state ecological related trends.

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\(^1\) According to Molley et al. 2011, Internal migration in the United States, Federal Reserve Board, Washington, D.C. employees with a bachelor degree is twice as likely to move regionally for a job compared to a labor force with an associate’s degree or less; even in two earner households.
Internationally, there is a strong movement to valuate ecosystem services from wildland and rural areas and set conservation priorities. With an ever-increasing human population consuming an escalating amount of natural resources resulting in land conversions for urban growth and agriculture there is an increasing demand for ecological restoration of ecosystems (Moilanen et al. 2011) and new agroecological approaches to food production (Noguera et al. 2011); both include the production and application of biochar - a solid material obtained from the carbonization of biomass (Glaser et al. 2001, Marris 2006), which improve nutrient retention in soils (less water pollution), which improves nutrient retention in soils (less water pollution) and increases long-term carbon storage in soils (>1000 years). These new approaches require more professionals to calculate the values of ecosystem services that are present, to compare those values to potential land conversions as well as work with carbon budgets (Abson & Termansen 2011). In addition, ecological restoration adds value by restoring ecosystem services as well as producing more fish and wildlife resources. The growing interest and production of biofuels has gigantic implications for managing forest and grassland ecosystems (Dale et al. 2011) leading to an increase in man hours per acre; mainly because this production/harvest impacts all ecosystem attributes, which we want to attain. Increasingly, there has been an internationalization of management of tropical forests. Many institutions and companies in developed nations used both staff time and monies to conserve tropical forests as carbon and biodiversity set offs for planning and managing their operations long-term through REDD (reducing emissions from deforestation and forest degradation) programs (Clements et al. 2011). Finally, in light of increased human dominance of earth’s surface (Vitousek et al. 1997), more and more species need evaluation for red listing of species and threatened ecosystems (Rodríguez et al. 2011). At the 25th anniversary of the creation of the discipline conservation biology by Micheal Soulé we are at a transformation point. Conservation groups – employing numerous professional ecologists – are finding new partnerships and new tools arising from community needs for ecosystem services that are cheaper and yield greater political returns on local levels creating a positive feedback loop for ecological employment (Forbes 2011).

On the state level, we are currently engaged in three long-term ecological restoration arenas; the restoration of the Puget Sound ecosystem to support healthy salmon runs; restoring salmon and wildlife populations to the Columbia Basin area, as well as restoring forest ecosystems on both public and private lands ($ 291.6 million in 2013 with projected funding of $278 million per year until 2025). The Puget Sound Action Agenda developed in coordination with the Puget Sound Partnership outlines a number of strategic priorities that require substantial hires of personnel with ecological skills and knowledge. These priorities emphasize restoration of ecosystem services and, prevention of water pollution at its sources – water and vegetation restoration in urban areas and in farmland areas, and implementation of a substantial monitoring program of the Puget Sound and its watershed. In addition, they require the implementation of regional salmon recovery plans and the recovery of the Puget Sound Orca Pods – Southern Residents. Consequently, there is a very aggressive funding strategy for the implementation of the priorities for decades to come. This strategy now focuses on the entire food web and its connections from forage fish for salmon and ocean trout to Orca whales depending on salmon - mainly the endangered Chinook salmon EPA. As an example, EPA funding for the Puget Sound in 2010 was $21 million with additional yearly funding for at least a decade of $16 million per year through the Puget Sound Partnership (all non-capital funding).

The main focus for restoring the Columbia Basin is the restoration of salmon, a keystone species for aquatic and terrestrial ecosystems. In order to be successful, most of the focus will be on riparian restoration and thereby restoring floodplain dynamics. This floodplain approach is also seen in other watersheds across the Pacific Northwest, requiring professional ecologists to plan, execute, and monitor ecological restoration projects in highly dynamic landscape components.

Furthermore, across the state, there is an increasing effort to combat invasive species, both plants and animals, which typically degrade ecosystems and their integrity thereby lowering their natural resource productions. Additionally, the negative impacts on agriculture help drive this part of natural resource job creation.

Finally, Forest restoration and new management approaches are also being implemented to use US forests as carbon sequestration and storage, with the Pacific Northwest forests particularly well suited due to high growth rates. Our forest ecosystems are in great need of restoration from misguided fire suppression for over a half century. In addition, we need to mange forests in the Cascades, especially in the North Cascades Ecosystem, for the endangered northern spotted owl and marbled murrelet. Further complicating ecological restoration of ecosystems and their services is an increasing fragmentation of habitats requiring planning and implementation of mitigation measures.

Ecological Society of America (ESA website 9 2011), which is the premier authority on ecological matters in North America has long predicted that there would be a tremendous growth in employment for scientists with an ecological degree:

“WHAT IS THE JOB OUTLOOK LIKE?
There is a growing need to understand and manage the natural world and our impact on it. This need has resulted in a growth in job opportunities for individuals with ecological backgrounds to conduct...
ecological research, to determine environmental impacts, to develop management plans to avoid environmental problems and restore ecosystems, to educate the general public, and to develop and manage sustainable communities.

Job opportunities in the ecological and environmental fields are predicted to grow enormously over the next several years - especially in private companies, non-government organizations, and in pre-college schools more than at universities and federal agencies.

A wide variety of positions requiring the application of ecological principles are available, though the title might not include “ecologist.” Some of these job titles include: consultant, planner, analyst, program manager, education coordinator, computer programmer, lobbyist, and lawyer. Remember, personal experiences may help to define new job descriptions and with every experience comes more responsibility, financial compensation, and opportunities.”

Locally, within SVC’s service area there is a strong outlook for ecology employment. Through a two-year planning process, Skagit County is has implemented their recommendations for a 50-year future, which outlines a very green future requiring the implementation of multiple ecological restoration projects at all levels and scales over the next decades. This will require an increase in professional ecologists on the ground within various businesses, Tribal and public institutions. It is worth noting that SVC graduates of science programs will also have opportunities outside Skagit, Island, and San Juan counties.

### 3.3. Employment Projections

The occupational outlook for various natural resource, biological, and ecological based professionals is projected to see great increases both for Washington State (Table 1), regionally in NW Washington & Snohomish Co. (Table 2), and nationally (Table 4) for years to come. This is in strong agreement with recent years’ research findings, tribal outlook as well as predictions by the Ecological Society of America (see above).

Table 1. Occupational outlook for ecological and biological based educations for Washington State relevant to proposed BAS in Environmental Conservation (Workforce Explorer 2011). Our survey results indicated that our BAS would be equivalent to a BS in environmental science.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>% growth 2008-18</th>
<th>Annual Average Openings†</th>
<th>% annual growth 2015-20</th>
<th>Annual Average Openings†</th>
<th>Current Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Env. Scientists &amp; Specialists, Incl. Health (BS)</td>
<td>14.9</td>
<td>184</td>
<td>1.9</td>
<td>235</td>
<td>$35.39 (21.91-55.47)</td>
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<tr>
<td>Zoologists and Wildlife Biologists (BS)</td>
<td>9.6</td>
<td>87</td>
<td>1.4</td>
<td>71</td>
<td>$32.08 (21.53-46.27)</td>
</tr>
<tr>
<td>Natural Sciences Managers (BS)</td>
<td>12.2</td>
<td>71</td>
<td>1.8</td>
<td>77</td>
<td>$58.93 (36.80-69.55)</td>
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</table>
Biological Scientists, All Other (BS) *

<table>
<thead>
<tr>
<th>Salary</th>
<th>Openings</th>
<th>Annual</th>
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</thead>
<tbody>
<tr>
<td>$32.93</td>
<td>47</td>
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Hydrologists (BS)

<table>
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<tr>
<th>Salary</th>
<th>Openings</th>
<th>Annual</th>
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<td>$36.39</td>
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Soil and Plant Scientists (BS)

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<td>$30.35</td>
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Life Scientists, All Other (BS)*

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<th>Openings</th>
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</tbody>
</table>

Conservation Scientists (BS)

<table>
<thead>
<tr>
<th>Salary</th>
<th>Openings</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>$30.66</td>
<td>13</td>
<td>30</td>
</tr>
</tbody>
</table>

Foresters (BS)

<table>
<thead>
<tr>
<th>Salary</th>
<th>Openings</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>$27.82</td>
<td>13</td>
<td>30</td>
</tr>
</tbody>
</table>

Total Annual Openings

<table>
<thead>
<tr>
<th></th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openings</td>
<td>457</td>
</tr>
</tbody>
</table>

Total Annual Openings exclude.*

<table>
<thead>
<tr>
<th></th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openings</td>
<td>385</td>
</tr>
</tbody>
</table>

† Includes new and replacement positions; new positions averages around 30% (10-55%).

Given the projected annual openings for BS graduates within natural resources in the State of Washington (Table 1) there is an under production of graduates. The University of Washington’s School of Environmental and Forest Sciences graduates around 100 BS students [including forest engineering (Michelle Trudeau, UW personal communication)] and Huxley College of the Environment at Western Washington University graduates about 45 BS students per year (Table 3). That is inadequate to fill the number of new openings in our state (Note: students graduating with a biology degree are not environmental scientists). Even with an additional small number of graduates from private universities, Washington State produces fewer environmental science graduates than we need. Locally produced students are better educated and adapted to work in Washington’s natural world compared to graduates from other regions of the country.

Excluding two of the more common occupations in Table 1 and 2 that may be offered by general biology degrees at many universities, there is still a great demand gap between job projections and students graduating with a BS in environmental science or natural resources, which can be filled by BAS graduates from SVC.

Recently (2012 & 13) Workforce Explorer projects that students graduating with a BAS in Environmental Conservation will enter a job market where there regionally will by 57-65 job openings per year for the next decade. With current projections of graduating a maximum of 20 students per year at full capacity, there will be great prospects for students finding employment holding high wages in the vicinity of their residence. Additionally, students graduating with a BAS, compared to an associate’s degree, will have greater opportunity for employment.

Given the relatively low number of graduates from Huxley College of the Environment, WWU there is not enough graduates to fill the available positions locally (Table 2 & 3). The BAS in Environmental Conservation at SVC would help alleviate the gap between demand for BS in environmental sciences and the local production of graduates. It should be noted that the Northwest Indian College graduate a low number of BS in environmental sciences. However,
their emphasis is on Indoamerican relations to natural resource management. Their graduates primarily end up in tribal governments (10 env. BS graduates per year Terri Plake, NWIC).

### Table 2. Occupational outlook for ecological and biological based educations for northwest Washington and Snohomish County (2009-2019 & 2015-2020), relevant to proposed BAS in Environmental Conservation (Workforce Explorer 2012) for students attending SVC.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Annual Average Job Openings (NW WA†) 09-19</th>
<th>Annual Average Job Openings (Snohomish Co.) 09-19</th>
<th>Annual Average Job Openings (NW WA†) 15-20</th>
<th>Annual Average Job Openings (Snohomish Co.) 15-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Env. Scientists and Specialists, Incl. Health (BS)</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Zoologists and Wildlife Biologists (BS)</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Natural Sciences Managers (BS)</td>
<td>2</td>
<td>10</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Biological Scientists, All Other (BS) *</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Soil and Plant Scientist (BS)</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Life Scientists, All Other (BS) *</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Conservation Scientists (BS)</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Foresters (BS)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Hydrologists (BS)</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td><strong>33</strong></td>
<td><strong>28</strong></td>
<td><strong>37</strong></td>
</tr>
<tr>
<td>*<em>Total excluding <em>”</em></em></td>
<td><strong>21</strong></td>
<td><strong>26</strong></td>
<td><strong>26</strong></td>
<td><strong>34</strong></td>
</tr>
</tbody>
</table>

† NW Washington comprise of Whatcom, Skagit, Island, and San Juan counties.
* Occupations that may be supported by other biology degrees.

It is worth noting that the two projections from recent years (2008-18 & 2015-20) show similar positive trends for employment for almost a decade into the future (Table 1 & 2). These jobs have been classified as high to very high wages by the Bureau of Labor Statistics.

Comparing the projected local need for students graduating with a baccalaureate degree in environmental science or natural resource management and the local production of graduates it is clear that there is a gap. It is important to employers to get students that are educated locally and have our distinctive knowledge and skills (See Appendix C). A good predictor of employability of potential BAS degree holders would be to compare our graduating student with an Environmental Conservation Certificate, since they already have a bachelor degree. In the past 5 years, 6 students have received a certificate and 5 students are working in the field and one is unknown – moved out of the area.

### Table 3 Students graduating from Huxley College of the Environment, WWU with a BS in Environmental Studies (Marine and Toxicology graduates excluded since they are in different fields of study (Source Huxley College)
The data given in Table 1 only represent new job openings. The percent new jobs vary to be from 10% to 55% of the total job creation. Therefore, adding replacement numbers, it is also possible to project the total number of open positions from 2010-2020 nationally. Using a conservative estimate of 25% new openings versus replacement positions from Table 1 the total job creation is estimated to be 136,000 environmental/ecology/natural resource positions nationally.

Table 4. Occupational outlook for various ecological and biological based educations relevant to the proposed BAS in Environmental Conservation at SVC (Bureau of Labor Statistics; www.bls.gov)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>%growth 2010-20</th>
<th>2010-2020 New job openings†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoologists or wildlife biologists</td>
<td>7</td>
<td>1,500</td>
</tr>
<tr>
<td>Conservation scientists &amp; foresters</td>
<td>5</td>
<td>1,700</td>
</tr>
<tr>
<td>Soil and plant scientists</td>
<td>10</td>
<td>3,500</td>
</tr>
<tr>
<td>Natural science managers</td>
<td>8</td>
<td>3,800</td>
</tr>
<tr>
<td>Environmental scientists</td>
<td>19</td>
<td>16,700</td>
</tr>
</tbody>
</table>

† Total additional openings – 27,200; BLS figures does not include replacement positions.

Funding for ecology-based jobs is definitely available. Washington State Recovery Funding Board in Washington State Announced that there will be $30 Million in Grants for Salmon Recovery. Organizations in 28 Counties Received Funding for ecological projects, which will lead to 300 jobs, created over the next 4 years. Our regional area received a disproportionately large amount of the recovery funding (Table 5); almost a quarter of the funding went to our three local counties. Salmon restoration projects are estimated to create 1.57 jobs for every $100,000 invested (not to mention the thousands of jobs created through harvest of the resource), according to a University of Oregon study. Since 1999, this federal funding and state match have funded more than 1,200 restoration projects estimated to have created more than 3,700 jobs (Washington State Recovery Funding Board 2011). This funding level will continue for several decades in order to help restore the Puget Sound.

Of late, the Pacific Coastal Salmon Recovery Fund, Northwest Regional Office, NOAA, National Marine Fisheries Service announced that $80,000,000 funding was allocated for 2011 alone. This level of funding is expected to continue for decades in order to rebuild dwindling salmon stocks. This funding will translate into more than 1250 job openings alone.

Table 5. Funding for salmon recovery in the three northwestern counties in Washington (Washington State Recovery Funding Board 2011). They received 21% of the total funding available, which demonstrate a disproportional need in our area.

<table>
<thead>
<tr>
<th>County</th>
<th>Funding Amount</th>
<th>Job Creation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skagit County</td>
<td>$2,298,337</td>
<td>36</td>
</tr>
<tr>
<td>Snohomish County</td>
<td>$2,497,397</td>
<td>39</td>
</tr>
</tbody>
</table>
Recently, an evaluation of the progress of the Implementation of the Puget Sound Chinook Salmon Recovery Plan was released by the National Marine Fisheries Service (Judge 2011). This report outlines a number of measures that need to be implemented. Only relevant key findings pertinent to the ecological employment outlook are listed below:

“Summary of pertinent information from the 2011 IMPLEMENTATION STATUS ASSESSMENT:

Key findings 3 & 4:

3 Habitat work is underway, but heavily weighted toward capital projects. Habitat managers within the 14 watersheds are implementing the strategies defined in the Recovery Plan, but at this stage of implementation, the work is heavily weighted toward capital habitat restoration activities. Non-capital programs are just as important for the success of the Recovery Plan, but funding sources tend to favor capital projects, and disfavor the funding of staff necessary to perform the work.

4 Staffing for core habitat programs remains insufficient and hampers implementation. The Lead Entities consistently state that they lack adequate staffing resources to fully implement their Recovery Plans. Most Lead Entity organizations are run with only one or two paid staff. They have identified core staffing needs that include the following staff to ensure all priority programs and projects are timely implemented:

Core Program Staffing Needs:

- Program Director (typically, the lead entity coordinator)
- Program Planner/policy support person (trained in land use planning; develop new strategies, participate in protection programs)
- Restoration/Acquisition Project managers (manage or supervise construction projects, land acquisition negotiations and real estate transactions)
- Outreach and education staff (develop programs and marketing materials, build community relationships and support, lobby opinion leaders and legislators)
- Basic clerical support staff (schedule meetings, take minutes, coordinate work)
- Biologists, ecologist or other technically-trained staff (for project development and review, status/trends monitoring, other field work)

Billy Frank Jr., Chairman, Northwest Indians Fisheries Commission have recently underscored the urgent need to improve fish and wildlife recovery efforts in Washington State. In the most recent issue of NWIFC News (2011), in celebration of the removal of the Elwha dams, he highlighted the economic benefits of investing in ecological restoration, and projected a
significant increase in activity. Along the same lines, but with much stronger language, Frank (2011) at the 141st North American Fisheries Conference in Seattle underscored the need for implementing the key findings from the assessment report for the Puget Sound Chinook recovery Plan. Additionally, we asked ten local tribes if the recommendations from the recent evaluation of the status of the Chinook recovery efforts in the Puget Sound eventually would result in an increase in the workload leading to an increase in hiring the next 5 years. Overwhelmingly, 90% responded yes, indicating future demand for environmental scientists and natural resource workers. In addition, the tribes were asked to project future employment needs. They projected that they will have at least 50 job openings in the next 5 years, which are about 10 openings per year.

In a survey of 13 International and Pacific Northwest environmental consulting businesses and agencies featured at the 141st North American Fisheries Conference in Seattle, indicated that 12 of the organizations were currently hiring baccalaureate degree employees and projected to continue to do so for 5 years or more (Appendix B). These included multi-state and international consultants, and state and federal agencies involved in fish, wildlife, and environmental work. These organizations typically respond to national and international trends in employment and recruit nationally.

Additionally, we surveyed 156 consulting businesses in the Puget Sound Area and 28 within the Columbia Basin. Although the overall return was low the respondents consistently answered that on average they will be hiring 3+ baccalaureate degree employees over the next five years. This will result in hiring of more than 550 people with a baccalaureate degree (Appendix E).

3.4. Conclusion

With the proposed BAS in Environmental Conservation SVC will be able to meet employer’s needs for environmental scientists with very high technical expertise (Appendix C). Our survey results indicated great satisfaction with proposed curriculum; especially the fact that there were high level ecological and quantitative science built into the curriculum (Appendix E).

The projected regional demand for environmental scientists and natural resource workers for the next many years is much greater than current graduate capacity from our regional colleges (Huxley College of the Environment and Northwest Indian College).

In conclusion, it is clear from the data presented that there currently is and will continue to be for years into the future a great need for scientists with bachelor degrees in ecology related fields. It is also apparent that there is a limited ability for students to attend traditional bachelor degree programs in ecology and natural resource management both because of capacity as well as place bound students. In addition, the funding patterns and outlook for ecological restoration unmistakably favor the Puget Sound Region and NW Washington. Currently, this region offers very few options for place-bound students enrolled in environmental workforce programs to continue on for a baccalaureate or advanced degree. Through offering a BAS in Environmental Conservation, SVC will be uniquely positioned to fill this void.
4. Applied baccalaureate program builds from existing professional and technical degree program offered by the institution.

The proposed BAS in Environmental Conservation is primarily based on the AAS-T and ATA degree tracks within the Environmental Conservation program at SVC (Table 6) in the Workforce Unit. The program was established in 1992. In the past 7 years the enrollment has increased continuously ending with nearly 50 FTE in fall quarter 2012 (Fig. 1) as well as a dramatic increase in graduating students (Fig. 2). The difference between FTEs and students graduating with an associate’s degree is a fair number of Environmental Conservation certificates. The certificate is a one academic year of core ENVC courses for students who already have a BA or BS degree. This is an indication that SVC’s Environmental Conservation Program has a great reputation for quality and has achieved employment success for graduates. Graduates from the ENVC program possess a strong reputation for high skills and knowledge, which translates into high employment readiness (See Stevenson Letter in Appendix C). Both our associates degrees and certificates for students already holding a bachelor degree as well as our GIS certificate are sought after by students because employers recognize the valuable skills and knowledge students obtain in our program. This is illustrated by the letter of support from the Stillaguamish Tribe (See Appendix C). Our graduating students are uniquely qualified to work as environmental scientists and natural resources such as timber, fish, and wildlife professions, which are jobs that cannot be filled by biologists.

The current AAS-T degrees in Environmental Conservation at SVC are excellent foundation degrees for a BAS in Environmental Conservation. Students will have had two years of ecology based curriculum, relevant general education requirements, and other academic support courses that will be able to support a new rigorous upper division curriculum of 300 and 400 level courses.

It should be emphasized that students with an AAS-T in Environmental Conservation cannot transfer to Huxley College of the Environment, WWU or School of Environmental and Forest Sciences, College of the Environment, UW without taking additional courses for typically 1-2 years (See Appendix C & E). Most ENVC courses do transfer to UW, but students who want to transfer lack GURs such as math, biology, chemistry, economics, which is illustrated in the planning sheet for transfer to School of Environmental and Forest Sciences, College of the Environment (Appendix D). Most ENVC courses do not transfer to Huxley or WSU, which would require workforce students who wants to transfer to take almost two years of academic coursework. They would typically have to fund that portion by themselves. The only option for most Environmental Conservation students would be a BAS at SVC. Additionally, attending college in Bellingham or Seattle would require very long commutes, which are time consuming and costly.

Given the enrollment trend and the student interest in a BAS degree (Table 10 & 11) it would be possible to sustain the proposed FTEs of 12-20 over five years (Form A). In addition to SVC students, we would be able to provide educational support for students from other community colleges with a professional technical degree in natural resources (Table 15). Students at Spokane and Grays Harbor community colleges are typically much younger recent high school
graduates, who are more mobile (Bates GHCC & Rieger SCC). These students face the same roadblocks as our technical students. SVC is uniquely positioned for proving for other CC students because we have very affordable student dorms.

The Environmental Conservation department at SVC has a long solid relationship with Huxley College, WWU and School of Environmental and Forest Sciences, UW. Prior to submitting this proposal we have had several conversations regarding our BAS proposal. At this point, they were very satisfied with our preliminary BAS curriculum. Both colleges would be able to provide continued education for graduating students at the Master’s level. As we move forward we will continue to work with both institutions to ensure that there are career paths for our students. The letter from UW indicates possible Master’s programs for our students. For Huxley College, Dr. Hollenhorst, Dean indicated that their new applied Master’s program would be a great fit.

In addition, Huxley College of the Environment, WWU only admits 191 new students every year, which correspond to an acceptance rate of 40%, which translates into 287 rejects (Kathryn Patrick at Huxley). Similarly, School of Environmental and Forest Sciences, College of the Environment, UW rejects a similar number of students (Michelle Trudeau, UW). Consequently, over 500 students must find education opportunities in other states. Given SVC’s prime location for environmental and natural resource education it will be possible to recruit a substantial amount of this pool.

Our region provides access to field based activities such as visiting salmon restoration projects at hydroelectric facilities where doomed runs of fish are being brought back from the brink; walking through forest lands where short-sighted management led to landslides that damaged key watersheds; touring wind-power generation facilities; seeing watershed reclamation projects that were possible only with cooperation of agricultural landowners, state, local and tribal governments, and community-based organizations; hiking in legally-protected temperate rainforests (a rare ecosystem) and national parks; kayaking and canoeing in near shore marine areas, and observing bald eagles and Orca whales in their natural habitat.

**Table 6.** Existing Associates in Applied Science degree in Environmental Conservation. Aquatic/terrestrial track shown. All program tracks could be used as a basis for a BAS degree.

<table>
<thead>
<tr>
<th>AAS-T / CREDITS; AQUATIC/TERRESTRIAL EMPHASIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIP: 03.0101; EPC: 165</td>
</tr>
<tr>
<td>Program Number</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>FIRST YEAR - FALL</td>
</tr>
<tr>
<td>ENVC</td>
</tr>
<tr>
<td>ENVC</td>
</tr>
<tr>
<td>ENVC</td>
</tr>
<tr>
<td>BIOL</td>
</tr>
<tr>
<td>Total:</td>
</tr>
<tr>
<td>FIRST YEAR - WINTER</td>
</tr>
<tr>
<td>ENVC</td>
</tr>
<tr>
<td>Course Code</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>ENVC 123</td>
</tr>
<tr>
<td>ENGL&amp; 101</td>
</tr>
<tr>
<td>PE 200</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
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</tbody>
</table>

**FIRST YEAR - SPRING**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVC 122</td>
<td>Stream Ecology</td>
<td>5</td>
</tr>
<tr>
<td>ENVC 140</td>
<td>Plants of Western Washington</td>
<td>5</td>
</tr>
<tr>
<td>ENGL&amp; 235 or 104</td>
<td>Technical Writing</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 104</td>
<td>Composition III (Research)</td>
<td>5</td>
</tr>
<tr>
<td>MATH&amp; 146</td>
<td>Introduction to Stats</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>20</strong></td>
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**SECOND YEAR - SUMMER**

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>ENVC 199</td>
<td>Cooperative Education †</td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>6</strong></td>
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**SECOND YEAR - FALL**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVC 201</td>
<td>Watershed Restoration</td>
<td>5</td>
</tr>
<tr>
<td>ENVC 202</td>
<td>Wildlife Biology</td>
<td>5</td>
</tr>
<tr>
<td>GIS 101</td>
<td>Introduction to Geographic Information Systems</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>15</strong></td>
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**SECOND YEAR - WINTER**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVC 210</td>
<td>Fish Ecology and Management</td>
<td>5</td>
</tr>
<tr>
<td>ENVC 211</td>
<td>Ecological Sampling and Monitoring Design</td>
<td>4</td>
</tr>
<tr>
<td>ENVC Electives</td>
<td>Various</td>
<td>5</td>
</tr>
<tr>
<td>LC/GE</td>
<td>(Learning Community or Gen. Ed. course)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

**SECOND YEAR - SPRING**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVC 220</td>
<td>Wetlands in Managed Landscapes</td>
<td>4</td>
</tr>
<tr>
<td>ENVC 221</td>
<td>Ecology of Ecosystem Edges/Ecotones</td>
<td>3</td>
</tr>
<tr>
<td>ENVC 222</td>
<td>Field Project</td>
<td>3</td>
</tr>
<tr>
<td>CMST&amp; 210 or 220</td>
<td>Interpersonal Communication or Public Speaking</td>
<td>5</td>
</tr>
<tr>
<td>GIS 105</td>
<td>Introduction to Global Positioning Systems (GPS)</td>
<td>2</td>
</tr>
<tr>
<td>GIS 106</td>
<td>Advanced Global Positioning Systems</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 111

† Cooperative Education is experiential learning experience

The Proposed BAS in Environmental Conservation will be offered in a hybrid format with 40% instruction, 20% lab/fieldtrips, and 40% distance education (web based instruction). This format selection is an expansion of our current hybrid format, which has been a great success with students. In addition, all surveyed students, both past (Table 26) and current students (Table 13) indicated that they preferred a hybrid format.
Fig. 1. Enrollment in Environmental Conservation tracks and Geographic Information Systems (DE) for the past 8 academic years.

Fig. 2. Students graduating with an associates degree in Environmental Conservation at SVC; includes AAS-T and ATA degrees. * number of students who will graduate by June, 2013.

Over the past two decades, the Environmental Conservation Program has built an excellent reputation among local employers in the environmental and natural resource science fields for graduating exceptional students (Stevenson Appendix C). In addition, this reputation is carried over to prospective students, which is responsible for our positive enrollment pattern for degree seeking student as well as certificate students. It is our intent to carry this excellence forward to the BAS degree, which will ensure that students are very employable.
5. **Student demand for program within service area.**

In order to assess the demand for a BAS in Environmental Conservation at SVC, we have surveyed two cohorts of current students and surveyed as many past students, enrolled in the past 5 years, as was possible to contact. The majority of current students were surveyed in April (1st & 2nd year students) and incoming 1st year students were surveyed in October. All the Tables are listed in Appendix A.

The majority of students enroll into the aquatic/terrestrial track within the Environmental Conservation Program (Table 7). The majority of students (79%) are living within Island and Skagit counties, with 15.3% in northern Snohomish County and 5.7% in western Whatcom County (Table 8). The majority of enrolled students (94.2%) are seeking an associate’s degree, with only a few percent with a bachelor’s degree seeking skills upgrade (Table 9).

To get a clear picture of students’ expectations when enrolling, we asked how many were planning on transferring to a four-year institution. Less than half (42%) responded positively to this question (Table 10). However, when asked if they were likely to enroll in a bachelor program at SVC, 61% answered ‘very likely’ (Table 11). An additional 30% answered ‘somewhat likely’. Finally, we asked them how far they were willing to commute (Table 12) and it is clear that 45 miles is the limit for most students. About 30% were not really willing to go beyond 25 miles.

The final two questions concerned the delivery mode of a BAS degree. Most students preferred to receive 10-20% of the instructional delivery as distance education (Table 13). Only a few percent of the students were interested in receiving instruction on Saturdays (Table 14).

There are a few other associate workforce programs in the state, which deliver natural science related courses (Table 15). It would be possible for students graduating from Spokane Community College and Grays Harbor College (See endorsement letters in Appendix C) who are not place bound to come to SVC for additional training. Many of the other two-year programs also serve rural communities or smaller communities. Completing a BAS at SVC would appeal to students in search of a small college in a rural setting. Tuition and housing are factors both identified as barriers by SBCTC for students moving on to a bachelor degree. Generally, more affordable housing would be available for students in Mount Vernon. SVC owns student apartments adjacent to the campus, and there are several apartment complexes within walking distance.

The total student FTES for Washington State community colleges in natural resources is 268.46 FTES (Table 15). Even if only a small percentage of these students transferred to SVC, the sustainability of a BAS in Environmental Conservation is ensured at SVC. Spokane Community College with more than 90 FTES has expressed an interest in promoting SVC’s BAS degree in Environmental Conservation as an attractive transfer option for their natural resource degrees (Appendix B).

Given the increase in FTEs and students graduating with an associates degree in Environmental Conservation at SVC (Figs. 1 & 2), creating a BAS would be sustainable over time and serve a
primarily place bound population of students. The vast majority of students enrolled in the Environmental Conservation Program at SVC are older returning students with established families and roots in the local communities. In addition, it would be possible to serve students graduating with an associate’s degree from Spokane and Grays Harbor community colleges. Moreover, it is also possible to serve the more than 500 students that were not able to attend the UW or WWU.

6. Efforts to maximize state resources to serve place-bound students.

Students graduating from SVC with a degree in Environmental Conservation (AAS-T & ATA) have virtually no option to transfer to a four-year institution in order to further their career within the ecology/natural resource fields.

Currently, there are three regional sources for a bachelor’s degree in environmental issues: the Northwest Indian College, Huxley College of the Environment at WWU, and School of Forest Resources within the College of the Environment at UW. All three institutions require transfer students to have an academic transfer degree. This effectively prevents most professional technical students to transfer for a bachelor degree. In order to transfer they must first complete another two years of academic transfer credits. This extended time and cost prevents most students from transferring.

Presently, there are basically three sources of bachelor’s degree in environmental issues. Firstly, the Northwest Indian College, located at Lummi Island, is past the commuting distance for most of the students enrolled at SVC. Furthermore, their curriculum is geared to students with an Indo-American cultural background. Secondly, Huxley College of the Environment at WWU and the regional Higher Education Consortium at Everett CC offers environmental degrees. The degrees are a two-year degree based on specific academic coursework, which does not align with the curriculum in the Environmental Conservation program at SVC. Workforce students graduating from the Environmental Conservation Program must take an additional course load of 1-2 years in order to transfer. In addition, Huxley College of the Environment at WWU is a very difficult route for students to take due to their strict GUR requirements (See Appendix C). Thirdly, students may transfer to the School of Environmental and Forestry Sciences, College of the Environment, UW. In order to transfer however, they must take 139 credits, which equates to about 3 years. SVC has had a transfer agreement with the School of Environmental and Forestry Sciences, College of the Environment, UW since the mid 1990s and less than 10 students have transferred. The additional credit load required before transfer and the distance to Seattle are barriers that most students cannot overcome. Again, this is reflected in comparing a desire to get a BS at entry (Table 25) and actually achieving it (Table 24).

6.1 Current Student Survey

There is clearly a strong desire for our students to seek a baccalaureate degree (Table 9, 10, & 11) with 61% indicating that they ‘very likely’ and 30% ‘somewhat likely’ would enroll in bachelor’s degree program if offered at SVC. Comparing this desire with the number of past students (12.5%) who actually achieved a bachelor’s degree (Table 22 & 23) demonstrates that
commuting is a very strong barrier. This is consistent with the findings in a SBCTC study from 2010.

Given the resident location of our current students (Table 8) and past students (Table 16), it is clear that most students would face challenges commuting (Table 12 & 25) and in reality are effectively place bound.

Further, most students indicated that they would not commute more than 45 miles to attend a bachelor’s program (Table 12 & 25). This effectively leaves many students with no access to a bachelor program in Environmental Conservation. In addition, most past students indicated interest in returning to SVC to get their Bachelor degree in Environmental Conservation (53.1% very likely, 31.3% likely) if it were available (Table 24).

During Spring Quarter of 2011 the Skagit Valley College Environmental Conservation Program faculty, in cooperation with the Office of Institutional Research, created another survey instrument designed to measure former students’ interest in pursuing a bachelor’s degree in their subject. The survey was made available on the college’s Web server using Remark Web Survey software. Former program students participated in the project from April 11 to June 8, 2011.

From the responses from former students regarding their place of residence, 21.8% had moved out of NW Washington, but only 9.3% had moved out of state (Table 16). This is a strong indicator of how place-bound our students are and how important it is to give them the opportunity to earn a baccalaureate degree close to home.

As with current students (Table 7) the majority of past students attended the Aquatic/Terrestrial track in the Environmental Conservation program (Table 17). Few students chose to seek a certificate of one year or less (Table 18).

Table 19 shows that a large proportion of students in the past did not graduate. Often students have a few support courses left. In recent years, we have made an extra effort to stay in contact with students to encourage and help them with their final coursework. This has increased the likelihood that students graduate with an associate’s degree increases as is also reflected in the graduation numbers for 2013.

6.2 Past Student Survey
The majority of past students did not attend a four-year institution (Table 20 & 21). Only about 10% transferred successfully to a four-year institution. This is in sharp contrast to the desire among incoming and current Environmental Conservation Students (Table 11) who have a great desire for a BS degree. Table 23 illustrate that most students stay within the greater Pacific Northwest.
About 31.3% of past students planned on transferring to a four-year institution (Table 23), which is in line with the expectations of current students (Table 10), demonstrating a consistent pattern of student behavior towards moving on to a university.

When asked if they were ‘somewhat more likely’ or ‘very likely’ to have enrolled into a bachelor’s program if it were offered at SVC the answers were respectively 31.3% and 53.1%. This is a clear indication that there is a huge demand for a bachelor program in Environmental Conservation at SVC. Interestingly, the commute distances students are willing to endure are remarkably similar between past students (Table 25) and current students (Table 12). This again enforces the need for a BAS at SVC.

Given this data, we are planning on offering the BAS in Environmental Conservation in a hybrid format with 60% of the curriculum offered as instruction and lab/fieldtrip. The remaining 40% will be distance education through web-based instruction. Like current students, past students are really not interested in pursuing education on a Saturday (Table 27).

Finally, the overwhelming portion of past students (Table 29), like current students, identifies themselves as place-bound.

7 Conclusion

The proposed BAS in Environmental Conservation will ensure continued learning for place-bound adult students. Likewise, rural students graduating from high school who are place-bound for economic or social reasons will also be afforded an opportunity for a baccalaureate degree. Table 30 outlines possible career paths for graduating students. Creating a BAS in Environmental Conservation at SVC would provide a number of students the opportunity to achieve a bachelor’s degree in ecology and natural resource management. Northwest Washington will continue to experience a disproportionate demand for scientists in the ecology-related filed. The BAS in Environmental Conservation at SVC would provide a pathway for place bound students who typically require access to a baccalaureate in proximity to their home (SBCTC 2010). The production of additional baccalaureate graduates would also fill the gap between projected employment needs and current projections for the NW region.

| Table 30. Outline of possible career paths available to BAS graduating students. |
|---------------------------------|---------------------------------|
| • Animal damage specialist      | • Plant scientist               |
| • Aquatic ecologist             | • Peace Corps                  |
| • Conservation Scientist        | • Researcher                   |
| • Cultural resource educator    | • Resource policy advisor or analyst |
| • Environmental consultant     | • Restoration ecologist        |
| • Environmental engineer        | • Soil scientist                |
In addition, we would be able to help fill the large pipeline issue in Washington State. Total annual job openings for the state is projected to be at least 472 per year (Table 1), which cannot be filled by students graduating from Huxley, WWU (45) and College of the Environment, UW (204, many in the oceanography, earth & space, marine sciences, and atmospheric sciences). Therefore, most of the positions are filled by students graduating in other states. However, it is desirable to have locally produced graduates. This is also in full alignment with the goals of the SBCTC and HECB to create more baccalaureate science degrees (WAHECB 2007, SBCTC 2010b). Our proposed BAS in Environmental Conservation will help the Higher Education Coordinating Board increase the number of higher degrees within the STEM fields, thereby promoting economic growth and innovation.

Both Huxley College of the Environment at WWU and School of Environmental and Forest Sciences at UW are supportive of our proposed BAS degree (Appendix C). Both institutions recognize that we would not be competing for students; rather, we would be able to add graduates to our workforce. In addition, there would be a pathway for students to enroll into a master’s program at UW and a professional master’s program at Huxley College (under development). In other words, our place bound students would have a clear and timely pathway to a bachelor and perhaps a master’s degree.

From our survey data it is clear that there is both a very high current and past student demand for a bachelor’s degree in ecology. It is equally clear that there is and will continue to be a demand in the Puget Sound Area, and northwestern Washington for well educated environmental and ecology professionals who have attained a baccalaureate degree. With the establishment of a BAS in Environmental Conservation at SVC students attending SVC and living in our service area will have the ability to get a baccalaureate degree in two years and also have the possibility to transfer to Huxley College of the Environment, WWU or School of Environmental and Forest Sciences, College of the Environment, UW.


APPENDIX A  Below are the results of two student surveys conducted at Skagit Valley College Environmental Conservation; April & October 2011. Currently Enrolled Students’ Responses:

<table>
<thead>
<tr>
<th>Table 7. Question 1: Which track are you on?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental track</td>
</tr>
<tr>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Aquatic/Terrestrial</td>
</tr>
<tr>
<td>Marine</td>
</tr>
<tr>
<td>Parks</td>
</tr>
<tr>
<td>Water/Wastewater</td>
</tr>
<tr>
<td>Biology</td>
</tr>
<tr>
<td>Science</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 8. Question 2: In which city do you currently live?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident city</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Anacortes</td>
</tr>
<tr>
<td>Acme</td>
</tr>
<tr>
<td>Arlington</td>
</tr>
<tr>
<td>Bellingham</td>
</tr>
<tr>
<td>Bow</td>
</tr>
<tr>
<td>Camano Island</td>
</tr>
<tr>
<td>Concrete</td>
</tr>
<tr>
<td>Darrington</td>
</tr>
<tr>
<td>Edison</td>
</tr>
<tr>
<td>Ferndale</td>
</tr>
<tr>
<td>Hamilton</td>
</tr>
<tr>
<td>Kirkland</td>
</tr>
<tr>
<td>Lyman</td>
</tr>
<tr>
<td>Marysville</td>
</tr>
<tr>
<td>Mount Vernon</td>
</tr>
<tr>
<td>Oak Harbor</td>
</tr>
<tr>
<td>Sedro-Woolley</td>
</tr>
<tr>
<td>Stanwood</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 9. Question 3: Do you currently hold a bachelor's degree?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
Table 10. Question 4: When you initially began your program at SVC, did you plan to:

<table>
<thead>
<tr>
<th>Student outlook</th>
<th>Students</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get an Associate degree and then work in a natural resource-related field</td>
<td>40</td>
<td>53</td>
</tr>
<tr>
<td>Transfer to a four-year institution in a natural resource-related field WITH a two-year degree</td>
<td>32</td>
<td>42</td>
</tr>
<tr>
<td>Not interested in working or pursuing a degree in a natural resource field</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>76</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 11. Question 5: Would you be more likely to enroll in a bachelor's degree program if this degree was offered at Skagit Valley College rather than transferring to another institution?

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Students</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very likely</td>
<td>46</td>
<td>61</td>
</tr>
<tr>
<td>Somewhat likely</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>No likely</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>76</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 12. Question 6: How far would you be willing to commute to attend an institution to obtain a bachelor's degree in a natural resource-related program?

<table>
<thead>
<tr>
<th>Commute distance</th>
<th>Students</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 15 miles</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>15-25 miles</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>26-45 miles</td>
<td>35</td>
<td>45</td>
</tr>
<tr>
<td>Over 45 miles</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>N/A</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>77</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 13. Question 7: If you were going to take further courses related to a natural resource-related degree, how much on-ground time would you like to see replaced by web-based instruction or other educational activities?

<table>
<thead>
<tr>
<th>Web-based instruction</th>
<th>Students</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>22</td>
<td>29</td>
</tr>
<tr>
<td>25%</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>50%</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>75%</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>N/A</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>77</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 14. Question 8: If you were going to take further courses related to a natural resource-related degree, would you be interested in a course where some weekday class time was replaced with a Saturday class?
<table>
<thead>
<tr>
<th>Saturday instruction</th>
<th>Students</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not very interested</td>
<td>42</td>
<td>55</td>
</tr>
<tr>
<td>Somewhat interested</td>
<td>29</td>
<td>38</td>
</tr>
<tr>
<td>Very interested</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>N/A</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>77</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 15. Natural resource FTEs for the academic year 2010-2011 at all Washington CCs within the natural resource fields that could transfer to SVC (Source SBCTC 2011).

<table>
<thead>
<tr>
<th>COLLEGE</th>
<th>CIP</th>
<th>CIP TITLE</th>
<th>FTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDMONDS</td>
<td>30101</td>
<td>NATURAL RESOURCES/CONSERV</td>
<td>0.13</td>
</tr>
<tr>
<td>GRAYS HARBOR</td>
<td>30290</td>
<td>HABITAT TECHNICIAN</td>
<td>1.00</td>
</tr>
<tr>
<td>GRAYS HARBOR</td>
<td>30301</td>
<td>FISHING &amp; FISHERIES</td>
<td>0.04</td>
</tr>
<tr>
<td>GRAYS HARBOR</td>
<td>30501</td>
<td>FORESTRY, GENL</td>
<td>1.78</td>
</tr>
<tr>
<td>GRAYS HARBOR</td>
<td>30511</td>
<td>FOREST TECH</td>
<td>5.56</td>
</tr>
<tr>
<td>GREEN RIVER</td>
<td>30511</td>
<td>FOREST TECH</td>
<td>90.59</td>
</tr>
<tr>
<td>GREEN RIVER</td>
<td>30601</td>
<td>WILDLIFE/WILDLANDS MGMT</td>
<td>4.47</td>
</tr>
<tr>
<td>OLYMPIC</td>
<td>30101</td>
<td>NATURAL RESOURCES/CONSERV</td>
<td>9.13</td>
</tr>
<tr>
<td>SKAGIT VALLEY</td>
<td>30101</td>
<td>NATURAL RESOURCES/CONSERV</td>
<td><strong>35.40</strong></td>
</tr>
<tr>
<td>SPOKANE</td>
<td>30101</td>
<td>NATURAL RESOURCES/CONSERV</td>
<td>55.36</td>
</tr>
<tr>
<td>SPOKANE</td>
<td>30101</td>
<td>WATER, WETLANDS &amp; MARINE</td>
<td>34.64</td>
</tr>
<tr>
<td>WALLA WALLA</td>
<td>30101</td>
<td>NATURAL RESOURCES/CONSERV</td>
<td>15.23</td>
</tr>
<tr>
<td>WENATCHEE VALLEY</td>
<td>30101</td>
<td>NATURAL RESOURCES/CONSERV</td>
<td>15.13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>268.46</strong></td>
</tr>
</tbody>
</table>

Survey of Former Environmental Conservation Students Report July 12, 2011:

Table 16. Question 1: In which city do you currently live?

<table>
<thead>
<tr>
<th>City</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anacortes</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Arlington</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Bow</td>
<td>2</td>
<td>6.3%</td>
</tr>
<tr>
<td>Burlington</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Concrete</td>
<td>2</td>
<td>6.3%</td>
</tr>
<tr>
<td>Coupeville</td>
<td>2</td>
<td>6.3%</td>
</tr>
<tr>
<td>Dresden Mills, ME</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Kirkland</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Kirksville, MO</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Marysville</td>
<td>3</td>
<td>9.4%</td>
</tr>
<tr>
<td>Missoula, MT</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Mount Vernon</td>
<td>7</td>
<td>21.9%</td>
</tr>
<tr>
<td>Oak Harbor</td>
<td>3</td>
<td>9.4%</td>
</tr>
<tr>
<td>Olympia</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Renton</td>
<td>1</td>
<td>3.1%</td>
</tr>
</tbody>
</table>
Table 17. Question 2: Which track were you on when you enrolled at SVC?

<table>
<thead>
<tr>
<th>Track</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic/Terrestrial</td>
<td>20</td>
<td>62.5%</td>
</tr>
<tr>
<td>Certificate</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Marine</td>
<td>2</td>
<td>6.3%</td>
</tr>
<tr>
<td>Parks</td>
<td>6</td>
<td>18.8%</td>
</tr>
<tr>
<td>Water/Wastewater</td>
<td>3</td>
<td>9.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Table 18. Question 3: Title of Certificate Sought:

<table>
<thead>
<tr>
<th>Certificate Type</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATA</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>ATA- Parks protection</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Environmental Conservation</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>GIS, and the environmental science</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Water/Wastewater</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>No Response</td>
<td>27</td>
<td>84.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Table 19. Question 4: Did you graduate?

<table>
<thead>
<tr>
<th>Graduate?</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>15</td>
<td>46.9%</td>
</tr>
<tr>
<td>Yes</td>
<td>16</td>
<td>50.0%</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Table 20. Question 5: Have you attended a four-year institution in a natural resources-related degree program?

<table>
<thead>
<tr>
<th>Attended a Four-Year Program</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>29</td>
<td>90.6%</td>
</tr>
</tbody>
</table>
Yes 3 9.4%
Total 32 100.0%

Table 21. Question 6: If yes, which institution?

<table>
<thead>
<tr>
<th>Institution</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evergreen State College</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Have two classes left to graduate, than</td>
<td></td>
<td></td>
</tr>
<tr>
<td>would like to pursue bachelors hopefully</td>
<td></td>
<td></td>
</tr>
<tr>
<td>at SVC</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>The Evergreen State College</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>University of Montana</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>No Response</td>
<td>28</td>
<td>87.5%</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 22. Question 7: Do you currently hold a bachelor’s degree?

<table>
<thead>
<tr>
<th>Hold Bachelor's Degree</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>28</td>
<td>87.5%</td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>12.5%</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 23. Question 8: When you initially began your program at SVC, did you plan to:

<table>
<thead>
<tr>
<th>Plan</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get an associate degree and then work in a natural resource-related field</td>
<td>21</td>
<td>65.6%</td>
</tr>
<tr>
<td>Transfer to a four-year institution in a natural resource-related degree program WITHOUT a two-year degree.</td>
<td>2</td>
<td>6.3%</td>
</tr>
<tr>
<td>Transfer to a four-year institution in a natural resource-related degree program WITH a two-year degree</td>
<td>8</td>
<td>25.0%</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 24. Question 9: Would you have been or be more likely to enroll in a bachelor’s degree program if this degree was offered at Skagit Valley College rather than transferring to another institution?

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not likely</td>
<td>5</td>
<td>15.6%</td>
</tr>
<tr>
<td>Somewhat likely</td>
<td>10</td>
<td>31.3%</td>
</tr>
<tr>
<td>Very likely</td>
<td>17</td>
<td>53.1%</td>
</tr>
</tbody>
</table>
Table 25. Question 10: How far were/are you willing to commute to attend an institution to obtain a bachelor’s degree in a natural resources-related program?

<table>
<thead>
<tr>
<th>Distance</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 25 miles</td>
<td>5</td>
<td>15.6%</td>
</tr>
<tr>
<td>26 - 45 miles</td>
<td>12</td>
<td>37.5%</td>
</tr>
<tr>
<td>Less than 15 miles</td>
<td>4</td>
<td>12.5%</td>
</tr>
<tr>
<td>Over 45 miles</td>
<td>6</td>
<td>18.8%</td>
</tr>
<tr>
<td>N/A</td>
<td>4</td>
<td>12.5%</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 26. Question 11: If you were going to take further courses related to a natural resource-related degree, how much on-ground class time would you like to see replaced by web-based instruction or other educational activities?

<table>
<thead>
<tr>
<th>Percent Replaced</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>5</td>
<td>15.6%</td>
</tr>
<tr>
<td>25%</td>
<td>7</td>
<td>21.9%</td>
</tr>
<tr>
<td>50%</td>
<td>10</td>
<td>31.3%</td>
</tr>
<tr>
<td>75%</td>
<td>8</td>
<td>25.0%</td>
</tr>
<tr>
<td>N/A</td>
<td>2</td>
<td>6.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 27. Question 12: If you were going to take further courses related to a natural resource-related degree, would you be interested in a course where some weekday class time was replaced with a Saturday class?

<table>
<thead>
<tr>
<th>Saturday Classes</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not very interested</td>
<td>10</td>
<td>31.3%</td>
</tr>
<tr>
<td>Somewhat interested</td>
<td>18</td>
<td>56.3%</td>
</tr>
<tr>
<td>Very interested</td>
<td>4</td>
<td>12.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 28. Question 13: If yes, which institution?

<table>
<thead>
<tr>
<th>Institution</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evergreen State College</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>have two classes left to graduate, than would like to pursue bachelors hopefully at SVC</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>The Evergreen State College</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>University of Montana</td>
<td>1</td>
<td>3.1%</td>
</tr>
<tr>
<td>Extent Place-Bound</td>
<td>Count</td>
<td>Percent</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>I am not able to move to another location to attend college.</td>
<td>14</td>
<td>43.8%</td>
</tr>
<tr>
<td>I am somewhat limited in my ability to move to another location to attend college.</td>
<td>11</td>
<td>34.4%</td>
</tr>
<tr>
<td>I can easily move to attend the college of my choice</td>
<td>7</td>
<td>21.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Table 29. Question 14: Please tell us to what degree are you “place-bound” by indicating the choice that best fits you.
APPENDIX B  Surveyed environmental employers – multi-state and international consultants and state and federal agencies involved in fish, wildlife, and environmental work (American Fisheries Society 141st Annual Meeting 2011).

<table>
<thead>
<tr>
<th>Alaska Department of Fish and Game</th>
<th>USGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.O. Box 115526</td>
<td>4210 University Dr.</td>
</tr>
<tr>
<td>1255 W. 8th Street</td>
<td>Anchorage, AK 99508</td>
</tr>
<tr>
<td>Juneau, AK 99811-5526</td>
<td>Phone: (907) 786-7000, 1-888-ASK-UGS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BioSonic, Inc.</th>
<th>ICF International</th>
</tr>
</thead>
<tbody>
<tr>
<td>4027 Leary Way NW</td>
<td>9300 Lee Highway, Fairfax, VA 22031-1207</td>
</tr>
<tr>
<td>Seattle WA 98107</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>Fax: 1.703.934.3740</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herrera Environmental Consultants</th>
<th>NOAA’s National Marine Fisheries Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>2200 Sixth Avenue, Suite 1100,</td>
<td>NOAA Fisheries Service</td>
</tr>
<tr>
<td>Seattle, Washington 98121-1820</td>
<td>Partnerships &amp; Communications</td>
</tr>
<tr>
<td>phone 206-441-9080</td>
<td>1315 East West Highway</td>
</tr>
<tr>
<td>fax 206-441-9108</td>
<td>Silver Spring, MD 20910</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gentner Consulting</th>
<th>USDI-BLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gentner Group Consulting, Inc.</td>
<td>1849 C Street NW, Rm. 5665</td>
</tr>
<tr>
<td>9007 Eton Road</td>
<td>Washington DC 20240</td>
</tr>
<tr>
<td>Silver Spring, MD 20901</td>
<td>Phone: 202-208-3801</td>
</tr>
<tr>
<td>Telephone: 202.455.4424</td>
<td>Fax: 202-208-5242</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goldier Associates, Ltd</th>
<th>Fishbio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500-4620 still Creek Drive</td>
<td>599 Hi Tech Parkway</td>
</tr>
<tr>
<td>Burnaby, British Columbia V56-6C6</td>
<td>Oakdale CA 95361</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fishways Global, LLC</th>
<th>U.S Fish and Wildlife Service- Fisheries Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>19849 Middlebelt Road</td>
<td>U.S. Fish and Wildlife Service</td>
</tr>
<tr>
<td>Livonia, Michigan 48152</td>
<td>1849 C Street, NW</td>
</tr>
<tr>
<td>Tel: (248) 477-5021</td>
<td>Washington, DC 20240</td>
</tr>
<tr>
<td>Fax: (248) 477-6971</td>
<td><a href="http://www.fws.gov/fisheries/">http://www.fws.gov/fisheries/</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HDR-One Company-Many Solutions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HDR fisheries Design Center</td>
<td></td>
</tr>
<tr>
<td>4717 97th Street NW</td>
<td></td>
</tr>
<tr>
<td>Gig Harbor, WA 98332</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C  Letters of commitment regarding the Bachelor of Applied Science in Environmental Conservation at SVC.

October 12, 2012

Claus R. Svendsen, Ph.D., Department Chair, Department of Environmental Conservation
Mick Donahue, Ph.D., Executive Vice President, Instruction & Student Services
Skagit Valley College
2405 E. College Way
Mt. Vernon, WA 98273

Dear Clause and Mick:

We understand that Skagit Valley College is proposing the establishment of a Bachelor of Applied Sciences (BAS) degree program in Environmental Conservation. We appreciate the efforts you have taken to keep us informed and seek our input, and fully endorse their proposal.

Our understanding is the proposed BAS will provide SVC students with an applied environmental baccalaureate degree that complements the Environmental Science B.S. and Environmental Studies B.A. degrees granted here in the Huxley College of the Environment at Western Washington. We are confident that this new degree serves a different set of students. For instance, since the current associates degree in Environmental Conservation is an AAS and therefore does not meet WWU's GUR requirements, few of these graduates transfer to Huxley College or our satellite campus at Everett CC for their bachelor's degrees.

As you develop the program Huxley College would be please to work cooperatively with you in the development of common course curricula that may serve students from both campuses.

Sincerely,

Steve Hollenhorst
Dean, Huxley College of Environment
Western Washington University
July 6, 2012

Dear Professor Svendsen,

Thank you for meeting with me about the BAS degree with a major in Environmental Conservation that you are proposing to offer at Skagit Valley College. I strongly support the program, and find that there are several ways that students may continue into our professional master’s programs, which I have outlined below.

**Masters in Environmental Horticulture**
The proposed curriculum prepares students well for this program, especially with the emphasis on restoration ecology. This professional master’s prepares students well for leadership in the workforce related to horticulture.

**Masters in Forest Resources (Forest Management)**
The proposed curriculum, with some additions, would prepare students well for this one year professional master’s program, which is SAF Accredited. The additions would be a Silviculture course and an economics course, which could be fit in fairly easily.

**Masters in Forest Resources (Peace Corps Master’s International)**
The proposed curriculum prepares students well for this unique master’s program, which also requires Peace Corps service as a part of the degree. This four quarter program is especially good for those interested in international environmental issues.

If you need any additional information, feel free to contact me directly.

Sincerely,

Michelle Trudeau
Director, Student & Academic Services
mlchtru@uw.edu
206-616-1533
January 23, 2012

Claus R. Svendsen, Ph.D.
Department Chair
Department of Environmental Conservation
Skagit Valley College
Mt. Vernon, WA 98273

Dear Dr. Svendsen,

The Natural Resources program at Spokane Community College is pleased to hear that Skagit Community College is considering offering a B.A.S. in Environmental Conservation. While our program is intended to be one that offers employability after completing the A.A.S., we recognize that many students wish to or need to continue their education in order to achieve their education and career goals. The program at Skagit offers students another way to achieve these goals. The more intimate, familiar community college setting and relatively lower cost may further enhance their access to this sort of opportunity and their chances of success.

We would actively want to negotiate a written articulation agreement between our program and the B.A.S. program, would advertise and advise students of this additional opportunity as part of a palette of transfer possibilities as well as ensure that any articulation agreement is posted on the CCS website.

If you need further assistance or support in this endeavor, please don’t hesitate to contact us.

Sincerely,

Monica Spicker
Department Chair
Environmental Sciences Department
Spokane Community College
1810 North Greene Street, MS 2080
Spokane, Washington 99217
Email from Todd Bates, Grays Harbor College, 4/6/2011 tbates@ghc.edu
Greetings Claus

We have approximately 10 students graduating a year from our program with an AAS in Natural Resource Technology. We have an emphasis on forest technology and they can go on to become technicians in the field. Approximately half of these students continue to pursue a BS. I believe we would have a few each year that would be interested in more information about Skagit Valley College. These are students that have typically transferred to The Evergreen State College in Olympia.

I would be happy to post information about your program for potentially interested students.

_Todd Bates_

Forestry Instructor

Grays Harbor College

Aberdeen, Washington

360-538-2517
Stillaguamish Tribe
Natural Resources Department

February 22, 2013

Claus Svendsen-Dept. Chair
Dept. of Environmental Conservation
A218 Laura Angst Hall
Skagit Valley College
Mt. Vernon WA 98273

Dear Claus,

As per our recent conversation I am writing this letter in regards to your BAS application with the State Board for Community and Technical Colleges. Since I am very familiar with your program and the quality of the graduates in the Environmental Conservation Program under its current format I feel I can offer some observations related to your desire to expand the program to a four year bachelor degree.

I have been employed by the Stillaguamish Tribe as the Environmental Manager since 1988. I have seen our Natural Resource Department expand from a team of three biologists in 1988 to a staff of nearly twenty in 2012. Myself, and our Natural Resource Manager both graduated from Huxley College in the late seventies, early eighties. We found the quality of education was excellent at the time with a focus on interdisciplinary studies in both social and biological sciences. Not only were you trained in the biological impacts and solutions to the problems we caused but the roots of why we were in the dire straits we were in. Today the interdisciplinary nature of Huxley has changed to the point where students choose one or the other. It has been my observation of students graduating from the Environmental Conservation Program at Skagit College that they are well-rounded and understand both where issues arise and what practical solutions can be employed to solve problems. I can envision that adding two more years to their training would only enhance their abilities.

Over the past decade or more we have hired several graduates from the Skagit College Program. We have been very impressed with their ability to hit the ground running. They understand how to go out in the field and assess water quality or habitat without a steep learning curve. It is obvious the training they get currently prepares them well for placement into a natural resource position at a Tribe, other government agency or non-profit. The addition of some exposure to GIS mapping and data gathering has been very useful to our department. In many cases students have had previous careers, which only adds to their overall experience. Many are also local residents who have a connection to where they work and live. Both of these traits make many of your students unique from the typical four year biology or environmental program.
February 22, 2013

In conclusion I would just say we have been very pleased with the students graduating from your Environmental Conservation Program that we have hired and put right to work. In fact very few of them have left or moved on until either retirement or another great opportunity has pulled them away. I can only see positive benefits to potential natural resource employers from expanding what is already a great two year program to a four year degree. We will continue to work closely with your program and graduates to fill needs as they arise in our natural resource department at the Stillaguamish Tribe.

Sincerely,

Pat Stevenson
Environmental Manager
Stillaguamish Tribe
P.O. Box 277
Arlington WA 98223
360-631-0946
pstevenson@stillaguamish.com
Appendix D  TYPICAL STUDENT SCHEDULE; TRANSFER AGREEMENT w/UW and U of Idaho; AAS-T / CREDITS

<table>
<thead>
<tr>
<th>Program</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST YEAR - FALL</strong></td>
<td></td>
</tr>
<tr>
<td>ENVC 101 Introduction to Watershed Management</td>
<td>5</td>
</tr>
<tr>
<td>ENVS&amp; 101 101 Introduction to Environmental Science</td>
<td>5</td>
</tr>
<tr>
<td>BIOL&amp; 211 Majors Cellular</td>
<td>5</td>
</tr>
<tr>
<td>PE 200 First Aid, Safety, and CPR</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17</td>
</tr>
<tr>
<td><strong>FIRST YEAR - WINTER</strong></td>
<td></td>
</tr>
<tr>
<td>ENVC 112 Limnology</td>
<td>5</td>
</tr>
<tr>
<td>ENVC 123 Fish Biology, Taxonomy, and Life History</td>
<td>5</td>
</tr>
<tr>
<td>CHEM&amp; 121 Intro to Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>MATH&amp; 146 Introduction to Stats</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
</tr>
<tr>
<td><strong>FIRST YEAR - SPRING</strong></td>
<td></td>
</tr>
<tr>
<td>ENVC 122 Stream Ecology</td>
<td>5</td>
</tr>
<tr>
<td>ENVC 140 Plants of Western Washington</td>
<td>5</td>
</tr>
<tr>
<td>CHEM&amp; 131 Intro to Organic/Biochemistry</td>
<td>5</td>
</tr>
<tr>
<td>ENGL&amp; 101 English Composition I</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
</tr>
<tr>
<td><strong>SECOND YEAR - SUMMER</strong></td>
<td></td>
</tr>
<tr>
<td>ENVC 199 Cooperative Education</td>
<td>6</td>
</tr>
<tr>
<td>MATH&amp; 141 Precalculus I</td>
<td>5</td>
</tr>
<tr>
<td>LC/GE (Learning Community or Gen. Ed. course)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>SECOND YEAR - FALL</strong></td>
<td></td>
</tr>
<tr>
<td>ENVC 201 Watershed Restoration</td>
<td>5</td>
</tr>
<tr>
<td>ENVC 202 Wildlife Biology</td>
<td>5</td>
</tr>
<tr>
<td>ENVC Elec. Electives</td>
<td>3</td>
</tr>
<tr>
<td>MATH&amp; 142 Precalculus II</td>
<td>5</td>
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<tr>
<td><strong>Total</strong></td>
<td>18</td>
</tr>
<tr>
<td><strong>SECOND YEAR - WINTER</strong></td>
<td></td>
</tr>
<tr>
<td>ENVC 210 Fish Ecology and Management</td>
<td>5</td>
</tr>
<tr>
<td>ENVC 211 Ecological Sampling and Monitoring Design</td>
<td>4</td>
</tr>
<tr>
<td>BIOL&amp; 212 Majors Plant</td>
<td>5</td>
</tr>
<tr>
<td>CMST&amp; 220 Public Speaking</td>
<td>5</td>
</tr>
<tr>
<td>MATH&amp; 151 Calculus I</td>
<td>5</td>
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<tr>
<td><strong>Total</strong></td>
<td>24</td>
</tr>
<tr>
<td><strong>SECOND YEAR - SPRING</strong></td>
<td></td>
</tr>
<tr>
<td>ENVC 220 Wetlands in Managed Landscapes</td>
<td>4</td>
</tr>
<tr>
<td>ENVC 221 Ecology of Ecosystem Edges/Ecotones</td>
<td>3</td>
</tr>
<tr>
<td>ENVC 222 Field Project</td>
<td>3</td>
</tr>
<tr>
<td>ENGL&amp; 235 or Technical Writing</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 104 Composition III (Research)</td>
<td>5</td>
</tr>
<tr>
<td>MATH&amp; 152 Calculus II</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS</strong></td>
<td>135</td>
</tr>
</tbody>
</table>
Appendix E  List of responses to business questionnaire regarding employment outlook for BAS/BS degrees.

Businesses were asked twice to respond to the survey.

Survey of Employers Regarding Bachelor of Applied Sciences in Environmental Conservation (BASEC)

I. Please enter the name of your company/organization (kept confidential: used for tracking only):

1. Upper Skagit Indian Tribe
2. Upper Skagit Indian Tribe
3. Colville Tribal Federal Corporation
4. Chehalis Tribe
5. Samish Indian nation department of natural resources
6. Samish Indian Nation
7. Not Identified
8. Yakama Nation Natural Resources
9. Samish Indian Nation (DNR)
10. Nooksack Indian Tribe
11. TWC
12. AMEC
13. Ecotone Solutions, LLC
14. GeoEngineers Inc
15. Shannon & Wilson
16. Wetland Resources, Inc.
18. Northwest Ecological Services
19. Aqua-Terr Systems, Inc.
20. skagit wetlands
21. Earthworks Environmental, Inc.

II. Please indicate the number of natural resources employees within your organization that have each of the following as their highest degree earned:
## Associate degree

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
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<td>4.8</td>
<td>9.1</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>14.3</td>
<td>27.3</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>14.3</td>
<td>27.3</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4.8</td>
<td>9.1</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>4.8</td>
<td>9.1</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>4.8</td>
<td>9.1</td>
</tr>
<tr>
<td>50</td>
<td>1</td>
<td>4.8</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>52.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing</td>
<td>System</td>
<td>10</td>
<td>47.6</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

## BS degree

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
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### Do not know attainment

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### III. Based on the attached curriculum, would you evaluate a potential employee candidate with a BAS in Environmental Conservation equal to a potential candidate with a BS in Environmental Science?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid</th>
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<tr>
<td>Not equal</td>
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</tr>
<tr>
<td>Total</td>
<td>21</td>
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<td></td>
</tr>
</tbody>
</table>
We would appreciate your comments on course content:

1. I like it. The only thing I would suggest is a law course just to open their eyes to EA and EIS's.
2. Looks like good courses and very appropriate for what we do in the Environmental field
3. A diverse curriculum.
4. QSCI 318, ENGL 324, ENVC 315, ENVC 327, QSCI 408, ENVC 410, ENVC 412 and ENVC 420 would be particularly helpful.
5. More ability to handle data - including mathematics and statistics- would be an asset.
6. In order to be complete it should include some strict biology classes. It is also a curriculum that is specific for someone that is going to be working in the Pacific NorthWest. It is great for that, however it should be marketed to keep them in the area otherwise many of the classes would not be as relevant.
7. It is not clear how much of the course work would emphasize field study and hands on experience. Candidates are much more employable with direct field experience that is applicable to todays work needs. We have hired BS degrees with UW wetland certificates, but would likely not consider an applicant with just an associates degree (even though the curriculum looks good) unless they also had a BS.
8. The curriculum looks pretty good. The more technical/science courses the better especially if the target job market is the private sector. For that type of student, it would be good to offer a short course in entrepreneurship. At the other end of the spectrum..Huxley graduates have the reputation of having too much emphasis on policy and "soft" courses (environmental ethics, environmental policy, environmental education, environmental journalism...). I have found that when I hire people with that sort of background, they need to be reeducated to do real-world problem solving like deriving a formula for re-scaling a paper map. You would think that that kind of problem would be easy for someone with an advanced degree but apparently it isn't. However, big-picture soft-course curricula can produce high falutin' bullshitters that actually do quite well in the public sector...if they can manage to claim a position in that highly competitive and shrinking market.
9. I assume the BASEC is a 4 year degree. The course content looks very acceptable.
10. Appears to be a capstone program, a hindrance for likely and necessary further education.
11. I would probably want someone with a masters degree. But a BAS as a step to the masters would be fine with me.
IV. What is your projected hiring outlook for the next five years at the baccalaureate level (new employees and replacements)?

<table>
<thead>
<tr>
<th>Baccalaureate-Level Hiring</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>4-6</td>
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<td>7-10</td>
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<td>4.8</td>
<td>5.0</td>
<td>95.0</td>
</tr>
<tr>
<td>&gt;10</td>
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<td>21</td>
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</table>

V. What is your projected hiring outlook for the next five years at the associate level (new employees and replacements)?

<table>
<thead>
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<th>Associate-Level Hiring</th>
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<th>Cumulative Percent</th>
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</table>

VI. How many applicants do you typically get for a baccalaureate-level position?

<table>
<thead>
<tr>
<th>Baccalaureate-Level Applications</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>61.9</td>
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<td>9.5</td>
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<td>9.5</td>
<td>85.7</td>
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<tr>
<td>Degree of Helpfulness</td>
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If helpful, what would you estimate the average increase in earning to be (in percent)?

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<td>3</td>
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<td>14.3</td>
<td>76.2</td>
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<td>4.8</td>
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VIII. When you advertise for a position at the BS-level, do you get an adequate mix of natural resource degrees (as opposed to general life sciences)?

<table>
<thead>
<tr>
<th>Adequate Mix of Natural Resource Degrees</th>
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<tr>
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</table>

Comments:

1. I’m the only Nooksack Tribal member in the Natural Resources Department who has a 4 year degree. We do have a tribal member working in Natural Resources who has an AA degree. We would find a position in Natural Resources if a Nooksack Tribal member graduated with a BASEC degree.
2. N/A to date
3. Currently there are a lot of candidates for few openings. This will change over time, but it is an employers market.
4. Certification in specific specialties has value as a stand alone feature like wetlands delineation, fisheries science, wildlife etc. Technical skills are valuable even without a degree such as CAD literacy, writing skills, research skills, GIS and GPS, field skills etc. Otherwise technically literate, smart, strategic, well organised, humble people are always valuable.
5. We have not had to advertise. We work via word of mouth. We have very little turn over.
6. I do not advertise for positions. I keep an eye out there for who is available or talk with my colleagues. Also, I have a small company and would rather subcontract work with other small companies on an as needed basis.

IX. Do you think the recommendations from the recent evaluation of the status of Chinook salmon recovery efforts in the Puget Sound (2011 IMPLEMENTATION STATUS ASSESSMENT: A Qualitative Assessment of Implementation of the Puget Sound Chinook Salmon Recovery Plan) eventually will result in increased work and hiring during the next five years?
Impact on Work and Hiring

<table>
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<td></td>
</tr>
</tbody>
</table>

Comments:

1. Yes. Currently we do receive funding for habitat restoration projects on the Nooksack River. We plan on hiring additional staff this year.

2. There's not any money

3. Absolutely. Increased stormwater requirements within Puget Sound are likely going to increase opportunities for people with biology and natural resource degrees. Generally, we are looking for people with master level degrees.

4. Most of the projects we are doing that involve restoration are focused on Chinook recovery. The funding is available for restoration being driven by salmon recovery.

5. Probably. Is there going to be adequate funding for hiring? I have found that the best time to get onto a new trend is at the point that it is really being implemented too early and the prospective employees don't get involved right away and end up needing to work in some other sector often never to return, too late and the competition is too great. There is a sweet spot that must be timed properly.

6. Hard to really see in that crystal ball. The economy plays a bigger part. If the economy improves more funds will be available for follow through on the recommendations.

7. Yes but minimal. Most of us working in the biological consulting field work with fisheries issues. In other words, most of us cover a broad spectrum of biological issues including fisheries, ESA, wetlands, and overall wildlife habitat.

8. Work is development driven and based upon up to date land use regulations which will not significantly change, outside of development restrictions which are reducing, not increasing available. *Note for above questions: Any (unlikely) new staffing will be at the MS level or very experienced BS level only
REGULAR MEETING OF THE STATE BOARD FOR COMMUNITY AND TECHNICAL COLLEGES

MEETING MINUTES

September 11, 2013

State Board Members

Beth Willis (Chair), Lakewood
Shaunta Hyde (Vice Chair), Lake Forest Park
Sharon Fairchild, Spokane
Jim Bricker, Coupeville
Elizabeth Chen, Federal Way
Anne Fennessy, Seattle
Wayne Martin, Richland
Larry Brown, Auburn
Jay Reich, Seattle

Statutory Authority: Laws of 1967, Chapter 28B.50 Revised Code of Washington
<table>
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<tr>
<th>Resolution Number</th>
<th>Description</th>
<th>Page in Minutes</th>
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<tr>
<td>Adoption of Consent Agenda:</td>
<td>- Approval of State Board Special Meeting Minutes for July 12, 2013</td>
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<td>- Approval for State Board Special Meeting Minutes for August 14, 2013</td>
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<tr>
<td>13-09-43</td>
<td>- South Puget Sound Community College, Local Expenditure Authority, Lacey Campus Development</td>
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<tr>
<td>13-09-44</td>
<td>- Whatcom Community College, Local Expenditure Authority, Student Recreation Center</td>
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<td>13-09-45</td>
<td>- Edmonds Community College, Surplus Real Property to City</td>
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<td>13-09-46</td>
<td>- Bellevue College, Local Expenditure Authority, Bookstore</td>
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<td>- Bellevue College, Local Expenditure Authority, IBIT</td>
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<tr>
<td>13-09-48</td>
<td>Approval of Revised State Board By-Laws</td>
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<tr>
<td>13-09-49</td>
<td>Approval of Revisions to WAC 131-48-010 to 131-48-140 Governing the Certificate of Educational Competence</td>
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</table>
The State Board’s regular business meeting was preceded by a retreat held at The Lodge at Suncadia on September 9-10, 2013. Topics and issues discussed at the retreat included: 1) System Direction, 2) ctcLink, 3) Applied Baccalaureates, 4) Student Achievement, 5) Washington Student Achievement Council, 6) Common Core, and 7) Legislative and Communication Planning. No action was taken in the retreat sessions.

State Board Members Present: Beth Willis, Shaunta Hyde, Sharon Fairchild, Jim Bricker, Elizabeth Chen, Larry Brown, Wayne Martin, Anne Fennessy, Jay Reich

State Board Members Absent:

CALL TO ORDER AND WELCOME

Chair Beth Willis called the meeting to order at 9:00 a.m. and welcomed those present. She asked for audience introductions.

ADOPTION OF REGULAR MEETING AGENDA

MOTION: Moved by Larry Brown and seconded by Sharon Fairchild that the State Board adopt its September 11, 2013, regular meeting agenda as amended.

ADOPTION OF CONSENT AGENDA (Resolutions 13-09-43 through 13-09-47)

MOTION: Moved by Larry Brown and seconded by Jim Bricker that the State Board adopt the consent agenda for its September 11, 2013, regular meeting as follows:

a) Approval of July 12, 2013, State Board special meeting minutes
b) Approval of August 14, 2013, State Board special meeting minutes
c) Resolution 13-09-43: South Puget Sound Community College, Local Expenditure Authority, Lacey Campus Development
d) Resolution 13-09-44: Whatcom Community College, Local Expenditure Authority, Student Recreation Center
e) Resolution 13-09-45: Edmonds Community College, Surplus Real Property to City
f) Resolution 13-09-46: Bellevue College, Local Expenditure Authority, Bookstore
g) Resolution 13-09-47: Bellevue College, Local Expenditure Authority, IBIT

MOTION CARRIED.
CHAIR’S REPORT

Chair Willis presented her report:


- **Presidents’ Association Report.** WACTC President Jill Wakefield reported on the topics of: 2013 WACTC Retreat Outcomes, 2014 Work Plan Focus, Common Core, Competency Based Degrees, Accreditation, Compensation, Allocation and Accountability Task Force, and Compensation Committee.

APPROVAL OF STATE BOARD BY-LAWS (RESOLUTION 13-09-48)

State Board Member Wayne Martin presented that at the June 2013 State Board meeting, Board members appointed a committee to review and suggest changes to their bylaws related to the election of officers and the Board’s Executive Committee. At the Board’s request, the bylaw committee drafted language to amend the bylaws.

*MOTION: Moved by Jim Bricker and seconded by Sharon Fairchild that the State Board adopt Resolution 13-09-48 approving the revised State Board bylaws as presented. MOTION CARRIED.*

PUBLIC HEARING REVISIONS TO WAC 131-48-010 TO 131-48-140 GOVERNING THE CERTIFICATE OF EDUCATIONAL COMPETENCE (RESOLUTION 13-09-49)

Lou Sager of the State Board staff presented that the legislature passed Substitute House Bill 1686 this year to remove the term GED® from our statutes, which will allow consideration of alternative high school equivalency tests. Staff proposes conducting a Request for Information and a Request for Proposals this fall and winter to identify high school equivalency test options. The consideration of these tests would include a cost analysis for both the test takers and test centers in our state. Staff plans to make a recommendation to the Board in March 2014.

In accordance with the Open Public Meetings Act, the Board held a public hearing on the proposed resolution. No public testimony was given.

*MOTION: Moved by Shaunta Hyde and seconded by Larry Brown that the State Board adopt Resolution 13-09-49 approving the permanent revisions to WAC 131-48-010 to 131-48-140 governing the Certificate of Educational Competence. MOTION CARRIED.*
ADJOURNMENT/NEXT MEETING

There being no further business, the State Board adjourned its regular meeting of September 11, 2013, at 10:00 a.m. The State Board will hold next meeting October 23-24 at Bellingham Technical College and Whatcom Community College.

______________________________
Elizabeth Willis, Chair

ATTEST:

______________________________
Marty Brown, Secretary
Centralia College Property Acquisition for Parking

**Brief Description**
Centralia College has critical parking needs which this acquisition will help address. This property was identified in the college’s master plan as part of the long term solution to their parking needs.

**Background Information and Analysis**
When there is inadequate parking designated for students they park in residential areas around the campus. This creates congestion in the neighborhood and hazards for the students and residents. Additional parking has been required by the City as a condition for future building permits. The college will work with the Department of Enterprise Services to complete the transaction in accordance with State laws.

A map of the proposed and recent acquisitions is attached.

**Potential Questions**
- Is the acquisition consistent with the State Board’s goal of finding more and better ways to reduce barriers and expand opportunities so more Washingtonians can reach higher levels of education?

**Recommendation/Preferred Result**
Staff recommends approval of Resolution 13-10-50, giving Centralia College authority to use local funds for the acquisition of 0.12 acres at 816 Centralia College Boulevard in Centralia, Washington.

Policy Manual Change Yes ☐ No ☒

Prepared by: Wayne Doty, Capital Budget Director
360-704-4382, wdoty@sbcctc.edu
State of Washington
State Board for Community and Technical Colleges
Resolution 13-10-50

A resolution relating to Centralia College’s request to acquire 0.12 acres at 816 Centralia College Boulevard in Centralia, Washington.

WHEREAS, Centralia College is requesting authority to acquire 0.12 acres at 816 Centralia College Boulevard in Centralia, Washington, for an estimated total cost of $97,000, for which the College has sufficient local funds; and

WHEREAS, the property has been identified in the College’s master plan as part of the solution to the long term parking needs;

THEREFORE BE IT RESOLVED that the State Board for Community and Technical Colleges authorizes Centralia College to use up to $97,000 in local funds for the purchase of the property located at 816 Centralia College Boulevard in Centralia, Washington.

APPROVED AND ADOPTED on October 24, 2013.

ATTEST:

_______________________________               _______________________________
Marty Brown, Secretary                              Elizabeth Willis, Chair
**Proposed Acquisition:**

**A** 816 Centralia College Blvd, Centralia  
Parcel Number 000844000000

**Recent Acquisitions:**

**B** 814 Centralia College Blvd, Centralia  
Parcel Number 000843000000  
Resolution 13-02-02

**C** 812 Centralia College Blvd, Centralia  
Parcel Number 000842000000  
Resolution 12-10-43

**D** 808 Centralia College Blvd, Centralia  
Parcel Number 000840000000  
Resolution 13-02-02

**E** 402 S King St, Centralia  
Parcel Number 000628000000  
Resolution 12-10-43
Lower Columbia College Property Acquisition for Student Housing

**Brief Description**
Lower Columbia College seeks to purchase an existing 11-unit apartment complex adjacent to the campus and make the apartments available to their students.

**Background Information and Analysis**
Most international students and some domestic students require housing near the campus as a condition of their enrollment. However, housing within walking distance of campus is difficult to find with a vacancy rate of less than 5 percent.

International students bring diversity to the campus and community. This diversity provides a world view for all students and provides a better college experience as students enter the world economy which requires relationships and familiarity with other cultures.

International students pay tuition equal to the total cost of their education without the state funding subsidies provided for resident students. International students do not displace resident students. Instead, their additional enrollment helps to keep the costs low for all students.

Alleviating lack of student housing has been identified as a strategic initiative by the college. In a recent survey of current students 19 percent were interested in housing near the campus and another 34 percent would be interested depending on the cost.

This 11,614 square foot apartment complex located at 1931 Olympia Way was built in 1964. The roof was recently replaced. The property is expected to cost $710,000 and the college has estimated an annual net income of $51,000 from this acquisition.

The college will work with the Department of Enterprise Services to complete the transaction in accordance with State laws. A map of the proposed and recent acquisitions is attached.

**Potential Questions**

- Is the acquisition consistent with the State Board’s goal of finding more and better ways to reduce barriers and expand opportunities so more Washingtonians can reach higher levels of education?

**Recommendation/Preferred Result**
Staff recommends approval of Resolution 13-10-51, giving Lower Columbia College authority to use local funds for the acquisition of the apartment complex at 1931 Olympia Way in Longview, Washington.

Policy Manual Change Yes ☐ No ☒

Prepared by: Wayne Doty, Capital Budget Director
360-704-4382, wdoty@sbctc.edu
State of Washington
State Board for Community and Technical Colleges
Resolution 13-10-51

A resolution relating to Lower Columbia College’s request to acquire 1931 Olympia Way in Longview, Washington.

WHEREAS, Lower Columbia College has requested authority to acquire the 11 unit apartment complex at 1931 Olympia Way in Longview, Washington, for an estimated total cost of $710,000, for which the College has sufficient local funds; and

WHEREAS, the apartments will be made available to the College’s students; and

WHEREAS, the acquisition will improve the lack of student housing identified as a strategic need by the College;

THEREFORE BE IT RESOLVED that the State Board for Community and Technical Colleges authorizes Lower Columbia College to use up to $710,000 in local funds for the purchase of the apartment complex located at 1931 Olympia Way in Longview, Washington.

APPROVED AND ADOPTED on October 24, 2013.

ATTEST:

_______________________________               __________________________________
Marty Brown, Secretary                              Elizabeth Willis, Chair
Lower Columbia College
Campus

Proposed Acquisitions:

A 1931 Olympia Way, Longview
Parcel Number 000701
Allocation and Accountability Task Force Update

**Brief Description**
The State Board will receive an update on the work of WACTC’s Allocation and Accountability Task Force, which met for the first time in September.

**Background Information and Analysis**
WACTC has convened a system task force to review the methods by which the State Board allocates state appropriated operating dollars to the college districts and the enrollment rules that govern the primary accountability measure for the use of the state dollars. WACTC intends to bring recommendations to the State Board next fall.

WACTC and State Board staff will keep the Board updated on the work and progress of the Task Force over the next nine months. At this meeting, the Board will be briefed on the Task Force’s work plan (Attachment A: WACTC’s Allocation and Accountability Task Force).

**Potential Questions**
Are there particular issues the Board would like to see addressed as the Task Force conducts its review of the allocation system?

**Recommendation/Preferred Result**
State Board members will have an opportunity to provide input on the Task Force’s work plan.

Policy Manual Change Yes ☐ No ☒

Prepared by: Denise Graham, Deputy Executive Director for Finance
(360) 704-4350, dgraham@sbctc.edu
WACTC’s Allocation and Accountability Task Force

**Purpose:** WACTC has created the Allocations and Accountability Task Force to promote a thorough understanding of the strengths and weaknesses of the current allocation and accountability system, consider alternatives, and determine what, if any, changes should be made. If changes are recommended, the Task Force will present the recommendations and an implementation timeline at the WACTC July 2014 retreat.

**Additional WACTC and State Board Involvement:** The Task Force will work closely with WACTC’s Operating Budget Committee. WACTC will brief the State Board regularly on its progress and will forward recommendations to the State Board for consideration.

**Timeline**
- September 2013 – Kick off meeting
- Task Force recommendations to WACTC July 2014
- WACTC recommendations to State Board Fall 2014
- State Board and presidents discuss during Fall 2014
- If new allocation methodology is adopted, begin implementation with June 2015 allocation for FY 2015-16.

**Meetings** will be scheduled around the WACTC meetings. Preliminary meeting schedule:
- September 26th, Thursday, 8:15 a.m. to 11:30 a.m., Clark College
- November 14th, Thursday, 8:30 a.m. to 11:30 a.m., Peninsula
- December 19th, Thursday, 8:30 a.m. to 11:30 a.m., Bellevue
- January 21st, Tuesday, 1:00 p.m. to 4:00 p.m., SBCTC
- February 20th, Thursday, 8:30 a.m. to 11:30 a.m., SBCTC
- March 28th, Friday, 1:00 p.m. to 4:00 p.m., SPSCC
- April 24th, Thursday, 8:30 a.m. to 11:30 a.m., Walla Walla
- May 29th, 8:30 a.m. to 11:30 a.m., Edmonds

**Task Force Membership**

**WACTC Members**
- Ed Brewster, Grays Harbor College, Chair
- Eileen Ely, Green River Community College
- Michele Johnson, Pierce College District
- Linda Kaminski, Yakima Valley Community College
- Bob Knight, Clark College
- David Mitchell, Olympic College
- Patty McKeown, Bellingham Technical College

- Scott Morgan, Spokane Community College
- Eric Murray, Cascadia Community College
- Gary Oertli, South Seattle Community College
- Jim Richardson, Wenatchee Valley, Chair, OBC
- Luke Robins, Peninsula College
- Pamela Transue, Tacoma Community College

**Commission Members**

**Business Affairs Commission**
- Deborah Frazier, Peninsula College
- Bill Thomas, Lake Wash Institute for Tech

**Instruction Commission**
- Bob Mohrbacher, Big Bend Community College
- Jeff Wagnitz, Highline Community College

**Research and Planning Commission**
- Patty James, Bellevue College
- Ty Jones, Columbia Basin College

**Student Services Commission**
- Bill Belden, Clark College
- Lisa Matye-Edwards, Lower Columbia
DRAFT Outline of Topics to Cover

September 26, 2013
- Economic and Demographic Context, Trends in Higher Education
  - State demographic projections
  - State economic and workforce need projections
  - System goals – mission study
  - New directions in higher education
- Task Force Planning
  - Identify issues and topics to cover

November 14, 2013
- Allocations 101 – How Did We Get Here?
  - Prior allocation and accountability system
  - Current allocations methodology, including principles
  - Current accountability system – enrollment rules
- Assessment of Current Allocation and Accountability System – Strengths and Weaknesses
- Develop principles of allocation and accountability system
  - Goals and purpose of allocation methodology and accountability measures
  - Principles of allocation system
  - Principles of accountability measures

Subsequent Meetings
- Analysis
  - Student Achievement Funding as part of allocation and accountability
  - Enrollment Rules and enrollment counting as accountability measure
  - Changing role of state funding in college budgets: State funding as a shrinking source of college revenues
  - Beyond state-funded programs and enrollments:
    - Sources of college revenue – current and historical
    - Types of enrollments (state, contract, self-support)
  - Basic costs to run a college
  - Costs (expenditures) of and revenues from different mission areas (Workforce, Academic Transfer, ABE, BAS)
  - Per student revenues and expenditures: weighted average; regression line
  - Anything to learn from other states?
- Development of potential alternative allocation methodologies and accountability measures
- Finalize recommendation for allocation methodology and accountability measures, including timeline for implementation.
Final Consideration of Lake Washington Technical Institute, Bachelor of Applied Science in Transportation and Logistics

Brief Description
In February 2013, the State Board for Community and Technical Colleges adopted the revised approval process, selection criteria, and application materials for community and technical colleges seeking to offer an applied baccalaureate program.

Lake Washington Institute of Technology completed an initial step in the approval process when college administrators met with State Board members on June 20, 2012 to discuss how the proposed Bachelor of Applied Science Degree in Transportation and Logistics aligns with the college’s strategic goals and helps meets regional/statewide needs.

The final step in the approval process requires State Board action on the college’s application to offer the proposed applied baccalaureate degree.

Background Information and Analysis
Lake Washington Institute of Technology is proposing an applied baccalaureate degree program in Transportation and Logistics Management. The program will prepare students for careers involved in planning, management, and movement of people, materials, and products by road, air, rail, and water.

The curriculum will be coordinated with industry-recognized skill certifications helping to ensure the baccalaureate degree program is relevant and students are well-prepared for employment. It will provide an important educational and career pathway for students who traditionally have few baccalaureate options after they have completed their professional/technical degree. Currently, Lake Washington offers seven two-year degree programs that will serve as the foundation for students enrolling in the new baccalaureate program. Students in these programs learn highly technical skills in their lower-division courses. The Transportation Logistics and Management program will build on their core knowledge with both focused general education and advanced industry-specific courses that will help students succeed in their chosen career.

Potential Questions
- Does Lake Washington Institute of Technology’s Bachelor of Applied Science Degree in Transportation and Logistics Management meet criteria established by the State Board for Community and Technical Colleges?

Recommendation/Preferred Result
The proposal meets criteria established by statute and Board policy based on staff review and evaluation by a system review group. Staff recommends State Board action on Resolution 13-10-52, approving Lake Washington Institute of Technology’s application for a Bachelor of Applied Science in Transportation and Logistics Management degree program.

Policy Manual Change Yes ☐ No ☒

Prepared by: Edward Esparza, Policy Associate – Student Services 360-704-4319, eesparza@sbctc.edu
State of Washington
State Board for Community and Technical Colleges
Resolution 13-10-52

A resolution to approve Lake Washington Institute of Technology’s application to offer a Bachelor of Applied Science in Transportation and Logistics Management upon recommendation of the Community and Technical College Applied Bachelor’s Degree Review Committee.

WHEREAS, Engrossed Second Substitute House Bill 2483, passed by the 2012 Washington State Legislature, authorizes the State Board for Community and Technical Colleges to approve all Applied Bachelor’s degree programs offered by community and technical colleges; and

WHEREAS, consistent with the Washington State Legislature’s requirement, the State Board developed objective criteria for the approval of Community and Technical College Applied Bachelor’s degrees; and

WHEREAS, the Community and Technical College Applied Bachelor’s Degree Review Committee found that Lake Washington Institute of Technology’s application provided evidence that met or exceeded all objective selection criteria and will expand bachelor degree capacity in the state;

THEREFORE BE IT RESOLVED that the State Board for Community and Technical Colleges approves the recommendation of the Review Committee to authorize Lake Washington Institute of Technology’s Bachelor of Applied Science Degree in Transportation and Logistics Management.

BE IT FURTHER RESOLVED, that the State Board for Community and Technical Colleges authorizes the Executive Director to make adjustments to this action, including any necessary changes to the State Board’s Policy Manual, as necessary, for actions taken by the Governor, Legislature, data corrections, externally imposed restrictions or guidelines, uniform accounting and reporting requirements, and unanticipated changes in state or federal law.

APPROVED AND ADOPTED on October 24, 2013.

ATTEST:

_______________________________               __________________________________
Marty Brown, Secretary                              Elizabeth Willis, Chair
Final Consideration of South Seattle Community College Bachelor of Applied Science in Sustainable Building Science Technology

Brief Description
In February 2013, the State Board for Community and Technical Colleges adopted the revised approval process, selection criteria, and application materials for community and technical colleges seeking to offer an applied baccalaureate program.

South Seattle Community College completed an initial step in the approval process when college administrators met with State Board members on May 8, 2013 to discuss how the proposed Bachelor of Applied Science in Sustainable Building Science Technology degree aligns with the college’s strategic goals and helps meet regional/statewide needs.

The final step in the approval process requires State Board action on the college’s application to offer the proposed Bachelor of Applied Science degree.

Background Information and Analysis
South Seattle Community College is proposing an applied baccalaureate degree program in Sustainable Building Science Technology. This program would address a critical gap in the current education system that has developed as this industry has evolved over the past five to ten years. Traditional engineering, construction and architectural studies focus on the design of new buildings, rather than the complex and sophisticated systems that enable newly designed and retrofitted buildings to function. Individuals previously trained as facility managers simply do not have the level of expertise or systems knowledge to support these highly technical operations. This degree will address the needs of:

- Incumbent technical workers within the industry. Many individuals who enter the sustainable building science field working as a technician with an associate degree or less cannot advance even though they often have developed many of the skills necessary for higher paying jobs.

- Graduates from other two year programs within the State Community & Technical College system. These programs include the Industrial Controls at North Seattle Community College, Energy Management degrees at Edmonds and Cascadia colleges, Construction Management at Renton Technical College, and others.

- Participants in South Seattle Community College’s industry-requested Building Science classes which focus on skilled incumbent and displaced workers from energy management, new building construction, and the commercial real estate sectors. These intensive, hybrid online and hands-on courses have been developed based upon industry skill panel recommendations and requirements to meet immediate needs of this sector as it rebounded from the recent recession. They serve place-bound students while still providing necessary intensive hands-on training.

The Sustainable Building Science Technology degree will draw upon the resources and serve students from across the Seattle District, the Puget Sound region, and beyond.
Potential Questions

- Does South Seattle Community College’s Bachelor of Applied Science Degree in Sustainable Building Science Technology meet criteria established by the State Board for Community and Technical Colleges?

Recommendation/Preferred Result

The proposal meets criteria established by statute and Board policy based on staff review and evaluation by a system review group. Staff recommends State Board action on Resolution 13-10-53, approving South Seattle Community College’s application for a Bachelor of Applied Science in Sustainable Building Science Technology degree program.

Policy Manual Change Yes ☒ No ☐

Prepared by: Edward Esparza, Policy Associate – Student Services
360-704-4319, eesparza@sbcctc.edu
State of Washington  
State Board for Community and Technical Colleges  
Resolution 13-10-53  

A resolution to approve South Seattle Community College’s application to offer a Bachelor of Applied Science in Sustainable Building Science Technology upon recommendation of the Community and Technical College Applied Bachelor’s Degree Review Committee.

WHEREAS, Engrossed Second Substitute House Bill 2483, passed by the 2012 Washington State Legislature, authorizes the State Board for Community and Technical Colleges to approve all Applied Bachelor’s degree programs offered by community and technical colleges; and

WHEREAS, consistent with the Washington State Legislature’s requirement, the State Board developed objective criteria for the approval of Community and Technical College Applied Bachelor’s degrees; and

WHEREAS, the Community and Technical College Applied Bachelor’s Degree Review Committee found that South Seattle Community College’s application provided evidence that met or exceeded all objective selection criteria and will expand bachelor degree capacity in the state;

THEREFORE BE IT RESOLVED that the State Board for Community and Technical Colleges approves the recommendation of the Review Committee to authorize South Seattle Community College’s Bachelor of Applied Science Degree in Sustainable Building Science Technology.

BE IT FURTHER RESOLVED, that the State Board for Community and Technical Colleges authorizes the Executive Director to make adjustments to this action, including any necessary changes to the State Board’s Policy Manual, as necessary, for actions taken by the Governor, Legislature, data corrections, externally imposed restrictions or guidelines, uniform accounting and reporting requirements, and unanticipated changes in state or federal law.

APPROVED AND ADOPTED on October 24, 2013.

ATTEST:

_______________________________ __________________________
Marty Brown, Secretary                Elizabeth Willis, Chair
2014 Supplemental Operating Budget Request

**Brief Description**
In even numbered years the Legislature adopts a supplemental operating budget to address significant emergent issues, corrections, or adjustments to the biennial operating budget enacted in June of this year. The 2014 Supplemental Budget development environment marks a significant shift from more recent budgets, as Washington’s economic environment and state revenue projections continue to provide positive news for budget writers. As a result, the Office of Financial Management (OFM), in their budget instructions, has included an opportunity to make requests for additional funding that align with the Governor’s highest priorities. World Class Education is one of five focus areas in the Governor’s Results Washington system.

**Background Information and Analysis**
The enacted 2013-15 biennial budget resulted in increased appropriations for the community and technical college system. When compared to FY 2013, annual appropriations increased by 9.2 percent, from $584.6 million to $638.1 million (See Attachment A – SBCTC Operating Budget Appropriations). While the increasing appropriations are a positive outcome, the newly enacted level remains 15 percent lower than our peak funding level of $750 million (FY 2009).

Washington’s recovery from the recession continues slowly and is anticipated to improve over the next four years. Most economic indicators show positive trends as the current biennium progresses. State unemployment levels continue to improve and are projected to decline from 7.0 percent (2013) to 6.2 percent by 2015. Overall, the improved economy is driving greater revenue projections for the 2013-15 biennium. The September revenue forecast for 2013-15 was adjusted upward by $222 million, when compared to the revenue assumptions included in the biennial budget passed by the Legislature in late June.

As with every budget cycle, there are multiple, worthwhile policy areas in which budget decision makers can make state investments. To our advantage is the high priority education has in statewide policy making. Governor Inslee has World Class Education as the lead priority in his Results Washington initiative. This emphasis combined with the state’s improving fiscal environment opens the door for the State Board to reinforce their budget priorities as stated in the 2013-15 biennial budget submission. Recognizing this budget request as an intermediate step between the result of last year’s budget development and upcoming discussions regarding priorities for the 2015-17 biennium, the 2014 supplemental recommendation represents a modest, mid-cycle investment in areas of high priority for the system. (See Attachment B – Proposed SBCTC 2014 Supplemental Operating Budget Request).

The proposed 2014 Supplemental budget request contains seven specific investment requests that address issues within three of the four areas of focus contained in the 2013-15 biennial budget submission: Meeting Washington’s Education Needs, Increasing Student Achievement, and Investing in Faculty and Staff. Some of the requests are resubmissions from last year. New High Demand Enrollments, additional funding for the Student Achievement Initiative, and funding for earned Faculty Increments continue to be high priorities for the system and warrant continued emphasis in the budget process. In addition, the recommendation contains items that have emerged since the 2013-15 budget submission. Among these is a request for the continuation of a pilot project which provides academic support for under-represented students in STEM pathways, as well as the inclusion of recommendations
from the Aerospace Pipeline Committee. Finally the supplemental budget requests the inclusion of all system employees in any cost-of-living adjustments proposed in FY 2015.

The proposal was endorsed by the Presidents and Chancellors at their September 26, 2013, WACTC meeting.

Background Information

Attachment A – SBCTC 2013-15 Operating Budget
Attachment B – Proposed SBCTC 2014 Supplemental Operating Budget Request

Potential Questions

- Does the proposed 2014 Supplemental Operating Budget request reflect the priorities of the State Board?

Recommendation/Preferred Result

The Board is asked to adopt Resolution 13-10-54 approving the submittal of the SBCTC 2014 supplemental operating budget request to OFM containing the items displayed in Attachment B: SBCTC 2014 Supplemental Operating Budget Request.

Policy Manual Change Yes ☐ No ☒

Prepared by: Nicholas Lutes, Operating Budget Director
(360)704-1023, nlutes@sbctc.edu
State of Washington
State Board for Community and Technical Colleges
Resolution 13-10-54

A resolution relating to the 2014 Supplemental Operating Budget Request.

WHEREAS, the enacted 2013-15 Biennial budget represents the first budget in four years to include increased investments in the community and technical college system, and;

WHEREAS, the most recent economic and revenue forecasts for the State of Washington continue to project a positive budget building environment, and;

WHEREAS, the 2014 Supplemental budget instructions from the Office of Financial Management provide an opportunity for agencies to submit, for consideration, policy investment requests that support Governor Inslee’s Results Washington initiative, which has World Class Education as a leading priority,

THEREFORE BE IT RESOLVED that the State Board for Community and Technical Colleges authorizes the Director to submit to the Governor a 2014 Operating Budget request for an estimated $28.96 million for policy level items as identified in Attachment B -- Proposed 2014 Supplemental SBCTC Operating Budget Request.

BE IF FURTHER RESOLVED that the Director shall make any necessary adjustments to the request, as necessary to meet changing conditions, or make technical adjustments, consistent with the Board’s direction.

APPROVED AND ADOPTED on October 24, 2013.

ATTEST:

__________________________________  ________________________________
Marty Brown, Secretary                              Elizabeth Willis, Chair
### SBCTC Operating Budget Appropriations

**$s in Thousands**

<table>
<thead>
<tr>
<th>2011-13 Biennium Appropriations</th>
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<td>FY 2013 Appropriations</td>
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<th>SBCTC 2013-15 Biennium Appropriations</th>
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<td><strong>2013-15 Budget Changes</strong></td>
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<tr>
<td>Student Achievement Initiative</td>
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<td>Institutional Funding</td>
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<td>Restore 3% Salary Reduction</td>
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<td>Restore One-time Reduction</td>
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<td>Maritime Industry Training</td>
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<td>Center of Excellence - Aerospace</td>
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<td>Opportunity Center for IT Project</td>
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<td>STEM and Career &amp; Tech Education (2SSB 5624)</td>
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<tr>
<td>All Other</td>
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<tr>
<td><strong>Total Changes</strong></td>
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<td><strong>Total State Funding</strong></td>
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| % change from FY 2013 | 9.2% | 8.9% |
Total Request: $28.96 million

**Meeting Washington’s Education Needs**  
$13.0 million

*Mission Areas: Serve more people, including underserved populations*
- Close the skills gap
- Increase Adult Basic Skills funding

- **New High Demand Enrollments**  
  $5.00 million  
  Washington must increase job-training in high-demand areas – especially STEM fields – to close skill gaps and fill Washington jobs with Washington workers. These in-demand programs are often the most expensive to offer because they require specialized equipment and smaller class sizes. These enrollments would expand access to high quality, up-to-date programs with a robust per student funding investment of $10,000 annually. Funding should support 500 additional FTEs.

- **Support Enrollments in AIR Washington**  
  $3.00 million  
  A portion of the $20 million AIR Washington grant is supporting the ongoing cost of enrollment. The requested funding would replace expiring federal grant funds with state support and maintain the existing programs developed through the AIR Washington grant. The program served approximately 1,840 FTEs in FY 2013. This item has been requested by the Aerospace Pipeline Committee.

- **New Aerospace Enrollments**  
  $5.00 million  
  The Aerospace Pipeline Committee finds that the need for additional enrollments in our system is significant and may be as high as 1,000 FTE. The committee recommends an investment of 500 new aerospace enrollments, at $10,000 per FTE, be provided to the community and technical college system.

**Increasing Student Achievement**  
$5.16 million

*Mission Areas: Improve and Incent Student Retention and Achievement*

- **Student Achievement Initiative (SAI)**  
  $4.75 million  
  The requested funding would establish an annual investment of $10.0 million per year for this successful, performance-based funding program. (Current appropriation is $5.25 million per year.)
• **Educational Support for traditionally under-represented STEM students** $0.41 million

  The MESA Community College Program (MCCP) is an academic support program that helps under-represented students pursue STEM degrees. Six colleges\(^1\) are participating in the pilot project receiving $55,000 per location. The program is currently funded through a National Science Foundation grant set to expire at the end of FY 2014. The request is to shift funding for the pilot program to state funds beginning in FY 2015.

**Investing in Faculty and Staff** $10.8 million

*Mission Areas: Invest in Sustaining Faculty and Staff Excellence*

• **Faculty Increments** $3.40 million

  Full- and part-time faculty must continuously update their knowledge, skills and abilities to bring the latest innovations and practices into the classroom and grow professionally. For such efforts, a faculty member earns a salary step increase typically called an “increment.” However, increments can be paid only if authorized by the Legislature. This request is for the funding necessary to provide ‘increments’ for full- and part-time faculty in FY 2015.

• **Including exempt, faculty, and TC classified in the FY 2015 Contingent 1% COLA** \(\approx $7.40 million\)

  Under the enacted 2013-15 operating budget, some state employees may have an opportunity to receive a 1% cost-of-living, salary increase. The FY 2015 1% COLA excludes CTC faculty and staff exempt from state merit system rules. The COLA is contingent upon increases in state revenue projections for FY 2015, due to ‘economic activity,’ when comparing the February 2014 revenue forecast to the September 2012 forecast. The threshold for triggering the COLA is an increase of at least $200 million. The request is to expand eligibility for the FY 2015 Contingent 1% COLA to include all CTC faculty and staff.

\(^1\) Columbia Basin, Edmonds, Highline, Olympic, Seattle Central, Yakima Valley
SBCTC 2014 Supplemental Capital Budget Request

Brief Description
The State Board’s 2013-15 capital request was not fully funded in the biennial budget. There also are two emergent opportunities that require legislative approval for financing. This resolution will reassert the State Board’s 2013-15 priorities and seek new financing authority for two locally supported projects.

Background Information and Analysis

The biennial budget funds every project the State Board requested in priority order, down to but not including the construction of the Olympic College Instruction Center. This budget funds our Major Construction projects 11 percent to 16 percent below the requested levels. Funding for Major Design projects is 6 percent to 43 percent below the requested levels. Funding for the Minor Program Improvement projects is 15 percent below the requested levels. The adopted budget also authorizes all of the alternatively financed projects and the long-term lease as requested.

Our 2014 supplemental capital request was due to the Office of Financial Management (OFM) on October 4, 2013. A request, consistent with this resolution, was submitted contingent upon the State Board’s approval. A summary table of the supplemental request with a comparison to the 2013-15 biennial request is attached.

Olympic College

Instead of funding the construction phase of the Olympic College Instruction Center, the Legislature directed the college to enter into an interagency agreement with the OFM to provide funding for a budget evaluation study. OFM was directed to do a budget evaluation study using value engineering techniques and life cycle cost analysis, and then report their findings back to the Legislature in a timely manner.

Budget evaluation studies are done by a multi-disciplinary team. After reviewing the programmatic need and design documents for the project, the team identifies changes that may better meet the programmatic need, add efficiency, or add value to the project. While the study is expected to be completed before the Governor’s supplemental budget proposal is released, it was not available for the State Board supplemental request. The information submitted for the 2013-15 biennial budget has been updated with the latest design information. The funding requested for the construction phase remains the same as it was in the 2013-15 request. It is likely the request will need to be revised after the study is complete.

Centralia College

The enacted 2013-15 capital budget reduced funding for Major Design projects by eliminating all escalation in the cost estimates. In addition, the budget reduced contingencies and eliminated acquisitions in some projects. The Centralia College Student Services project received all of these reductions and as a result cannot meet the city’s requirement that they mitigate their existing parking shortage before they apply for another building permit.
The funding requested in the supplemental budget will allow the project to be ready for construction in the 2015-17 biennium. The project total cost remains the same as it was in the 2013-15 request.

**Lower Columbia College**

Lower Columbia College has two opportunities to address critical capital needs that require legislative authority for financing. The college is requesting two $3 million Certificates of Participation (COPs) for these projects.

One of the COPs is for the renovation and addition to the Main Building built in 1970. The building was identified as needing improvement in the 2011 Facility Condition Survey. The college will renovate approximately 4,000 square feet on the second floor of the west wing and add another 2,300 square feet to the Main Building. The renovation will increase the college's ability to offer math classes. The debt will be paid from existing local funds.

The second COP will allow the college to purchase a condominium-type interest in the second floor of a five-story mixed use building to be built at the intersection of Vandercook Way and Commerce Avenue. This is a self-supporting activity that will use a combination of non-appropriated and non-allotted cash and financing for construction and operation. This project will make 24 units of housing available to students within two blocks of the campus.

**Potential Questions**

- Is the request consistent with the State Board’s capital priorities for the 2013-15 biennium?
- Does the Board want any additions, deletions, or modifications to the proposed request?

**Recommendation/Preferred Result**

Staff recommends approval of Resolution 13-10-55, authorizing staff to complete the 2014 supplemental capital request as described above and summarized on Attachment A.

Policy Manual Change Yes ☐ No ☒

Prepared by: Wayne Doty, Capital Budget Director
360-704-4382, wdoty@sbctc.edu
State of Washington
State Board for Community and Technical Colleges
Resolution 13-10-55

A resolution relating to the 2014 Supplemental Capital Budget.

WHEREAS, the Office of Financial Management (OFM) requested that all state institutions submit their requests for the 2014 supplemental capital budget by October 4, 2013; and

WHEREAS, the request shown in Attachment A follows the capital priorities set by the State Board for the 2013-15 biennium; and

WHEREAS, this request represents the most pressing immediate needs of the colleges in priority order;

WHEREAS, the request was submitted by OFM’s deadline subject to the State Board’s approval;

THEREFORE BE IT RESOLVED that the State Board for Community and Technical Colleges authorizes the completion of the request to the Office of Financial Management and the Legislature for the community and technical college system based on Attachment A, including the two alternatively financed projects.

APPROVED AND ADOPTED on October 24, 2013.

ATTEST:

__________________________________________  ________________________________
Marty Brown, Secretary                             Elizabeth Willis, Chair
### SBCTC Capital Requests for New Appropriated Funds in 2013-15


<table>
<thead>
<tr>
<th>Priority</th>
<th>Type</th>
<th>College</th>
<th>Number</th>
<th>Project Description</th>
<th>SBCTC 2013-15 Request</th>
<th>2013-15 Funding</th>
<th>2014 Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minor Preservation</td>
<td>Statewide</td>
<td>30000709</td>
<td>* Preventive Facility Maintenance</td>
<td>22,800,000</td>
<td>22,800,000</td>
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<tr>
<td>2</td>
<td>Minor Repairs</td>
<td>Statewide</td>
<td>30000844</td>
<td>Roof Repairs</td>
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<td>3</td>
<td>Minor Repairs</td>
<td>Statewide</td>
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<td>Facility Repairs</td>
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<tr>
<td>4</td>
<td>Minor Repairs</td>
<td>Statewide</td>
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<td>Site Repairs</td>
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<td>72,893,000</td>
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<td>5</td>
<td>Minor Program</td>
<td>Statewide</td>
<td>30000723</td>
<td>Minor Program Improvements</td>
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<td>94,893,000</td>
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<tr>
<td>6</td>
<td>Construction</td>
<td>Bellevue</td>
<td>20082702</td>
<td>Health Science Building</td>
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<td>7</td>
<td>Construction</td>
<td>Grays Harbor</td>
<td>20081226</td>
<td>Science and Math Building</td>
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<td>8</td>
<td>Construction</td>
<td>Seattle Central</td>
<td>30000120</td>
<td>Seattle Maritime Academy</td>
<td>18,521,000</td>
<td>70,319,000</td>
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<td>9</td>
<td>Construction</td>
<td>Yakima Valley</td>
<td>30000121</td>
<td>Palmer Martin Building</td>
<td>22,160,000</td>
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<tr>
<td>10</td>
<td>Construction</td>
<td>Green River</td>
<td>20081222</td>
<td>Trades and Industry Building</td>
<td>30,629,000</td>
<td>245,096,000</td>
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<tr>
<td>11</td>
<td>Design</td>
<td>Centralia</td>
<td>30000123</td>
<td>** Student Services</td>
<td>4,397,000</td>
<td>249,493,000</td>
<td>3,162,000</td>
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<tr>
<td>12</td>
<td>Construction</td>
<td>Bates</td>
<td>20082703</td>
<td>Mohler Communications Techno</td>
<td>27,040,000</td>
<td>276,533,000</td>
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<tr>
<td>13</td>
<td>Design</td>
<td>Columbia Basin</td>
<td>20082704</td>
<td>Social Science Center</td>
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<td>14</td>
<td>Design</td>
<td>Peninsula</td>
<td>30000126</td>
<td>Allied Health and Early Childhood</td>
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<td>279,972,000</td>
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<tr>
<td>15</td>
<td>Design</td>
<td>South Seattle</td>
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<td>Cascade Court</td>
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<td>16</td>
<td>Construction</td>
<td>Clark</td>
<td>20082705</td>
<td>Health and Advanced Technologies</td>
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<td>320,896,000</td>
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<td>17</td>
<td>Design</td>
<td>Renton</td>
<td>30000134</td>
<td>Automotive Complex Renovation</td>
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<td>18</td>
<td>Design</td>
<td>Edmonds</td>
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<td>Science Engineering Technology Bldg</td>
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<tr>
<td>19</td>
<td>Design</td>
<td>Whatcom</td>
<td>30000138</td>
<td>Learning Commons</td>
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<tr>
<td>20</td>
<td>Construction</td>
<td>Olympic</td>
<td>30000122</td>
<td>College Instruction Center</td>
<td>53,053,000</td>
<td>386,277,000</td>
<td>53,053,000</td>
</tr>
</tbody>
</table>

**Notes:**
- General Construction occurs in order of system priority.
- * Project 30000709 is a maintenance level request for 060 funds originally swapped in 2003-05 for 001 funds in the operating budget. The fund swap first occurred in Section 799 of SSB 5401 to offset a corresponding reduction in the Operating budget.
- ** Project 30000123 requesting more of the design and acquisition costs in 2013-15 to be ready for construction phase in 2015-17. The total project cost is unchanged from 2013-15 request.
### SBCTC Capital Requests for COPs to be paid from non-appropriated funds in 2013-15


<table>
<thead>
<tr>
<th>Request</th>
<th>College</th>
<th>Number</th>
<th>Project</th>
<th>State</th>
<th>Local</th>
<th>COP</th>
<th>Total</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Description</td>
<td>Peninsula</td>
<td>30000501</td>
<td>Forks Satellite Site</td>
<td>0</td>
<td>0</td>
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<td>Reauthorize</td>
<td>Spokane</td>
<td>92000012</td>
<td>Extended Learning Center</td>
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<td>5,400,000</td>
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<tr>
<td>Authorize</td>
<td>South Puget Sound</td>
<td>30000972</td>
<td>Renovation of Lacey Campus</td>
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<td>0</td>
<td>5,000,000</td>
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<tr>
<td>Authorize</td>
<td>Green River</td>
<td>30000973</td>
<td>Student Life Replacement Project</td>
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<td>15,000,000</td>
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<td>Authorize</td>
<td>Whatcom</td>
<td>30000975</td>
<td>Student Recreation Center</td>
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<td>1,000,000</td>
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<td>Authorize</td>
<td>Lower Columbia</td>
<td>30000976</td>
<td>Student Housing</td>
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<td>Authorize</td>
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<td>30000978</td>
<td>Main Building Renovation</td>
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<td>0</td>
<td>3,000,000</td>
<td>3,000,000</td>
<td>new</td>
</tr>
</tbody>
</table>

**Notes:**

Centralia Community College will need a $5M COP for construction of the Student Services Building project 30000123 in 2015-17.
2013 Student Achievement Awards

**Brief Description**
Through the Student Achievement Initiative the Board measures colleges and awards funding to them for their annual performance. The Washington State Legislature appropriated $10,500,000 for the Initiative in the 2013-15 biennium. The Board will be awarding $5.25 million for the 2012-13 performance year.

**Background Information and Analysis**
Last year, the Board adopted recommendations from the Washington Association of Community and Technical Colleges (WACTC) for both the achievement point metrics and the funding model. This Fall marks a transition from the original funding methodology for one-year net point gain to the new three part methodology based upon each college’s share of total points, points per student, and student completions in the performance year.

The Student Achievement Initiative is a key policy tool for the Board’s policy focus on student success. The Initiative is important to the State Legislature, which has invested in it both for higher education state policy and budget. Student Achievement is important to the college system, which has just spent a year reviewing and bringing forth recommendations to the Board. It is also important to the work of WACTC for their review of the allocation model. Finally, just as the initial work became a model for other states to follow, the advancement of the revisions to Student Achievement resulting from the yearlong review will be closely watched by other states and higher education policy organizations for impacts on student success.

Recommendations for final 2012-13 performance awards will be available for the Board meeting.

**Potential Questions**
- Which colleges are the leaders in 2012-13 performance?
- What impacts are we seeing on student success?

**Recommendation/Preferred Result**
Staff recommends State Board action on Resolution 13-10-56, approving the 2013 Student Achievement Awards.

Policy Manual Change Yes ☐ No ☒

Prepared by: David Prince, Director, Research and Analysis
(360) 704-4347, dprince@SBCTC.edu
Tab 11

State of Washington
State Board for Community and Technical Colleges
Resolution 13-10-56

A resolution relating to the Student Achievement Initiative Awards.

WHEREAS, the Board established the Student Achievement Initiative to reward colleges for improvements in increasing student success and to shift a portion of funding from enrollments to performance; and

WHEREAS, the Student Achievement Initiative measures colleges for the intermediate outcomes that students achieve, leading to and completing college certificates and degrees; and

WHEREAS, state funds for Student Achievement were appropriated in the 2013-15 operating budget to the State Board for Community and Technical Colleges; and

WHEREAS, the performance for all thirty-four colleges was measured for four performance areas—net point gain between 2011-12 and the 2012-13 performance year, shares of total points, points per student, and completions in the 2012-13 performance year; and

WHEREAS, these funds are awarded to the colleges based on their performance in each of these areas; and

THEREFORE BE IT RESOLVED that the State Board for Community and Technical Colleges approves the 2013 distribution of $5,250,000 to support the Student Achievement Initiative to be awarded in 2013; and

BE IT FURTHER RESOLVED that 2014 performance is based on each college’s share of system performance for total points, points per student, and completions.

BE IT FURTHER RESOLVED that the State Board for Community and Technical Colleges authorizes the Executive Director to make adjustments, as necessary, for actions taken by the Governor, computational errors, data corrections, externally imposed restrictions or guidelines, legislative appropriation provisos, restrictions, guidelines, uniform accounting and reporting requirements, and unanticipated changes in state or federal funding.

APPROVED AND ADOPTED on October 24, 2013.

ATTEST:

_______________________________               __________________________________
Marty Brown, Secretary                              Elizabeth Willis, Chair