

# INNOVATION

## **Proposed Investments - \$44.3 million**

Community and technical colleges are centers of education and innovation in their communities. Partnerships with business and labor, regional collaboration among colleges, keeping faculty skills and instructional equipment current and distance learning programs are tactics that enable community and technical colleges to be nimble and responsive. Strengthening these tactics will be essential to providing well-trained workers with exactly the skills needed, “just in time” to promote business success, accelerate economic development, increase Washington’s global competitiveness, and provide prosperity.

The best way to strengthen these tactics is to invest in capacity. Building partnerships and collaborative relationships produces good results, but requires adequate investment in people to do the hard work of outreach, defining common interests, identifying problems to be solved, researching trends, and strategizing solutions. All of this effort takes time. Similarly, providing customized training to address individual business needs requires dedicated capacity to be a focus for the business community. Meeting the needs of students and the economy means that instructional equipment must be up to date - the learning environment must mirror the earning environment. Creating and maintaining distance learning courses and other on-line resources, which students increasingly demand, requires investment in people and equipment. Good classroom teachers need help with translating successful face-to-face courses into an on-line format. The importance of faculty to these efforts must be recognized.

This decision package represents the funding needed to expand the innovative capacity of the community and technical colleges. If funded, this investment will result in:

- expanded collaborations and promulgation of data and proven practices to further key industries through the Centers of Excellence;
- education and training environments that look like the workplace, through contemporary instructional equipment;
- increased flexibility for students to learn, study and plan at times and locations convenient to them through expanded distance learning, access to library resources and on-line advising; and,
- improved part-time faculty salaries, and improved understanding of faculty and administrator compensation.



## **EXPANDED CENTERS OF EXCELLENCE –\$3.4 MILLION**

### **Background**

The community and technical college system has established 11 Centers of Excellence aligned with the state’s strategic industries. Each Center, hosted by one or more colleges,

focuses on a targeted industry that drives the state's or region's economy and that has a reputation for fast, flexible, quality education and training programs.

Centers are guided by industry representatives and lead collaborative and coordinated statewide education and training efforts with the goal of building a competitive workforce in a global economy. Centers leverage expertise for all 34 community and technical colleges by serving as points-of-contact and resource centers for industry trends, best practices, innovative curriculum, and professional development opportunities.

Bellevue Community College is the Center for Information Technology Excellence (CITE), which is affiliated and co-located with the National Workforce Center for Emerging Technologies (NWCET). CITE is an information resource and solution provider for model information technology education programs, best practices, up-to-date research, information dissemination, instructor development, and sharing of industry trends impacting employment, education, and business growth across Washington State.

Bellingham Technical College is a Center of Excellence for Process Technology, focusing on education and training related to continuous flow processes and instrumentation for industries such as petroleum refineries, chemical processing plants, food processors, pulp and paper mills and wastewater treatment plants.

Centralia College's Center of Excellence for Energy Production and Distribution Technology provides leadership for a growing alliance of energy industry and college partners. Together, industry and educational partnerships provide comprehensive degree and certificate programs, on-line courses, and regional classroom training opportunities that focus on the future of the energy industry.

Edmonds and Everett Community Colleges jointly host the Materials and Process Development Center of Excellence. The Center's mission is to increase the competitiveness of manufacturers using composites and other advanced materials through workforce training and education.

The Washington State Center of Excellence for Careers in Education, housed at Green River Community College, provides support, mentoring, and advising to community colleges and their K-20 partners for the creation and expansion of career-ladder programs in education. The Center provides a yearly best practices conference, a comprehensive web site, curriculum development and dissemination, and training for K-20 instructors and para-professionals.

Pierce College's Center for Excellence in Homeland Security facilitates and coordinates Homeland Security initiatives with a coalition of 34 community and technical colleges, public agencies, and private sector organizations. The Center provides and brokers dynamic education and training to prepare a skilled workforce to maintain our national security.

Renton Technical College's Construction Center of Excellence is a resource for industry professionals, colleges, and others interested in preparing a diverse workforce for the

construction industry. The Construction Center of Excellence showcases innovative educational offerings, at RTC and elsewhere, and promotes awareness of career pathways within construction.

The Center for Manufacturing Excellence at Shoreline Community College is industry led by an advisory board. Through collaboration among business, industry, education, and community partners, the Center promotes the manufacturing profession and raise awareness of manufacturing careers and educational opportunities throughout Washington State. The Center is a vital resource to help grow and sustain manufacturers' participation in the global marketplace.

Skagit Valley College is home to the Northwest Center of Excellence for Marine Manufacturing and Technology. The Center is a hub for innovative discussions, resources, training and education services that create a repository of information and illuminate best practices related to industry trends and emerging technologies to foster economic vitality.

Walla Walla Community College's Agricultural Center of Excellence provides collaborative leadership in addressing the emerging workforce and economic development interests of rural, urban, and related agriculture in Washington State. The Center is a hub for accessing fast, flexible services and education to meet employer needs.

The Allied Health Center of Excellence, located at Yakima Valley College, is dedicated to addressing Washington State's healthcare workforce needs of today and tomorrow. Through collaboration and cooperation with industry partners, the center provides innovative programs to prepare qualified and competent health care professionals and leaders for the future.

For additional information about specific centers, please go to:  
<http://www.sbctc.ctc.edu/workforce/CtrsofExcellence.asp>

### **Investment**

Centers of Excellence serve as catalysts for partnerships among community and technical colleges, and with K-12 and university partners to meet the needs of strategic industries. These efforts maximize expertise and resources available in the community and technical college system while reducing duplication. This request seeks an additional \$100,000 per year per existing Center, plus funding to establish three new Centers at \$200,000 each year.

### **Outcome**

Additional investment in the existing Centers, and creation of three new centers, supports:

- Specialized and cutting-edge faculty development in both industry skills and instructional strategies;
- Increased curriculum development and curriculum sharing across the state to allow maximum mobility for students, creating opportunities to expand dual credit programs with K-12, and articulation agreements with four-year colleges and universities, on behalf of the entire system;
- Research on specific industry trends;

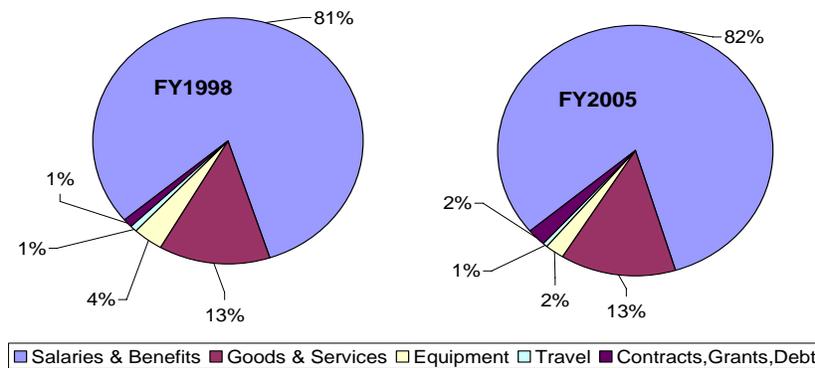
- Formal industry skill standards development and maintenance;
- Mini-grants to colleges for innovative program improvements;
- Intensive consultation with community and technical programs; and
- The ability to leverage the Centers' collective resources to garner federal grants to support specific initiatives that meet the Centers' mission.

## 21<sup>ST</sup> CENTURY INSTRUCTIONAL EQUIPMENT - \$17.0 MILLION

### Background

Community and technical colleges repeatedly cite the lack of available funds for big-ticket instructional equipment as a critical funding priority. Budget reductions during recent biennia resulted in colleges shifting resources away from such purchases to maintain and expand resources for instruction. In 2005, the community and technical college system spent \$1.4 million less on equipment than it did in 1998. Expressed as a percentage, systemwide equipment expenditures declined from four percent of expenditures in 1998 to two percent in 2005.

**Expenditures by Object  
(General Fund State and Tuition)  
FY1998 compared to FY2005**



Many professional and technical programs rely upon industry-based tools and equipment for student learning and skill development. Often, because of limited resources, equipment at community and technical colleges lags industry standards. Employers must absorb the cost of additional employee training when the employer is expecting a graduate prepared with entry level skills.

A survey of the colleges indicated that the greatest categories of unmet professional and technical equipment needs are in the healthcare and trades related programs. Single item costs for **healthcare** equipment, such as spectrometers, microscopes, defibrators, digital imaging, simulators, virtual clinical instruction tools, ventilators ranged from a low of \$20,000 to a high of \$221,000, with an average of \$62,000. Single item costs for **trades related** equipment, such as automotive upgrades for hybrid technology, machining

equipment, aviation and flight equipment, welding equipment, and industrial electrical equipment ranged from a low of \$10,000 to a high of \$102,000, with an average of \$50,000. These numbers exclude the estimated \$5.5 million cost to replace airplanes in aviation training programs.

Professional and technical instructional equipment is only part of the community and technical college system's equipment need. Every college faces instructional technology costs to maintain and upgrade computer labs, purchase software, replace servers, phone switches – the list is extensive. **Technology** single item costs reported in the survey included a low of \$20,000 and a high of \$237,000, with an average cost of \$83,000.

### **Investment**

The community and technical college system's request for equipment funding will allow colleges to have a stable, predictable source of funding for high cost items, permitting them to more effectively serve students and employers.

This investment is critical to the production of high demand FTEs to improve Washington's global competitiveness.

### **Outcome**

Up-to-date instructional equipment provides business with employees who have practiced complex technical skills in a safe learning environment and who have developed "soft skills" that employers value, such as team building, negotiation, and conflict resolution skills. These outcomes lead to quicker transitions from the classroom to the workplace and decreased employer training costs for students unfamiliar with industry standard equipment.

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## **Expanded distance learning and on-line resources - \$11.8 million**

### **Overview**

Students are increasingly interested in accomplishing both instruction and administrative tasks at times and in ways that are convenient for their lives. Online technologies are commonplace for K-12 students, with computers in more than 97 percent of classrooms statewide. Higher education needs to remain consistent and relevant to high school graduates as they move into the community and technical college system.

The ready availability of on-line services will influence future student decisions about where and when to attend college. Investment in distance learning and technology for on-line services and resources can help students juggling work, family and college. From the state's perspective, these investments reduce future capital costs and improve student retention and accomplishment.

This request represents the funding needed to:

- **expand distance learning,**
- **provide uniform access to on-line advising and planning and**
- **provide uniform access to library resources.**

Funding the educational technology request will provide: increased access for students through expanded distance learning offerings and decreased capital requests; uniform access to on-line advising and educational planning, improving student efficiency; and, uniform access to contemporary library resources throughout the two year college system, improving employability and ability to transfer to four year degree programs.

## **Distance Learning**

### **Background**

Use of online instructional technologies is growing at colleges. Classes offered predominately online have grown between 15 and 20 percent each year over the last five years. In FY 2006, 9.5 percent of FTES took an online class. Hybrid face-to-face classes, enhanced with online learning technologies, are growing at an even greater rate, accounting for nearly 40 percent of FTES.

### **Investment**

The total request for distance learning for 2007-09 is \$2.5 million. Colleges estimate that they currently spend over \$6 million each biennium on **course management systems' licenses**, hardware, hosting and technology support. These systems make teaching and learning available all day, every day. Over the next two years, colleges expect an increase of 20 percent for licenses for course management systems, based on increased vendor costs and growth in online and hybrid enrollments. This cost increase drives \$1.32 million of the total community and technical colleges request for distance learning for the 2007-09 biennium.

To successfully expand distance learning course offerings, faculty need assistance with **curricula development and training** in on-line instruction methods, so that they can evolve their traditional face-to-face classes into effective on-line classes. The system requests \$1.2 million to:

- pay for the creation of up to forty courses for two on-line degree programs to fill gaps in online workforce training course offerings, shared across the two-year college system;
- purchase rich media tools that allow colleges and instructors to build course content that includes audio, video and animation, and on-line labs;
- create a single log-on for colleges' web-based services; and
- fund a full-time system-level faculty support manager to train and support faculty in on-line instruction, as well as coordinate and promote collaborative faculty efforts throughout the entire community and technical college system.

### **Outcome**

In addition to flexibility and convenience for students, on-line instruction can reduce overcrowding in classrooms and in some cases reduce the need to expand or construct new facilities. Currently, two-year colleges are operating classrooms at over 36 seat hours per week compared to the HECB standard of 22 hours per week. SBCTC is reliant on on-line

programs and hybrid programs to reduce demand for classrooms. SBCTC capital planning anticipates that by 2015 we will have over 16,000 FTE students using online instruction, reducing capital construction by 360,000 square feet and saving taxpayers over \$110 million in avoided construction cost. In the draft “Making the Grade” consultant report prepared for Washington Learns, the authors recommended that the state encourage distance learning to reach new groups and save on capital expansion costs, noting that the state should share part of the cost savings with institutions showing increases in this area (p. 15).

## **Educational Planning and On-line Advising**

### **Background**

In the draft “Making the Grade” consultant report prepared for Washington Learns, the authors note the need for “creation of a web-based advising system that would allow community college students to determine on their own how their courses match transfer requirements . . . (p. 13).” This statement specifically addresses a tool being created by the Higher Education Coordinating Board (HECB). The two-year college system has created a tool that would complement the HECB system.

The Ed Plans online advising system is a tool designed to help students explore and plan their educational futures by allowing them to compare their own student course history data to degree and/or certificate requirements. This tool gives students an understanding of where they are in their education and where they need to go. The system, developed through a collaborative effort among Walla Walla Community College, Yakima Valley Community College, and Columbia Basin Community College, with funding from a federal Title V grant, is designed to:

- Increase student access to accurate, timely, and easy-to-find “anytime” advising information;
- Help students clearly understand the educational pathways available to move toward their degree and certificate goals;
- Improve faculty, staff, and counselor aptitude for utilizing technology to provide instructional and student services to both traditional and distance students;
- Expand institutional capacity to monitor student performance and use of campus resources.

With the Ed Plans program, students can select a program of study, develop a plan for completing the requirements, and save the plan for review, discussion and approval by an advisor. In addition to laying out the requirements for completing a degree or certificate program, Ed Plans maps out the sequencing of classes that makes the most sense for students. For example, it can help students with quarterly course selection by telling them which classes should be taken, and in which order, to prepare for the next level in a discipline (such as math or English). This can be a very useful tool to encourage students to take required math or English courses early in their education.

The program also has the ability to perform multiple “what if” queries for students, which allows them to compare the coursework that they have already completed with the requirements of selected degree and certificate programs. This capability allows students to

explore “what ifs” related to a number of educational pathways. Students can become more efficient, since they can easily acquire knowledge of what is necessary to complete various degree and certificate programs.

Colleges can also use the Ed Plans module to manage future program and course offerings based on student demand. The system, capturing the projected course-taking patterns of students, can provide administrators with information about how many sections of each course would be needed if students were to enroll according to their established plans. While these projections would not be exact, the level of information available could be useful to inform a general understanding of future course offering needs.

### **Investment**

This budget request represents the funding needed to address one-time expenditures to promulgate the Ed Plans module throughout the two-year college system (\$960,000), and for biennial ongoing expenses to operate and maintain the system (\$3.64 million).

### **Outcome**

On line advising and educational planning will: broaden students’ understanding of the feasible education and career paths available to them; help students be more efficient in completing their programs of study; provide continual access to educational planning tools, allowing advance preparation and more efficient use of face-to-face advising time; and, help colleges more effectively plan future course offerings.

## **Library Resources**

### **Background**

Washington’s public four-year institutions received legislative funding in three separate years in the late 1990s to make available to all students digital library resources, a common library catalog and courier services for interlibrary loan document delivery.

The two-year college system has not had legislative funding for these purposes, although the community and technical college system serves 60 percent of all higher education enrollments, and, provides initial education and training for over 40 percent of Washingtonians who ultimately attain a bachelor’s degree.

### **Investment**

This request represents the one-time and ongoing funding needed for the first phase of a three biennium plan to achieve uniform access to the same level of modern, high quality library resources and services to community and technical college students as at four-year institutions.

**Digital library resources** are books, articles, primary source documents, dictionaries, and manuals in digital and searchable formats. All colleges in the CTC system provide students with digital access to common periodicals and newspapers through a low-cost statewide license agreement brokered by the State Library. Using grants, student technology fees and other local funds, about two-thirds of the CTC colleges provide their students

digital access to one or more of the core library resources. Availability of the resources at an individual college depends on the level of special funding and high priority program areas. Even with these special funds the CTC system provides digital access to just 10 percent of resources regarded as core.

However, all students need access to specialized resources in their fields of study, both to enhance their studies and to prepare them to use these same resources on the job. The biennial statewide license cost (the most cost-effective approach to providing these resources) for the core collection is \$3 million, to serve 500,000 students. This request will leverage the current investment of \$300,000 such that, in addition to the general periodicals, every CTC students regardless of where they enroll will have digital access to core library resources in 6 areas:

- Allied health
- Science, engineering and technology
- Information technology
- Business
- Social sciences
- Arts and humanities

Failure to purchase these resources will continue the library resources disparity between four-year and two-year college students, and will continue the uneven access to resources within the two-year college system.

A **common library catalog and interlibrary loan service** will maximize the availability of non-digital library resources throughout the community and technical college system. Books, manuals and journals held in one library can serve students at other libraries through the long-standing interlibrary loan process. \$1.3 million will support a one-time effort to capture all holdings in a common library catalog, provide on-going biennial funding for operations and maintenance of the catalog, and provide on-going biennial funding for a courier service to deliver non-digital materials among the colleges. 500,000 students, regardless of which college they attend, will be able to borrow from the combined library resources of the entire CTC system and receive the books and manuals they need within 48 hours, just like students at public baccalaureate institutions.

The two-year college system is establishing **information literacy** instruction across the curriculum in a variety of formats consistent with the needs of baccalaureate institutions and employer perspectives. This work has been done with grant funding that ends after FY 2007. Funding this request of \$350,000 will allow the system to work hand in hand with university and industry librarians to spread information literacy instruction across the curriculum. In 2009-11 the higher education library community plans to work with K-12 to achieve college readiness standards for information literacy.

## **Outcome**

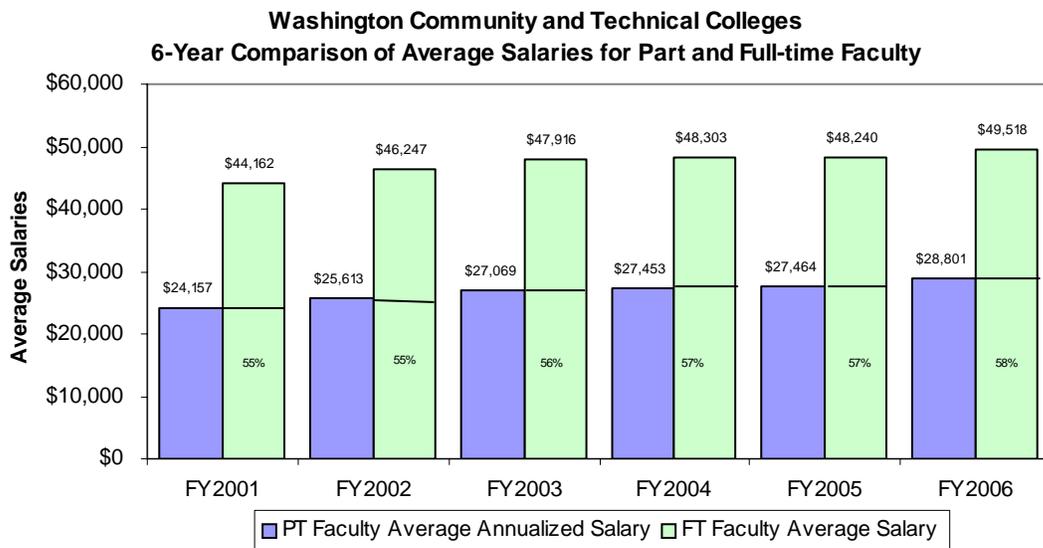
Uniform access to contemporary library resources throughout the two-year college system will improve student employability, improve student ability to transfer to four year degree programs, and enhance seamlessness in Washington higher education.

## **PART-TIME FACULTY SALARY IMPROVEMENT AND SALARY STRUCTURE STUDY - \$12.1 MILLION**

### **Background**

Washington community and technical colleges – similar to trends nationally – rely upon part-time faculty as an integral part of total instructional effort. Part-time faculty allow colleges the flexibility to offer courses outside the expertise of full-time faculty, to employ people who are currently working in the field, to offer more evening and off-campus courses, and to adjust course offerings quickly in response to student and employer demand or to changes in funding.

SBCTC has sought legislative funding each biennium to improve pay levels for part-time faculty since the 1997-99 biennial budget request. Legislative appropriations over the last five biennia have increased average part-time faculty salaries in relation to pay levels for average full-time faculty<sup>1</sup> from 43 percent of average full-time faculty salaries in 1997-98 to approximately 58 percent in 2005-06. Although this progress is encouraging, part-time faculty are still compensated at levels far below full-time faculty.



Source: Community & Technical College part-time faculty salary survey and IPEDS average faculty salaries

<sup>1</sup> In order to compare part-time to full-time faculty pay levels, the part-time pay level is represented as an amount paid to a part-time instructor who is assigned a full-time teaching load. It is important to note that the resulting average salary does not represent actual pay levels for part-time faculty, because by definition they do not teach a full-time credit load.

Salaries for full-time faculty and administrators also need attention. Rather than pursuing salary improvement funding for these groups at this time, the SBCTC proposes to contract for a study of the salaries of CTC faculty and administrators to build on the work begun by Washington Learns consultants. These consultants noted in the draft report, “Making the Grade”, that faculty salaries in Washington are next to last when compared to the other Global Challenge States (a set of states which are noteworthy for their global competitiveness, used by the consultants for a number of comparisons). The contracted study would look at the salary structures of the Global Challenge States (GCS), as well as comparing the salary structures of Washington’s CTCs, K-12, and the 4-year public institutions.

**Investment**

This decision package requests \$11.9 million in state funds to continue to improve part-time faculty salaries. Also included in this request is \$200,000 for a contracted study to compare salaries of CTC faculty and administrators to those in the GCS, and the salary structures of Washington CTCs, K-12 and the 4-year institutions.

**Outcome**

Funding part-time salary improvement at this level would increase the system’s average part-time faculty salaries to 62 percent of the average FY2006 full-time faculty pay levels. Information from the salary study will improve policymakers’ understanding of the differences in salary structures across the various Washington educational sectors. Policymakers will also achieve a deeper level of understanding about the effect of Washington’s faculty salaries (in comparison to the GCS) on Washington.

<b>General Fund State (GFS)</b>	
<b>(001-1)</b>	
<b>FY2007-08</b>	\$ 23,067,000
<b>FY2008-09</b>	<u>\$ 21,227,000</u>
<b>Total Request</b>	<b>\$ 44,294,000</b>

