



Applied Baccalaureate Degree Program
in IT Networking -
System Administration

Program Proposal

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FORM C

**COVER SHEET
NEW DEGREE PROGRAM PROPOSAL**

Program Information

Institution Name: Yakima Valley Community College

Degree Name: Bachelor of Applied Science in IT Networking –
System Administration CIP Code: 11.1001

Name(s) of existing technical associate degree(s) that will serve as the foundation for this program:

Degree: IT General Degree CIP Code: 11.0301 Year Began: 2000

Degree: Network Administrator CIP Code: 11.0901 Year Began: 2000

Degree: General Support Specialist CIP Code: 11.1006 Year Began: 2005

Planned Implementation Date (i.e. Fall 2014): Fall 2015

Proposal Criteria: *Please respond to all eight (8) areas listed in proposal criteria FORM D.
Page Limit 30 pages*

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Chief Academic Officer

April 30, 2015
Date

Introduction

Yakima Valley Community College (YVCC) proposes a two-year Bachelor of Applied Science in IT Networking with emphasis on System Administration (BASIT) as a baccalaureate path way for:

- Place-bound working adults who hold an Associate of Applied Science degree in information technology (AAS-IT) from any accredited community or technical college and desire to obtain an applied baccalaureate degree in IT Networking - System Administration
- Individuals working on an AAS-IT degree who desire to continue on to a four-year institution, but because of economic, working, and or personal circumstances are place-bound
- Place-bound working adults who hold a Certificate in Information Technology and now have the need and desire to pursue a higher educational degree
- Any place-bound working adults who hold an AA transfer degree and have decided that a BASIT would be the best career path for them

As YVCC expands its baccalaureate degree offerings, the goal is to meet both employer and community's demand. Furthermore, these degrees are design to realistically provide a viable pathway to those desiring to further their education, but who are place-bound.

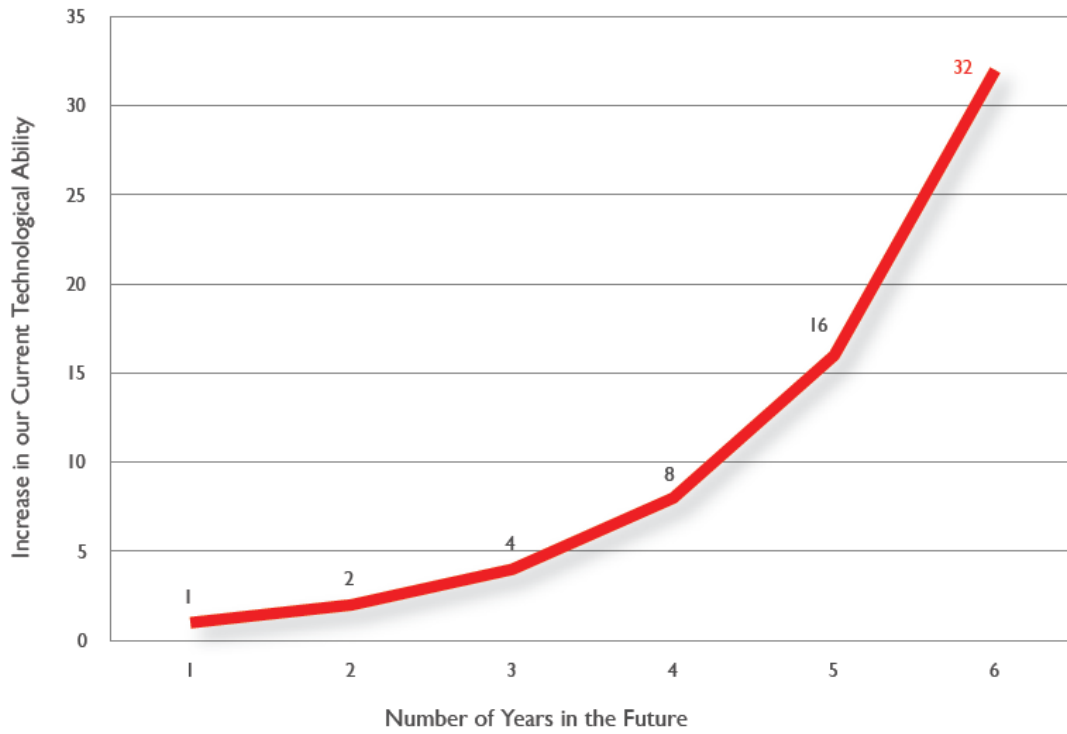
Designing a bachelor of applied science degree in information technology offers some challenges unique and inherent to the field of information technology. These challenges can be summarized within the following areas:

- Flexibility
- Sustainability
- Relevance

A Bachelor of Applied Science in IT Networking with emphasis on System Administration regardless of its “niche/specialization” has to be designed to meet the aforementioned challenges. The axiom about technology is “it will change”. In 2012 The Emerging Future, LLC., company issued a paper titled “Estimating the Speed of Exponential Technological Advancement.”¹ In this document the authors predict that technology advancement for a five year period beginning in 2012 would be 32 times more advanced than in 2012. In ten years from 2012 technology would be 1,024 times more advanced.

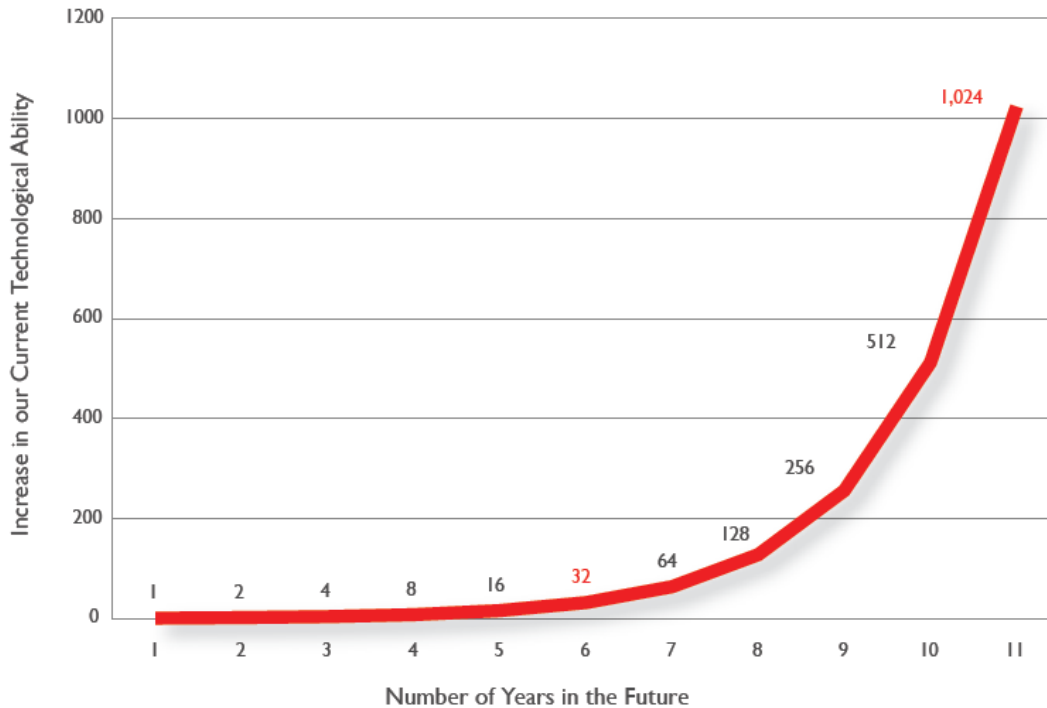
Human Intuitive Perspective of Technological Advancement in Five Years

Thirty Two Times More Advanced



Human Intuitive Perspective of Technological Advancement in Ten Years

A Thousand Times More Advanced



YVCC proposes a bachelor's degree that will be flexible, sustainable, and relevant.

The curriculum has been designed taking into consideration industry's feedback. More importantly, YVCC has in place a systematic methodology to evaluate and change curriculum to meet these three challenges.

This degree proposal will address the following areas:

- Baccalaureate rigor reflected in learning outcomes, program evaluation criteria and process, course preparation needed by students transferring with a technical associate degree, general education components, and course work needed at junior and senior levels in the BASIT program
- Qualified faculty to deliver the course work required for a successful learning outcome
- Selective admissions process and methods assure that the program serves as diverse a population as possible
- Appropriate student services plan including a description of financial aid services and academic advising for students admitted into the program
- Commitment to build and sustain a high quality program including types of funds to be used to support the program, projected program expenses, appropriate facilities to be used, equipment, technology, and instructional resources needed for the program, and the college's ability to sustain the program over time

- Rationale for not seeking program specific accreditation
- Pathway options beyond baccalaureate degree and opportunities for graduates to continue their education onto a graduate (Master's) degree program
- External expert evaluation of program. The college selected two external experts to review the program

Criteria 1: Curriculum Demonstrates Baccalaureate Level Rigor

The Bachelor of Applied Science in IT Networking – System Administrator (BASIT) was developed by a team of experienced information technology faculty members who also have significant amount of relevant work experience in many of the related subjects.

In developing the curriculum for this program, the team reviewed similar programs from Olympic College and Green River Community College. The faculty also considered feedback received from the business community and specifically the local IT community.

The BASIT curriculum will give students a strong practical foundation in the technical aspect of network system administration. This curriculum also takes advantage of selected 300/400 level classes from our current Bachelor of Applied Science in Business Management (BASM). The result is, as one of our employer representatives put it, a “well-rounded education”. Students will be cognizant of the pervasiveness of IT/IS technology in the business cycle and the impact that their work and knowledge could potentially have in whether or not an organization will be able to meet its goals and continue to compete in the market place.

Program Learning Outcomes

The Bachelor of Applied Science in IT Networking – System Administration program will broaden and deepen students’ foundational knowledge, adding general education, theory, advanced technical and professional skills, and integrative collaborating learning. Upon successful completion of the program, students will be able to:

- Understand the place of information technology in an organization environment including alignment with organizational goals and objectives
- Analyze and develop recommendations for information systems administration in accordance with best practices and standards, legal and regulatory requirements, and ethical and social considerations including respect for privacy and intellectual property
- Develop successful and respectful relationships with clients, coworkers, managers, and stakeholders, applying a wide range of adaptive and effective communication skills to convey complex technical concepts
- Develop solutions for networking and security system administration balancing business concerns, technical issues, and security
- Maintain network and data systems in accordance with desired organizational goals and objectives, while performing, analyzing, testing, and recommending solutions based on best practices
- Analyze, assess, identify, and define effective problem-solving techniques of network and data systems and play a leading role in the implementation of those results

Program Evaluation Criteria and Process

The Bachelor of Applied Science in IT Networking – System Administration program (BASIT) evaluation process aligns with existing program assessment practices at YVCC and is designed to respond to the following standards:

- The program remains aligned with the college’s mission and core themes
- The program meets the expectations of the institutions to which our students transfer and the needs of businesses, industries, and organizations who employ our students
- Program outcomes are appropriate, clear, and measurable
- Course outcomes support and align with program outcomes. Course evaluation will focus on student work linked to course objectives

- Faculty members are engaged in assessment activities leading to improvements in teaching and learning
- Human Resources, technology, and institutional support are sufficient to ensure the successful execution of the program
- Student admissions and advising are effective in ensuring student preparation and success
- Program graduates are well prepared for entry into and success in graduate-level programs
- Program graduates are successful in securing and retaining employment, and that these jobs provide living-wage incomes commensurate with the prevailing wages for comparable degrees
- Program graduates are prepared to earn certification in a variety of IT disciplines
- The program is fiscally efficient and self-supporting

Program Evaluation Processes

Program evaluation involves faculty and staff, instructional leadership which includes the Vice President of Instruction and Student Services, the Dean of Workforce Education, the IT Advisory Committee, and the Office of Institutional Effectiveness (the institutional research office of the College). Program evaluation addresses program philosophy, mission and goals, enrollment, staffing, student learning outcomes assessment, program outcomes, and workforce demands of employers.

Program outcomes as well as program courses – including scope and sequence – have been reviewed by the IT Advisory Committee members and a December 8, 2014 Focus Group meeting of industry representatives (Appendix D). The Advisory Committee consists of local leaders from the business community. They will continue to be consulted on an ongoing basis to ensure the program is consistent with the needs of the local and regional businesses and industries.

Advisory members have expressed overwhelming support for the BASIT program, recognizing the need in the Yakima Valley for a more educated workforce. In conjunction with the involvement of the Advisory Committee, the IT Department will continue to reach out to other industry representatives to ensure that the courses and program design are relevant to the current and future needs of their respective industries.

Course Evaluation

Each academic department and degree program at YVCC is responsible for developing and evaluating its curriculum, and developing a coordinated, sequential series of courses which students may achieve increasing competencies and knowledge in their chosen field of study.

Because this program is new and first in its class and its first cohort is not scheduled to graduate until June 2017, data concerning post-graduation success will not be available for several years. However, program and course evaluations will rely heavily on close monitoring of those data that can be obtained in real time and more importantly, on student feedback and performance.

It is the policy of YVCC for the Workforce Education division curriculum committee to review and approve BASIT courses prior to being offered to the general student population. Program faculty and administration will work closely with the program's Advisory Committee to track program performance on a course-by-course basis using existing tools that have been developed for that purpose.

These tools include:

- Student evaluations – Student evaluations will be conducted in all courses during each quarter of the first three years. These are designed to provide information concerning effectiveness of the pedagogical approach, the usefulness of the course content, and the students' perspective on how well they were prepared for the courses

- Administrative observations will be conducted in each course to assess the appropriateness and effectiveness of instructional design and delivery. All courses will be reviewed during the first year, after which the courses will be reviewed every three years on a rotating basis
- Curriculum Maintenance – Courses in the BASIT program will be reviewed and updated on a three-year rotating cycle, with one third of the program courses thoroughly reviewed each year. The program Advisory Committee will provide advice and guidance regarding the industry standards and requirements for positions requiring a bachelor’s degree
- Faculty Team Retreat – To maximize student success, the faculty will actively collaborate to ensure concepts are being reinforced and outcomes are being met. At the end of the year, faculty will meet to assess the first year’s progress of course and program outcomes. In addition, curriculum review will be scheduled for the upcoming year

The program administration will work with the program faculty, IT Advisory Committee, and other appropriate college personnel to resolve any issues that may arise during implementation to ensure the continued improvement, flexibility, sustainability, and relevancy of the program.

Course Preparation Needed by Students Transferring with a Technical Associates Degree

The goal of this program is to provide a realistic pathway to a baccalaureate degree for those place-bound working adults and underserved individuals in our communities.

This program is designed for:

- Place-bound working adults who hold an Associate of Applied Science degree in information technology (AAS-IT) from any accredited community or technical college and desire to obtain an applied baccalaureate degree in information technology with emphasis on system administration
- Individuals working on an AAS-IT degree who desire to continue on to a four-year institution, but because of economic, working, and or personal circumstances are place bound
- Place-bound working adults who hold a Certificate in Information Technology and may pursue a bachelor’s degree without having to travel or quit their current employment
- Any place-bound working adults who hold an AA transfer degree and have decided an applied baccalaureate degree in information technology with emphasis on system administration would be the best educational path for them

Regardless of the individual and specific circumstances of each student admitted to the BASIT program, all BASIT students will need to complete three main curriculum components. Completion of these three main curriculum components will give the student the minimum requirement of 180 college level credits to be eligible to receive a bachelor’s degree from YVCC.

These three components are:

- Basic IT core credit courses or their equivalents
- 60 credits of general education (Gen Ed), and
- 300/400 upper level course work

The list of recommended IT core credit courses or their equivalents are presented in Table I. These courses may be completed at the AAS level and/or during the BASIT program.

These recommended IT core credit courses or their equivalents provide students the concepts of theory, history, software, Internet, networking, hardware, programming, and computation which are a solid foundation in the IT discipline. To ensure student success in this field, they must earn a minimum GPA of 2.0 on each course before they may begin taking 300/400 upper division IT courses.

Table I		
Course Preparation Needed Before Taking 300/400 IT Courses		
Course No	Course Description	Credits
IT 101	Introduction to Information Technology	5
IT 103	Computer Operating Systems	5
IT 110	Computer Programming Introduction	5
IT 115	Database Introduction	2
IT 140	Network Fundamentals	5
IT 145	Advanced Microsoft Windows	5
IT 146	Windows Server	5
IT 149	Windows PowerShell Scripting	2
IT 225	Database Advanced	4
Total IT Core Course Credits		38

General Education Components

Table II lists a sample of recommended general education credits. These credits will be earned at the associate degree and/or applied bachelor's degree level.

Table II		
General Education Courses		
Course No	Course Description	Credits
Communication Skills (10 credits)		
ENGL& 101	English Composition I	5
CMST& 210	Interpersonal Communication	5
Quantitative/Symbolic Reasoning Skills (5 credits)		
MATH 146	Introduction to Statistics	5
Humanities (10 credits)		
HUM 120	Critical Thinking	5
PHIL 215	Introduction to Ethics	5
Social Sciences (10 credits)		
ECON& 201	Micro Economics	5
ECON& 202	Macro Economics	5
Natural Sciences (10 credits)		
BIOL 105	Biology for Non-majors with Lab	5
NUTR 101	Human Nutrition	5
Other General Education (15 credits)		
PHIL& 120	Introduction to Logic	5
POLS 370	Political Economy	5
YVCC	Current Distribution List	5
Total General Education Credits		60

During the first submission of this proposal YVCC's Arts and Sciences Division, which is charged with the responsibility of creating courses with general education distribution, created PHIL 315 Professional

Ethics, a 300 level course with humanities distribution which would become part of YVCC's 300/400 inventory of general education courses.

300/400 Level Courses

Table III lists 58 credits of 300/400 level courses needed to complete the BASIT program.

Table III		
300/400 Level Courses to Complete BASIT Program		
Course No	Course Description	Credits
BASIT 301	Windows Server Administration	5
BASIT 302	Supporting Windows Clients	5
BASIT 311	Linux Operation & Administration	5
BASIT 321	Exchange Server Administration	5
BASIT 331	SQL Server Administration	5
BASIT 341	Advanced Powershell Scripting	3
BASIT 401	Advanced Windows Server Services	5
BASIT 421	Virtualization and Data Centers	5
BASIT 431	Querying SQL Servers	5
BASIT 470	Internship	5
BASM 410	Project Management	5
BASM 415	Information Systems Management	5
	Total BASIT Credits	58

YVCC designed this program with two different type of incoming students in mind. One pathway will be for those with and AAS-IT degree and the other pathway for those with an AA transfer degree.

Table IV illustrates the junior and senior year proposed course work for an individual enrolled in the BASIT program holding an AAS-IT.

Table IV		
Junior & Senior Years Course Work for AAS-IT Student		
Course No	Course Description	Credits
Junior Year Course Work		
NUTR 101	Human Nutrition	5
YVCC	Current Distribution List	5
HUM 120	Critical Thinking	5
MATH 146	Introduction to Statistics	5
BASIT 311	Linux Operation & Administration	5
ENGL& 101	English Composition I	5
PHIL& 120	Introduction to Logic	5
POLS 370	Political Economy	5
BASIT 421	Virtualization and Data Centers	5
BIOL 105	Biology for Non-majors with Lab	5
BASIT 301	Windows Server Administration	5
BASIT 331	SQL Server Administration	5
	Junior Year Total Credits	60
Senior Year Course Work		
PHIL 215	Introduction to Ethics	5
BASIT 401	Advanced Windows Server Services	5
BASIT 341	Advanced Powershell Scripting	3
ECON& 201	Micro Economics	5
BASIT 302	Supporting Windows Clients	5
CMST& 210	Interpersonal Communication	5
ECON& 202	Macro Economics	5
BASIT 321	Exchange Server Administration	5
BASIT 431	Querying SQL Servers	5
	Senior Year Total Credits	43
	Junior and Senior Years Total Credits	103

Course Preparation Needed by Students Transferring with an Associate's Degree other than an AAS-IT Degree

As stated above, the goal of this program is to provide a realistic pathway to a baccalaureate degree for those place-bound working adults and underserved individuals in our communities.

The following section describes the pathway for those place-bound working adults who would hold an associate's degree in a different field of study. Some of these students may be working in the IT industry and have decided that a bachelor's degree in IT is their best option. These individuals often enter the IT field based on practical experience, on the job training, and or personal IT knowledge without formal education and or training. Others may be considering a career change and getting formal IT education might be their best option.

The pathway for these students would vary from student to student based on transcript information, but they will not have to complete an AAS-IT degree to complete the BAS-IT program.

Regardless of individual and specific circumstances, all BASIT students will need to complete three main curriculum components. Completion of these three main curriculum components will help students meet the minimum requirement of 180 college level credits to be eligible to receive a bachelor's degree from YVCC.

These three components are:

- Basic IT core credit courses or their equivalents Table I above
- 60 credits of general education (Gen Ed), and
- 300/400 upper level course work Table III above

The aforementioned component credits can be met during the junior and senior years of the BASIT program as illustrated in Table V below.

The list of recommended IT core credit courses or their equivalents are listed in Table I above. YVCC expects most of these students would have to take all or most of the 38 credits listed on Table I. Most of these students would be taking these IT core credits during the first two quarters of their junior year in combination with at least four 300/400 level courses as shown in Table V below.

Students holding an associate's degree will have completed some credits that would meet the general education requirement of 60 credits. Any missing general education requirements will have to be completed before receiving a BAS-IT degree from YVCC.

Table V illustrates the junior and senior year proposed course work for an individual enrolled in the BASIT program holding an AA transfer degree.

Table V		
Junior & Senior Years Course Work for AA DTA Student or Other		
Course No	Course Description	Credits
Junior Year Course Work		
IT 101	Introduction to Information Technology	5
IT 103	Computer Operating Systems	5
IT 140	Network Fundamentals	5
IT 146	Windows Server	5
BASIT 311	Linux Operation & Administration	5
IT 115	Database Introduction	2
IT 149	Windows PowerShell Scripting	2
IT 110	Computer Programming Introduction	5
IT 225	Database Advanced	4
BASIT 421	Virtualization and Data Centers	5
BASIT 301	Windows Server Administration	5
BASIT 331	SQL Server Administration	5
Junior Year Total Credits		53
Senior Year Course Work		
IT 145	Advanced Microsoft Windows	5
BASIT 401	Advanced Server Services	5
BASIT 341	Advanced Powershell Scripting	3
BASM 410	Project Management	5
BASIT 302	Windows Client Support	5
BASM 415	Information Systems Management	5
BASIT 321	Exchange Server Administration	5
BASIT 431	Querying SQL Servers	5
BASIT 470	Internship	5
Senior Year Total Credits		43
Junior and Senior Years Total Credits		96

Criteria 2: Qualified Faculty

YVCC currently employs the following faculty (see below) to support the program. Faculty has extensive industry and instruction experience which will serve the students well.

Faculty Name	Credentials	Status	Qualified to Teach
Apperson, Stefan	MBA, BS in Business	Full Time	BASIT 301, BASIT 311
Batali, Michael	M.A: Teaching, Learning and Teacher Education: Instructional Technology Specialization; BS: Business Education, M.Ed: Business and Marketing Education;	Full Time	BASIT 431, BASIT 302, BASIT 311, BASIT 331
Dalton, David	MA in Administrative Management and Leadership, BS in Ministerial Studies	Full Time	BASIT 321, BASIT 331, BASIT 341, BASIT 401, BASIT 421, BASIT 301, BASIT 302
Panattoni, Dale	MS: Information Technology; BS: Computer Information Systems; previously MCSE/2000 Microsoft Certified Systems Engineer Win 2000; previously MCSE/NT Windows NT: CCNA Cisco Certified Network Associate; CompTIA A+	Part Time	BASIT 301, BASIT 302, BASIT 321, BASIT 331, BASIT 401, BASIT 421

All Yakima Valley Community College Instructors in the IT Program meet the Washington Administrative Code requirements regarding advanced degrees. In addition, many of the instructors have industry and/or field experience in the disciplines they will be teaching (Appendix B). As the college recruits qualified faculty for this program, the college will seek to recruit PhD educated faculty. Previous position recruitments have revealed that for YVCC, attracting PhD level faculty in Information Technology is very challenging. The college will also look for opportunities to support existing IT faculty who decide to pursue additional advanced degrees.

The recommended general education courses are delivered by Arts and Sciences Division instructors. Depending on work load, course availability, and course scheduling instructors, teaching assignments will vary by year.

Criteria 3: Selective Admissions Policy

Admission

In the first year of the BASIT program the college plans to accept 16 students. It is anticipated that 8 students will be full-time and 8 students part-time taking one or two classes each quarter (please see Table VIII for five year projection program enrollment). Application forms will be available on the college website, and students will be able to submit applications electronically. Based on the content of the 300/400 level courses, feedback received from the Advisory Committee, Focus Group meetings, and former students, the BASIT program will permit enrollment of non-degree seeking students on a space-available basis.

Space availability for non-degree seeking students will be reduced as the surplus space is utilized to accommodate program growth. As shown in Table VIII, the program expects to have a total of 36 students by the second year. This growth will reduced the space available for of non-degree seeking students.

Selection for Admission

Two exempt staff members will play specific and distinct roles in the admission process. These include the Program Coordinator for the BASIT program and the Director of Applied Baccalaureate Degree Programs.

The program coordinator will serve as the point of contact for students and prospective students. He will create and managed a pool of applicants eligible for admission into the program. The program coordinator will receive admission applications and supporting documents. He will conduct the initial screening process and credential evaluation. Based on the screening and credential evaluation results, the program coordinator will identify prospective students who have met the minimum requirements for admission and placed them into the pool of applicants.

The Director of Applied Baccalaureate Degree Programs is the administrator responsible for the integrity and performance of the applied baccalaureate degree programs being offered at YVCC. The Director will work with program faculty to make final admission decisions. The Director, working with faculty members from the BASIT program will function as an admission committee. The committee will evaluate the applications of those who meet the minimum requirements for admission in order to select those most likely to succeed in the program.

To be considered for admission into the BASIT program, all applicants must complete and submit the basic application packet which consists of the following:

- YVCC application
- BASIT application
- Official transcripts from previous colleges and or universities. If 90 or more college level credits have been earned from a regionally accredited institution but no degree conferred, the applicant will meet with the Coordinator and Director to determine eligibility and course evaluation
- A minimum cumulative grade point average of 2.5
- A personal essay/statement to include, but not limited to, previous experience, career goals, and application of the degree to career advancement. Additional topics could include personal or economic hardships or barriers applicant has had to overcome, and/or an accomplishment they are proud of
- Resume
- Two letters of recommendation from persons who know applicant's work ethic (i.e., a supervisor or instructor). These letters should address applicant's contributions to their work place, and how applicant would benefit from completing the BASIT Program

Final Admission Decision

Anticipating that there will be more applicants than the BASIT program can serve, final admission into the program will be merit based.

- Applicants will be ranked according to cumulative GPA
- Personal essays will be reviewed for evidence that the applicant has demonstrated an ability to perform well as a student and/or as an employee, despite personal or economic challenges
- Letters of recommendation will be reviewed for evidence of strong work ethic and leadership potential

- Among equally qualified applicants, admission will be on a first-come, first-served basis

Orientation

All BAS students will be required to attend a non-credit orientation course. In this non-credit 4 hour course, faculty and staff will acquaint students with student services available to them while attending YVCC. Topics will include:

- Overview of BAS Programs
- Meet BASIT faculty & staff
- Meet & greet other BAS students entering the program(s)
- Training on the Canvas course management system, Panopto lecture capture software, and how to access lectures, course materials, discussion boards, grade book, tests, etc
- Overview of YVCC's student services and how to access those services
- Visit computer and testing labs
- Introduction to on-site and online tutoring options for the BAS courses
- Access library materials available through an offsite computer, as well as onsite library options

Explain efforts that will be used to assure that the program serves as diverse population as possible.

YVCC has a diverse population of students. In the 2013-14 school year 61% of YVCC students were of color (includes Hispanic, Native American, Asian/Pacific Islander, African American, and other of color) and 64% were female. Marketing for BASIT prospective students will target this diverse student population, as well as currently employed individuals in the local community with Associate of Applied Science degrees. The college will reach out to past students, employers in the community that have expressed support of the program, and develop community outreach activities to market and promote the program.

YVCC is also very proactive in working with the school districts within its service area to promote new and existing programs to their high school students. The Director of Baccalaureate Programs works closely with the Admissions Outreach & Retention Coordinator to plan and attend outreach programs at various school districts and other functions that may be conducive to the promotion of the BAS programs.

Criteria 4: Appropriate Student Services Plan

Yakima Valley Community College operates two campuses located in the cities of Yakima and Grandview. The Yakima Campus serves over 8,000 students per year and on average, the Grandview Campus, located 40 miles southeast from Yakima serves 1,500 students per year.

The Student Services described below are available to all students of the college. For most of these services, the college provides facilities at both campuses.

Academic Advising

The full-time IT instructors provide academic advising for all AAS-IT degrees and certificates. Academic advising for the BASIT program will be provided by the same team of instructors with the support and assistance of the BASIT Program Coordinator. The Counseling/Advising Office also provides academic advising at a lesser level and its staff will usually refer students to the appropriate department for more targeted guidance.

Disability Support Services (DSS)

YVCC is committed to providing access for all students, to instructional and technological quality, and the support services which will ensure students success. YVCC allocates budgetary support for these services annually. During annual mid-year budget review processes and in response to unanticipated increases in demand for services, YVCC allocates additional funds as needed to fully meet this obligation.

As part of this commitment, DSS provides appropriate accommodations to individual students, access to adaptive technology, and barrier-free facilities. Available accommodations include, but are not limited to: Alternative exam format/time, taped texts/lectures, ASL interpreters, note takers, accessible parking, and registration assistance. DSS facilitators work with instructors, departments, and the students to ensure accommodation needs are met.

Financial Aid

The Financial Aid Office prepares and disburses federal, state, and institutional aid for all YVCC students. All students admitted to the BASIT program will be able to apply for financial aid. They will also be eligible to apply for work-study employment when such positions become available.

Veteran's Administration Programs

YVCC's Veteran's Program provides outstanding veteran support services and encouragement to our student Veterans to ensure program completion. The Veterans Affairs Office assists all eligible veterans, reservists, dependents, and VA chapter 31 students. It is anticipated that the BASIT Degree will be eligible for VA-approved funds.

Tutoring

All YVCC students qualify for free tutoring services for Accounting, American Sign Language, Anthropology, Biology, Chemistry, Economics, Mathematics, Physics, Spanish and other courses as needed.

eTutoring

YVCC has partnered with the State Board of Community and Technical Colleges and the Connecticut Distance Learning Consortium to provide online tutoring assistance to students through eTutoring.org. All YVCC students have access to eTutoring's free online tutoring services in the following areas: Accounting, Anatomy & Physiology, Biology, Chemistry, Economics, Math, Medical Terminology, MS Office 2007, Outpatient Medical Coding, Pathophysiology and Pharmacology, Physics, Spanish, Statistics, Web Development, and Writing.

Math Center

Separate from the main tutoring center, YVCC has a "drop-in" Mathematics Center that is open 7:30am-9:00pm Monday-Thursday and 7:30am-3pm on Friday. During these hours there is a mathematics instructor who can assist students with any questions as well as large tables for group study, textbooks and student solution manuals and anything else a student taking a mathematics course might need.

Writing Center

The Writing Center is a resource for YVCC students. Its primary purpose is to guide students to become better writers in a college setting. The Writing Center is open Mondays & Tuesdays from 8:00am-7:00pm, Wednesdays 8:00am-3:00pm, Thursdays 8:00am-5:00pm, and Fridays 8:00am-3:00pm. If students can't get to the writing center, they can give feedback online through their Online Consultations link.

eLearning Support for CANVAS or its Successor

Students will be introduced to CANVAS through the New Student Orientation for bachelor program students. CANVAS technical support is provided on an ongoing basis. YVCC faculty are equipped to answer basic questions regarding CANVAS. Additional support can be accessed through the eLearning Coordinator who is available by phone, email, or in person to support student and faculty needs.

Computer Labs

Students will have access to computer labs located at the Technology Complex where the BASIT classes will be offered. In addition, in the Deccio building there is a full-time student lab with 32 workstations where students can go to use the internet, type up assignments or fulfill any other school related computer needs. There is also a dedicated and monitored 36 work station lab where students go to take proctored exams. Four other computer rooms connected to the “computer monitoring HUB” can be used as overflow for proctored exams on busy weeks such as finals or when the main computer lab is filled to capacity.

BAS-IT courses will be taught in a computer equipped classroom dedicated to advanced networking instruction. The dedicated networking classroom will be available for students in need of additional classroom time to work on projects and assignments. The networking classroom will be available during the evenings before and after classes and additional evenings as needed.

Internet Access

The college provides free Wi-Fi campus wide, which covers every building on campus as well as most outdoor spaces.

Library and Media Services

The mission statement for the Library and Media Services reads:

In carrying out the Mission of Yakima Valley Community College, the mission of the Library and Media Services is to meet the information needs of students and employees by providing access to information, retrieval services, and technology in a dynamic user-friendly environment.

To fulfill its mission, the Library and Media Services acquires and integrates resources in a variety of formats, utilizing technologies enabling broad access to information in support of the college curriculum.

The library provides multiple services for students, faculty and staff, such as information literacy instruction, reference service, circulation services, course reserves, inter-library loan, in-library student technology support, and copyright guidance. Library instruction, copyright information, reference service and collection development are conducted by professional faculty reference librarians. Reference service is available 24/7 through a state and national cooperative. Library services are designed to foster students’ ability to think critically about their information needs and successfully apply information tools and resources to meet these needs.

The collections consist of both print and online resources. The monograph collection includes over 45,000 titles, some of which are e-Books. With the help of a Title V Grant, the e-Book collection is expected to expand over the next few years. The library subscribes to several major full-text periodical databases with access to thousands of titles in information technology. Using the ProQuest database, students can search more than 750 business periodicals and newspapers with a trade or industry focus. It provides the latest industry news, product and competitive information, marketing trends, and a wide variety of other topics. It also contains publications on every major industry, including information technology, finance, insurance, transportation, construction, and many more.

Media Services provides instructional equipment and physical and virtual resources, as well as other services to support teaching and enhance student learning leading to success. Media Services also manages a laptop computer loaner program where students can check-out a laptop computer for a period of time at no additional charge.

Criteria 5: Commitment to Build and Sustain a High Quality Program

(1) Types of funds to be used to support the program

The program is designed to be self-sustaining. The planning and start-up costs of the program are allocated from existing operating funds of the college. During the first year of program implementation, expenses are expected to exceed tuition revenue, and this difference will be allocated from existing operating funds of the college. As indicated in the revenue and expense tables below, the BASIT program is anticipated to be self-sustaining by year three.

The proposed BASIT program will be the second BAS program offered by YVCC. Consequently some of the start-up costs of Director and Coordinator's salary are being allocated equally between the two BAS programs.

Table VI shows the budgeted start-up costs for the BASIT program.

Table VI Budgeted Start-Up costs	
	FY 2014-15
Director BAS Programs	\$39,775
BAS Programs Coordinator	28,163
Curriculum Development	15,216
Marketing	5,000
External Review (2@ \$3,500)	7,000
Travel	892
Total	\$96,046

(2) Projected program expenses

BAS projected fixed costs are allocated equally among all BAS programs. Table VII shows projected program expenses for the first five years of operation starting Fall Quarter 2015.

**Table VII
Five Year Projected Program Expenses**

	Year 1	Year 2	Year 3	Year 4	Year 5
	2015-16	2016-17	2017-18	2018-19	2019-20
Director of Applied Baccalaureate Programs	\$32,959	\$33,552	\$33,552	\$33,552	\$33,552
FT Instructor	\$60,165	\$61,248	\$61,248	\$61,248	\$61,248
PT Instructors	\$12,680	\$28,530	\$34,236	\$36,138	\$36,138
Coordinator of BASIT Program	\$44,629	\$45,432	\$45,432	\$45,432	\$45,432
Curriculum Development	\$3,804	\$6,340	\$6,340	\$6,340	\$6,340
Subtotal Salaries	\$154,237	\$175,103	\$180,809	\$182,711	\$182,711
Benefits	\$53,983	\$61,286	\$63,283	\$63,949	\$63,949
Subtotal Personnel	\$208,220	\$236,388	\$244,092	\$246,659	\$246,659
Equipment	\$5,000	\$2,000	\$2,000	\$2,000	\$2,000
Marketing	\$5,000	\$5,000	TBD	TBD	TBD
Goods/Services	\$6,000	\$3,000	\$3,000	\$3,000	\$3,000
Library	\$5,000	\$5,000	\$1,000	\$1,000	\$1,000
Travel	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Total Expenditures	\$232,220	\$254,388	\$253,092	\$255,659	\$255,659

These projections assume a 1.8% increase in year two for the Coordinator and Director of Applied Baccalaureate Programs.

Explanation of Expenses

- The Director of Applied Baccalaureate Programs is responsible for doing research for new programs, gaining approval for and launching the implementation of any new applied baccalaureate degree programs, the management of all BAS programs. The salary for this position will be allocated proportionately across the budgets of each BAS program
- The Coordinator is the main point of contact for prospective and current students of the BASIT program. This position will assist new students with the admission process, guide students to available student services, monitor student progress, and assist in student advising as needed.
- Instructional workload will be shared between full-time and part-time instructors as needed to provide schedule depth and flexibility
- The program faculty will conduct an extensive review of 1/3 of the curriculum each year
- New equipment in the form of computers and printers for program faculty and staff
- Marketing funds will allow for the purchase of radio, print or other advertising media to inform the community about the new BAS opportunities being offered by YVCC. The effectiveness and use of the marketing budget will be evaluated and adjusted every two years based on the needs of the programs
- In addition to printing and other normal office supplies, professional development conference fees will be budgeted in goods and services
- \$5,000 has been set aside for the purchase of an additional library database and other resources during years one and two,
- Travel supports in-district contact with businesses and organizations, as well as current and prospective students. Additionally, it supports out-of-district travel for conferences and professional development for the Director of the BAS programs, the Coordinator of the BASIT program, and the BASIT program faculty
- Goods & Services support professional development for faculty. These funds are intended to supplement Perkins Professional Development funds and Exceptional Faculty Award funds for which these faculty members are also eligible

The College must update software as necessary to remain up-to-date with industry software standards. However, the College does not anticipate a significant amount of funds required to continue to remain in compliance with industry standards because several leading software companies either donate and or allow education and training institutions to use their software for minimal fees.

Program Sustainability

Table VIII shows five-year program enrollment projections.

Table VIII					
Five Year Projection Program Enrollment					
	Year 1	Year 2	Year 3	Year 4	Year 5
	2015-16	2016-17	2017-18	2018-19	2019-20
Year 1 FT	8	7			
Year 1 PT	8	7	6		
Year 2 FT		11	10		
Year 2 PT		11	10	9	
Year 3 FT			15	13	
Year 3 PT			15	13	12
Year 4 FT				20	18
Year 4 PT				20	18
Year 5 FT					20
Year 5 PT					20
HC- FT/Year	8	18	25	33	38
HC- PT/Year	8	18	31	42	50
Total HC/Year	16	36	56	75	88

This five year enrollment projection assumes a 10% attrition rate per year. This plan reflects 16 students admitted Year 1 with an increase enrollment of up to 40 new students in Years 4 and 5. Based on the College's history, new enrollment will be 50% full-time and 50% part-time with part-time students taking one or two classes per quarter. These projections do not include non-seeking degree students who might come from industry wishing to update some of their skills by taking one or two courses.

These enrollment projections reflect a 90% retention rate. This very high retention rate is consistent with the reported retention rates of applied baccalaureate programs currently offered at other CTC's in Washington State, and reflect the selective admission process, the intense student support, the strong link to employer demand and the expected high motivation of the enrolled students.

Based on the above enrollment projections and the tuition rates authorized by the SBCTC, Table IX shows operating revenue projections for the first five years of the program. Tuition rates are specific to BAS programs and are higher than the tuition rates currently published on the YVCC web site.

Table IX Five Year Projected Program Operating Revenue					
(includes local fees)					
	Year 1	Year 2*	Year 3	Year 4*	Year 5
	2015-16	2016-17	2017-18	2018-19	2018-19
Annual Operating Rev. @ 15 Credits*	\$ 60,558	\$ 133,146	\$ 207,116	\$ 277,387	\$ 325,467
Annual Operating Rev. @ 10 Credits*	\$ 13,457	\$ 30,682	\$ 47,727	\$ 63,920	\$ 75,000
Annual Operating Rev. @ 5 Credits*	\$ 16,822	\$ 39,203	\$ 60,982	\$ 81,673	\$ 95,829
# Students Enrolled @ 15 cr/qtr.	9	19	31	42	49
# Students Enrolled @ 10 cr/qtr.	2	5	7	9	11
# Students Enrolled @ 5 cr/qtr.	5	12	18	24	28
Total Headcount	16	36	56	75	88
Estimated FTE	10	25	41	55	65
Projected Revenue (operating)	\$90,837	\$203,030	\$ 315,825	\$ 422,980	\$ 496,296
*2% tuition increase in years 2 and 4					

(3) Appropriate facilities, equipment, technology, and instructional resources needed for the program

The Technology Complex (IT Complex) is located on the south side from the main college campus. This facility is the main instructional building for IT. The face-to-face portion of the BASIT classes will be delivered primarily in this IT Complex facility. These facility has state-of-the-art information technology equipment, which is kept up-to-date with the latest operating system and software.

In the Deccio Higher Education Center, the College has dedicated staff who work in the Instructions Support Center which manages and facilitates four computer lab classrooms, one open computer lab classroom, one computer lab which is used exclusively to support proctored testing. BASIT instructors and students will have access to these classrooms to administered tests and or classes as needed.

Some of the classes will be delivered in a hybrid mode. Students will be able to take face-to-face courses using the latest equipment and the College’s IT infrastructure is robust enough to facilitate a positive learning experience for the on-line portion of the courses.

Over the last 12 months the College has invested time and resources updating all the teaching computing stations throughout campus, hence providing a more positive teaching and learning experience.

Additionally, the college has upgraded and expanded wireless Wi-Fi service throughout both campuses, providing both inside and outside coverage. The completion of this project will allow students and teachers to take advantage of wireless technology for the delivery of course work and provide a more robust environment for BASIT students to take on class projects that would require wireless Wi-Fi accessibility.

Another initiative was the expansion of our server capacity. This expansion will allow the College to provide a more robust performance for new applications. This expansion will have a significant and positive impact on all IT students as they will experience the difference in network performance.

Program Sustainability

Table X shows projected revenue and expenses, the BASIT Program is anticipated to be self-sustaining by year 2. YVCC will allocate local funds to cover the projected shortfall for Year 1. Funds from the BASIT Program will be used to enhance the BAS Programs.

Table X Five Year Revenue and Expense Projection					
	Year 1	Year 2	Year 3	Year 4	Year 5
	2015-16	2016-17	2017-18	2018-19	2018-19
Projected Revenue	\$90,837	\$203,030	\$315,825	\$422,980	\$496,296
Projected Expenses	\$232,220	\$254,388	\$253,092	\$255,659	\$255,659
Difference	(\$141,383)	(\$51,358)	\$62,733	\$167,321	\$240,637

Criteria 6: Program Specific Accreditation

The college will not seek specialized program accreditation. There is no program specific accreditation for this applied baccalaureate degree.

YVCC has been granted candidacy status at the baccalaureate level by the North West Commission on Colleges and Universities. Accordingly, applied baccalaureate degrees offered by YVCC are included under the accreditation of the college. Final determination by the commission of YVCC’s accreditation at the baccalaureate level is scheduled for January 2016.

Criteria 7: Pathway Options Beyond Baccalaureate Degree

Graduates from YVCC's BASIT program will be prepared to pursue master's degrees. Based upon recent conversations with Central Washington University, BASIT graduates would be able to apply to Central's new Master of Science – Information Technology and Administrative Management degree program.

YVCC has continued to have further conversations with Central's MS-ITAM Program Coordinator who has indicated that YVCC's BAS-IT graduates will be able to apply to Central's master's program.

Western Governors University (WGU) offers three master's level programs in Information Technology. These master's degree programs are competency based and as such WGU emphasizes skills/competencies over coursework. Students applying to any of WGU's master's programs would need to have completed a bachelor's degree in information systems or information technology. YVCC has contacted and shared with WGU the proposed 300/400 level curriculum. The BAS-IT degree would meet the bachelor's degree requirement for any of WGU's three Information Technology master's degree programs.

University of Phoenix offers an online Master of Information Systems (MIS) degree program. Students applying to this program would need to have completed a bachelor's degree. According to the Registrar, YVCC's BAS-IT graduates will be able to apply to this program.

Criteria 8: External expert evaluation of program

Yakima Valley Community College has retained Dr. Michael C. Peterson, Professor at Western Governors University and Professor and Course Developer at Liberty University and Dr. Lori Braunstein Professor in the Information Technology and Administrative Management Department (ITAM) at Central Washington University (CWU), to be the expert external evaluators for the BASIT program proposal. A short bio and the results of their evaluations and recommendations are included in Appendix C.

YVCC evaluated the recommendations made by the external expert reviewers and it will continue to design 300/400 level courses that will re-enforce the "soft skills" learned at the 100/200 level.

YVCC's Arts and Sciences Division has created three additional 300 level courses in the areas of organizational behavior, professional ethics, and managerial communications. These courses have general education distribution and have become part of YVCC's 300/400 level course inventory. These courses will be an integral part of meeting general education requirements for BAS programs offered at YVCC.

BAS-IT faculty members have taken note of other applicable recommendations made by its external expert reviewers which will be addressed in the first annual course evaluation. Please see Appendix C for more details to the College response to the feedback received from the external evaluators.

Conclusion

In a recent article Randy Luvaas of the Yakima Valley Business Times wrote "A common complaint among businesses is that the area doesn't offer enough skilled workers or those with the education and training to handle complicated jobs"ⁱⁱ

YVCC's main educational service area continues to experience a "drain" of talent when it comes to people with a bachelor's degree. Studies in other parts of the country where baccalaureate degrees have been awarded through community colleges have shown that people who earned a baccalaureate degree through a community college have a much higher percentage of staying in the community and contribute to the educational and economic growth of the same. Great Basin College in the State of Nevada

illustrates succinctly the long-term benefits when community colleges offer baccalaureate degrees. In *Alternative Pathways to the Baccalaureate*, John Patrick Rice writes:

Because many prospective GBC student are place-bound (perhaps committed to their families and their family enterprises), the option of enrolling at a distant school simply may not exist. Now, with professional preparation at the bachelor's degree level available in every community in rural Nevada, professionals can be "homegrown" to meet the needs of business and industry. Graduates already residing and having a stake in their communities are now prepared to accept the professional responsibilities required to meet the business and industry needs of the service area. For students and the communities where they live, Great Basin College is not just a center for learning, but is also an instrument for enhancing the value of living in rural Nevada. (pp. 39, 40)ⁱⁱⁱ

As of the writing of this program proposal, if the BASIT degree is implemented, it would be YVCC's second BAS degree and it would be the first one of its kind east of the Cascades. As demonstrated by the results of both the student and the employee surveys, there is a strong demand and interest in our service area for a BAS in IT Networking - System Administration.

Offering a bachelor of applied science in Information Technology - System Administration will open the door to families and individuals who saw a bachelor degree out of their reach. Many dreams will come true and many families will have the possibility of a better future and make an impact in their communities that will create vibrant and better communities for generations to come.

A student from Florida put it this way:

We do not have fraternities and sororities, we have families. We don't have dorms, we have mortgages. Extracurricular activities? We call those jobs. We are rooted in the community, unable to transfer to another college. (ibid. p. 50)^{iv}

Appendix A – Course Descriptions

300/400 Level Courses to Complete BASIT Program	
Course No	Course Description
BASIT 301	<p style="text-align: center;">Windows Server Administration</p> <p>This course explores knowledge and skills required in deploying, managing and maintaining Windows servers, configuring File and Print Services, configuring network services and access, configuring a Network Policy Server (NPS) infrastructure, configuring and managing Active Directory, configuring and managing Group Policy.</p>
BASIT 302	<p style="text-align: center;">Windows Client Support</p> <p>This course covers the design, installation, configuration, maintenance, and support of Windows clients and associated network and security resources.</p>
BASIT 311	<p style="text-align: center;">Linux Operation & Administration</p> <p>This course covers the operations and network administration of the Linux operating system including Linux installation, adding software packages, network file services configuration, Apache web server, file transfer protocol (FTP), Samba file and print server.</p>
BASIT 321	<p style="text-align: center;">Exchange Server Administration</p> <p>This course explores the skills and knowledge necessary to deploy, secure, manage, and support messaging services for an organization using Exchange. This course will also provide guidelines and best practices to improve performance and minimize security threats when using Exchange.</p>
BASIT 331	<p style="text-align: center;">SQL Server Administration</p> <p>This course explores the skills and knowledge necessary to work with databases on an SQL database server. The student will learn how to use SQL server tools to maintain and administer databases.</p>
BASIT 341	<p style="text-align: center;">Advanced Powershell Scripting</p> <p>This course explores the skills and knowledge necessary to automate system management and maintenance tasks using the Windows PowerShell environment. Students will design, write, test, and validate scripts to perform system management tasks.</p>

300/400 Level Courses to Complete BASIT Program	
Course No	Course Description
	Advanced Server Services
BASIT 401	This course explores the skills and knowledge necessary to manage advanced networking services in a Windows Server environment including advanced DNS and DHCP options, Active Directory services, clustering, and disaster recovery.
	Virtualization and Data Centers
BASIT 421	This course explores the skills and knowledge necessary to evaluate, plan, deploy, and administer data center virtualization. Consideration will be given to the advantages and disadvantages of data center virtualization as well as implementation strategies.
	Querying SQL Servers
BASIT 431	This course examines strategies to extract, organize, and interpret data from database servers into meaningful information through practical scenarios and applications in planning, designing, creating, using, troubleshooting, modifying, and optimizing database queries using the Structured Query Language (SQL).
	Project Management
BASM 410	This class is a comprehensive study of the theory and practice of project management, focusing on leadership and decision-making critical to effective implementation. It includes the managerial aspects of project definition, internal/external communication, constraints, environmental concerns, time limits, risk sensitivity, metrics measurement, budget implications, impact analysis, risk response controls, contingencies, and performance specifications. It provides the skills and knowledge to identify and quantify problems and provide solutions to meet project requirements.
	Information Systems Management
BASM 415	This course helps students understand available IT components and how to use IT applications for success. Students will learn the terminology used in the field of IT and how IT principles can apply to businesses. Competitive advantages of using IT and return on investment is stressed. Focus is placed on the following basic principles of IT: hardware and software components, database technology, telecommunications and networking, e-commerce, Enterprise Resource Planning (ERP), Decision Support Systems (DSS), Expert Systems (ES), systems development and implementation, and ethical and societal issues involved in IT.

Appendix B – Reviewers Bios and Comments

Mike Peterson is faculty for the College of Information Technology at Western Governors University (WGU). In addition, he teaches information technology courses for Indiana Wesleyan University and Liberty University.

Before teaching at WGU, Mike served as the Information Security Administrator for Central Oregon Community College (COCC) in Bend, Oregon. Prior to that he taught computer science classes full-time, and math, part-time, at Chemeketa Community College in Salem, Oregon, and COCC from 2002 to 2011.

Prior to teaching, Mike served on active duty with the United States Coast Guard. Mike graduated from the United States Coast Guard Academy where he earned a commission as an Ensign coincident with a Bachelor's degree in Mathematical and Computer Sciences. While on active duty, he also earned a Master's degree in Computer Science. Mike was project manager for the development of several major Coast Guard systems that handled aids to navigation, maritime law enforcement, and marine safety.

Mike is currently finishing his dissertation for a PhD in Information Technology Education after successfully completing his coursework and comprehensive exams in 2013. His dissertation examines the realm of assistive technology and how it is managed at higher education institutions.

Evaluation Summary

Over the last 13 years, I, Mike Peterson, have developed and taught courses full-time at the community college and university level, in Information Technology and Computer Science, which has provided me an immense amount of experience to evaluate the new Bachelor of Applied Science – System Administration degree at Yakima Valley Community College. Please see my bio for additional qualifications.

The Bachelor of Applied Science – System Administration degree at Yakima Valley Community College displays baccalaureate level rigor on par with bachelor's degrees at other colleges and universities. The curriculum is well-developed as to provide solid applied skills, knowledge, and troubleshooting techniques in all areas of system administration, allowing for a strong and reliable education for those that earn the degree.

Upon review of this curriculum, I have made some fine-tuning recommendations in the form of edits for the curriculum and associated courses.

For the curriculum, I recommend the following edits:

- 1) Refer to the Bachelor of Applied Science in IT Networking – System Administration as the BASIT-SA. There will be other BASIT degrees and this will allow them to be referred to uniquely.
- 2) System administration, in its current state, refers to administration of three main types of systems: networking, data, and security. Maintaining this triad should be the stated focus of the BASIT-SA.
- 3) The graduate outcomes for this degree should be listed in order of a) correctly trained for employment first; b) equipped to earn certifications second; and c) prepared for graduate degrees if so chosen. While not directly in competition with one another (and certainly not exclusive of one another), there is a priority to this list order.

4) The three components of the degree, basic IT core, Gen Ed, and upper level coursework should have credits listed, so these three components can be compared and an overall composition (what part of the overall total does each component comprised) can be immediately discerned.

5) The upper level coursework requirements in terms of student minimum grade per course and overall GPA should be clarified. I recommend: “students must earn a minimum grade of C for each course and maintain a GPA of 2.0 before they can start taking 300/400 upper division IT courses.”

6) Other minor edits to the course outlines have been made and submitted separately to the main lead and program coordinator.

Dr. Lori Braunstein, Ph.D., is a professor in the Information Technology and Administrative Management Department (ITAM) at Central Washington University (CWU). Dr. Braunstein was instrumental in developing the BAS degree type in Washington State and built and directed the BAS-ITAM degree at CWU from 2007-2009; with enrollments growing from 35 students to 225 during that time period. Dr. Braunstein is also the past-chair of the ITAM Department.

Currently Dr. Braunstein serves as Director of Academic Planning at CWU, working with the Provost to ensure integrity of curricular and general education programs at Central.

Dr. Braunstein earned her B.S in Business Administration from Washburn University in Topeka, Kansas; her MBA from Delta State University in Cleveland, Mississippi; and her Ph.D. in Business Information Systems and Education at Utah State University in Logan, Utah. She has taught at the University of North Alabama, Eastern New Mexico University, and, for the past 21 years, Central Washington University.

Evaluation Summary

Evaluation of Yakima Valley Community College Applied Baccalaureate Degree Program in IT Networking – System Administration

Yakima Valley Community College (YVCC) has proposed a new BAS Degree in IT Networking – System Administration (BAS-IT). As an outside evaluator of the program, I have been asked to evaluate this new baccalaureate degree based on seven criteria: 1) Curriculum demonstrates baccalaureate level rigor, 2) Program is taught by qualified faculty, 3) Program has selective admissions policy, 4) YVCC has appropriate student services, 5) YVCC is committed to building and sustaining a high quality program, 6) Program has identified specific accreditation opportunities, and 7) Pathway options beyond the baccalaureate degree are available.

Curriculum Demonstrates Baccalaureate Level Rigor

YVCC provided Program Learning Outcomes for the BAS-IT:

- Understand the place of information technology in an organization environment including alignment with organization goals and objectives
 - o Feedback – “Understand” is generally not a measureable outcome; additionally, terms synonymous with “understand” (e.g., define, describe, state, etc.) are on the lower-level of learner outcomes (Knowledge □ Comprehension □ Application □ Analysis □ Synthesis □ Evaluation). While some course learner outcomes might need to be at the lower-levels of learner outcomes to help students progress to higher-levels of learning, overall program outcomes should be measuring students at the higher levels of analysis, synthesis, and evaluation.

- Analyze and develop recommendations for information systems administration in accordance with best practices and standards, legal and regulatory requirements, and ethical and social considerations including respect for privacy and intellectual property.
 - o Feedback – Again, “develop” tends to be at the lower-level of student learning. By the end of the program, students should be able to “Propose and justify recommendations” This level of critical thinking is needed not only in the IT industry but even in entry-level networking positions.
 - o Feedback – While I am unable to ascertain the exact content of all the courses in the BAS-IT proposed degree, I do not see in which class(es) legal and regulatory requirements are discussed (Business Law is an option, not a requirement for the program); nor do I see a course or course substance in ethics and social considerations including respect for privacy and intellectual property. Developers of the BAS-IT program might consider adding an IT Security, Privacy, and Ethics course in which students can develop both critical thinking skills in wrestling with the real issues of privacy and ethics in technology and skills in developing organization privacy statements.
- Develop successful and respectful relationships with clients, coworkers, managers, and stakeholders, applying a wide range of adaptive and effective communication skills to convey complex technical concepts.
 - o Feedback – “Develop” is again a lower-level learning outcome. It looks as though many of the courses have “Small Group Activities and Discussion” as an assignment/activity in the course. Small group activities are an excellent place to reinforce teamwork skills that were probably introduced in the Human Relations and Interpersonal Communication courses; a soft skill that is highly prized in industry.
- Develop solutions for networking and security system administrations balancing business concerns, technical issues, and security.
 - o Feedback – “Develop.” To provide solutions, students need to “analyze,” “diagnose,” propose,” and “evaluate” solutions for networking and security systems. As with some of the other program learner outcomes, I do believe you are requiring higher level learning skills from your students, but that is something I must assume. Carefully choosing the verbs you use in writing program outcomes will better demonstrate the critical thinking skills you are requiring of students.
- Maintain network and data systems in accordance with desired organizational goals and objectives, by performing, analyzing, testing, and recommending solutions based on best practices.
 - o Feedback – the second half of this program outcome is probably captured within the previous program outcome (performing, analyzing, testing, etc.) and could be deleted. And while “maintain” is a lower level learning outcome, requiring that students can maintain systems prior to moving to higher order learning of analyzing, testing, etc. would show progression of skills in your program.
- Analyze, assess, identify, and define effective problem-solving techniques of network and data systems and play a leading role in the implementation of those results.
 - o Feedback – “Identify” and “define” are at the lower level of student learning. At the beginning of the program, students should be able to identify and describe problem-solving techniques. At the end of the program, students should be able to analyze and assess problem solving techniques. This particular outcome might need to be two separate program outcomes.
 - o How you will measure “play a leading role in the implementation of those results?” is not clear to me in your curriculum. In your Project Management course, can BAS-IT students work as a team with a local organization to use effective problem-solving techniques to plan, implement, and evaluate an IT solution? Are there computer simulations that can be used to accomplish this program outcome? Will students need to take an Internship in which they must take a leading role in identifying appropriate problem-solving techniques and implementing and assessing their solution?

The Program Outcomes for the BAS-IT are certainly appropriate, though some could be rewritten to show a better progression of skills and the attainment of higher-order learning. What is missing are the courses (and really activities) that are tied to each of the program outcomes and how you will assess whether or not – and to what extent – students meet the Program Outcomes.

Developing a matrix that lists the Program Outcomes, the activities/courses in which the outcomes are taught, the manner of how and when the outcomes will be assessed, and the expected level of success of students meeting those outcomes will help ensure you have a cohesive program rather than a listing of required courses.

While the BAS-IT is largely a technical degree, and while the degree is designed to give students the skills they need for entry-level employment, employers are often as interested, or more interested, in soft skills: the ability to communicate, both verbal and written; the ability to work effectively in a team; the ability to manage and lead work teams; an understanding of one's emotional intelligence, etc.

I would urge the BAS-IT faculty to revisit their 300- and 400-level courses. Are you incorporating soft skill attainment in these courses? Do you have specific course outcomes to measure these soft skills? A baccalaureate degree should not be designed only for entry-level positions, but should provide those skills necessary for a graduate to progress into managerial positions. Additionally, these soft skills cannot be taught just in the lower-division courses of business communication and human relations, but must be repeated and reinforced in upper-division courses.

Qualified Faculty

The faculty identified in the BAS-IT program do meet the WAC standards regarding advanced degree requirements and I have no doubt they are experienced, passionate teachers. However, one of the fundamental tenants of higher education at the baccalaureate level is faculty engaged in scholarly research; research that is disseminated back not only to the academy to move our understanding of IT forward, but also disseminated back to students as part of the teacher-scholar model. Based on the CV's of the BAS-IT faculty, engagement in scholarly research is minimal, if not nonexistent. Additionally, I saw no curriculum that requires students to engage in scholarly research. The vast majority of baccalaureate degrees at universities require students to engage in scholarly research; some require that students present research at conferences or symposiums.

Selective Admissions Policy

With the use of the Program Coordinator and Director of Applied Baccalaureate Degree Programs, it appears the selection policy was developed to help identify those students who have the best chance of success in the BAS-IT program. I encourage YVCC to continue its practice of working so well with diverse ethnic groups to ensure that women and minorities have access to this program, and thus access to high-wage IT jobs.

Appropriate Student Services Plan

The services outlined in the BAS-IT proposal seem appropriate. Advisors should be trained to work with students in the BAS-IT program to ensure students understand pathways into advanced degrees. YVCC should also work with appropriate institutions to identify direct articulation pathways into advanced degrees.

Commitment to Build and Sustain a High Quality Program

As a self-support program, the necessity to control expenses sometimes outweighs what is best for the students. With only one full-time faculty member and other faculty expenses put toward part-time instructors, students might experience a "rotating door" of faculty. Faculty not only teach courses, but provide mentoring and career guidance. Students bonding with/identifying with an instructor who might be on campus for only one quarter might affect overall student retention. Building a high quality program

might require the expense of hiring full-time and/or terminally degreed faculty to provide consistency of instruction, consistency of instructors, and the rigor of a baccalaureate-level program. However, based on my interactions with some of the BAS-IT faculty, their commitment to mentoring and guiding students is exemplary.

As a self-support program, YVCC should develop a viable “exit” strategy in case enrollment numbers do not provide enough revenue to generate profits, or even a break-even point. The strategy could be simple: “YVCC is committed to the efficacy of the BAS-IT program. However should the program be discontinued, the degree will continue to be offered for an additional two years to graduate out students and/or students will be advised into a comparable program.”

Program Specific Accreditation

YVCC has indicated it will not seek program specific accreditation. ABET’s Computing Accreditation Commission (CAC) does accredit bachelor-level computing programs. Whether ABET would evaluate a BAS offered at YVCC as bachelor-level, I do not know. ABET has accredited university-level computing programs in Washington State.

Pathway Options Beyond Baccalaureate Degree

According to the BAS-IT proposal, graduates of the YVCC BAS-IT program will be prepared to pursue master’s degrees. It would be beneficial to students for YVCC to set up articulated pathways to ensure graduates do indeed have access to advanced degree programs.

Recommendations

Based on the materials provided for the BAS-IT degree at YVCC, the following recommendations are made:

- Some Program Learner Outcomes should be rewritten to indicate progressive and relevant higher-order learning outcomes for graduates. Additionally, outcomes should be tied to specific learner activities, assessments, and measurements of success to build a cohesive program.
- Ascertain if students are being exposed to and learning the soft skills that employers indicate are vital to employment
- Incentivize faculty to engage in scholarly research. One does not need to hold a terminal degree to engage in action research, particularly in the areas of course pedagogy and in some IT fields. Venues exist for faculty to discuss and disseminate action research results; results that will better inform instruction, will result in deeper course and program development, and will ultimately result in graduates who themselves will be able to engage in action research in their organizations.
- YVCC should continue mentoring and guiding minorities and women into the BAS-IT program.
- The BAS-IT Coordinator should work with universities to establish articulated pathways to advanced degrees for BAS-IT graduates.
- Faculty and Administration at YVCC should develop an “exit” policy in the case of program closure – not only for the BAS-IT but for all its programs (if one is not already in place).

In conclusion, I cannot say that students graduating from the BAS-IT program at YVCC have graduated from a program that “demonstrates baccalaureate level rigor.” Offering courses at the 300- and 400-level, in and of itself, does not demonstrate baccalaureate level rigor. However, based on my readings of other BAS programs offered at Washington Colleges, Community Colleges, and Technical Colleges, the BAS-IT program at YVCC is certainly on par with these other BAS degrees.

Appendix C – Response to Evaluator’s Recommendations

Recommendation:

Developers of the BAS-IT program might consider adding an IT Security, Privacy, and Ethics course ...

Faculty response:

Security is an integral component of almost all of our technical courses. When we discuss Windows Server, Exchange, SQL, etc. we include security for each of those products in I the course. In addition we have an ethics course included in the Gen Ed courses.

Recommendation:

Use of the word develop in the course outcomes

Faculty response:

We used the term develop because industry professionals understand the idea of developing solutions to business challenges using specific applications or platforms. The course descriptions use different terms for the learning outcomes.

Recommendation:

Are you incorporating soft skill attainment in these courses?

Faculty response:

Many of our courses include group work as well as oral and written assignments to help students developed the desired soft skills.

Recommendation:

Engagement in scholarly research is minimal.

Faculty response:

YVCC is not a research institution, we are an instructional institution. The focus of our faculty is on student instruction rather than research. Inherent in that instruction is research of new technologies and new approaches in education. That is not highlighted however because we are primarily an instructional institution. We do have research assignments in our courses where students are required to research and present information.

Appendix D – Industry Focus Group Meeting

BASIT Focus Group

December 8, 2014

Participants: Nick Fulton (Yakima Valley Farm Workers Clinic), Randy Brown (Memorial Hospital), Ryan Montgomery (Pacific Northwest University), Matthew Hunter (Allan Brothers Fruit), Jeremy Cox (West Valley School District)

1. What qualifications do you look for in candidates?

- A bachelor's degree related to the position (system administrator) or experience (at least two years), prefer experience, also like internships, and customer service experience – Jeremy
- Any IT degree and outside experience (could be internship or volunteer experience) – Matt
- Internships, and a degree, also customer service and team experience – Ryan
- Education (a degree) or experience (experience is more valuable), technical aptitude and knowledge of basics (i.e. general understanding of DHCP, IP addresses) – Randy
- In addition to education and experience (look for someone who has been a part of a project), personality is important, and ability to do well under pressure, and ability to prioritize time and tasks; having a hard time finding interns – Nick

Follow Up question: Is a Bachelor's degree necessary or is an Associate degree sufficient?

- A bachelor's degree is necessary for systems analyst positions – Nick
- Prefer a Bachelor's degree, usually better social skills, writing skills, communication skills, teamwork, more well-rounded - Ryan
- A four year degree is better, shows commitment, more knowledge – Matt

2. What are the biggest weaknesses that you are finding in candidates?

- Few industry certifications (would like to see more) – Matt
- Certifications are valuable (if relevant), worth more than education, but more valuable with some experience – Ryan
- Certifications are as good as experience in some cases – Jeremy
- Not as much emphasis on certifications, tests don't always measure knowledge (being a good or bad test taker can affect results), experience with certifications shows dedication - Randy
- Lack of broad experience, and general knowledge or no technical depth (both ends of the spectrum) – Ryan
- Not being able to adapt, or focus on more than one area – Matt
- Not willing to try to figure out something if you don't know (you may be the only one in the office when the call comes in) – Nick

3. Have you had a hard time finding qualified people?

- Yes – Jeremy
- Yes – Ryan
- Have a hard time keeping people, they don't stay, take better jobs somewhere else – Matt
- Yes, lack of experience, poor social skills (comes out in interview), no interest in area (do they ask questions?) – Nick

4. What other topics would you like to see for the courses offered?

- Storage management
- Project Management
- Virtualization
- Data Center design / hardware (cooling, racks, power management)
- Disaster recovery
- Business Continuity
- Security (antivirus, user education, awareness)
- Regulatory requirements (HIPAA, FERPA)
- Accounting, budgeting
- Business Communications

5. Are there any proposed courses that aren't necessary or could be removed?

- Sharepoint (BASIT 421)

ⁱ The Emerging Future, LLC. 2012. *Estimating the speed of exponential technological advancement*. PDF document downloaded 12/15/14 from www.theemergingfuture.com

ⁱⁱ Luvaas, R. (2014, July 25). Officials report progress in area's STEM education. *Yakima Valley Business Times*, p. 6

ⁱⁱⁱ Remington, N., & Remington, R. (2013) *Alternative pathways to the baccalaureate: Do community colleges offer a viable solution to the nation's knowledge deficit?* Sterling, VA.

^{iv} Ibid.