FOOTHILL COLLEGE
Program Planning and Review
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I. Department/Program Mission	
1. State the department name and everyone who participated in creating the comprehensive program plan.	Computer Networking and Electronics (CNET) Department Enterprise Networking program Mike Murphy, Chuck Johnson, Robert Cormia, Luis Barreto, and Judy Baker. In keeping pace with the changes in industry, we wish to change the name of the department to "**Computer Networking and Emerging Technologies (CNET)**". The name aligns more closely with emerging technologies within the Information Communication Technology (ICT) field.
2. State the program's mission. If you don't have one, create one.	**The mission of the Computer Networking and Electronics Department is to develop and provide state-of-the-art, high quality, curriculum to prepare students for productive professional careers in the information communication technology field.** Objectives: • Training professional workers and technicians, • Training students in current and emerging technologies, techniques, and methodologies related to information communication technology, • To serve adult learners for life-long learning. The Department places a high priority on enabling learning for diverse student populations with limited resources.
3. Explain how the program/department mission is aligned with the college mission?	CNET programs help facilitate California economic growth and global competitiveness through education, training and services that contribute to continuous workforce improvement in the information communication technology industry (ICT) field. Our mission is to promote student learning through lower-division academic instruction, career preparation, and continuous workforce development.

II. Department and Program Description & Data

1. What are your hours of operation?	Our offices open at: 9 am Closed for Lunch: No ☐ or Yes ☒ If yes, when: 12-1pm Our offices closed at: 5 pm			
2. What types of classes do you offer, at what locations, and at what times?	Times offered: ☒Morning (6AM-12PM) ☒Afternoon (12PM-4PM) ☒Evening (4PM-10PM)	Locations offered: ☒FH Main Campus ☐Middlefield ☐Off campus	Types Offered: ☒In Person ☒Hybrid ☒Distance	Status Offered: ☒Credit ☐Non-credit

3. List current positions and descriptions for all personnel in your area on the chart below (include position titles only, not individual names).

Faculty Positions by Discipline	**Full-time Headcount**	**Part-time Headcount**	**Brief Description of duties**
Computer Information Systems	2	1	Prepare and deliver lectures, develop curriculum, participate as presenters, participate in shared governance, industry advisory board members, and volunteers at national and international conferences. Operate Cisco Regional Academy. Participate in regional collaborative, Mid-Pacific Information Communication Technology (M-PICT).
Management and Classified Positions	**Full-time Headcount**	**Part-time Headcount**	**Brief Description of duties**
Dean	1		Provide division leadership, manage budgets, facilitate curriculum processes, supervise staff, assists students/faculty/staff, and

			coordinate program activities and oversight.
Administrative Assistant	1		Position currently filled through an "out-of-class" assignment, which ends in December. Div. Admin supports 3 distinct functions: CTIS, Apprenticeship, and COOP. Coordinates the day-to-day operations of the office, interacts with the public, students, administrators, faculty and staff; and monitors division budgets and fiscal management process.
Instructional Computer Laboratory Administrator	1		Install, configure, and maintain server systems and software for the division; monitor performance and upgrade as necessary; configure and debug server and network desktop clients. Assure proper operations of computer systems, servers, and other electronic equipment; participate and assist in the researching, planning, and formulating solutions for various server and network functions.
Student Worker Positions	**Hours per Week**	**Months per Year**	**Brief Description of duties**

4. Given the data, describe the trends in enrollment, FTES, and Average Class size. What are the implications for your department?	In the 06/07 fiscal year, student enrollment (grades) was 1,090 and WSCH was 9,175 with a productivity of 548. In 07/08 fiscal year, student enrollment (grades) fell to 910 and WSCH 7,756 with an increase in productivity of 603. In 08/09 student enrollment (grades) rose to 1,174 and WSCH was 10,660 with productivity of 667. It has been increasingly difficult to find a sufficient number of qualified part-time faculty members to support current program growth and demands. The department has experienced explosive growth averaging 36% in 08/09. The average class size runs from 36 to 60. Finding qualified part-time teachers for lab sections and additional course section demand is a chief priority for the department. In 2003/2004, WSCH for the CNET department was 5,380. In 2004/2005, departmental WSCH rose to 6,271. In 2005-2006, WSCH rose to 8,442. In 2006-2007, WSCH grew to 9,175. In 2008-2009, WSCH grew to 10,660. The CNET program has shown a steady pattern of growth from 2003 to 2009.
5. Student Achievement: Given the data, describe the trends in overall success rates, retention rates, and degrees and certificates awarded. What are the implications for your department?	In the 06/07 fiscal year, there was a retention rate of 81% and a success rate of 77%. In 07/08, there was a significant increase in retention rate to 89% and success rate dropped to 73%. The retention rate had increased by 9% and the success rate had dropped by 5%. In 08/09, the retention rate remained 89% and the success rate rose 3% to be 76%. In 2007, there were 21 Associate's degrees and 49 Certificate (Awards<2 years) completions in the region for Computer Systems Networking and Telecommunications. Foothill College issued 20 certificates (award < 1 year), which represents just under 50% of certificates issued for the region. There were 20 Associate's degrees issued in the region for Computer and Information Systems Security. There is great growth potential in developing workforce certifications (< 1 yr) for both displaced workers, as well as, continuing education for computer professionals. As the economy experiences downturn, a distinct rise in demand for Computer Systems Networking and Telecommunications certifications has been observed.
6. Student Equity: Given the data, describe the trends	In comparing 2007/08 (total headcount 910) with 2008/09 (total

with respect to underrepresented students. How will your program address the needs/challenges indicated by the data?	head count 1,174), **retention increased** for Black students by 4 percentage points (88%); and Filipino students by 9 percentage points (85%). Student **retention remained unchanged** for Asian and Unrecorded students 88%. Student **retention decreased** for Hispanic students by 9 percentage points (82%); for Pacific Islander students by 27 percentage points (73%); for White students by 1 percentage point (92%); for Other students by 11 percentage points (81%). **Pacific Islander Ethnicity students seem to have a disproportionally lower percentage of student retention.** Percentage of **success increased** 1 percentage point for Asian students (75%); 8 percentage points for Black students (71%); 18 percentage points for Filipino students (65%); 4 percentage points for Hispanic students (68%); 4 percentage points for White students (84%); and 9 percentage points for Other students (67%). Percentage of **success decreased** 52 percentage points for Pacific Islander students. Percentage of **non-success remained the same** for Asian students (14%). Percentage of **non-success decreased** 3 percentage points for Black students (18%), 9 percentage points for Filipino students (20%), 12 percentage points for Hispanic students (15%), 5 percentage points for White students (8%), and 18 percentage points for Other students (15%). Percentage of **non-success increased** for Pacific Islander students by 23 percentage points, (36%). T**here are significant increases in non-success for Pacific Islander students that need to be addressed.** Ethnic groups, other than Asian and White, are not well represented in current CNET Programs. Other underrepresented students include those with handicaps such as hearing impaired, visually impaired and physically impaired. These needs/challenges will require the establishment of specialized recruitment programs and teacher training programs to reach out to these underrepresented student populations. In order to better serve these underrepresented students, Instructors have begun to utilize CCC Confer. The division as a whole will be looking to better identify barriers opposing

	student success. We will be developing a survey instrument that will seek to identify challenges, needs, and opportunities in raising student success and retention.
7. Given the data, discuss how the FTEF trends and FTEF/FTES ratio will impact your program. Include any need for increasing or reducing your program faculty. What are the implications for your department?	In 2006/07 fiscal year, Full-time FTEF was 2.11 and PT/Overload was 2.44. In 2007/08 fiscal year, Full-time FTEF was 1.73 and PT/Overload was 1.80. In 2008/09, Full-time FTEF was 2.02 and PT/Overload was 2.38. There is zero reassigned time in this department. The addition of a new CNET faculty member would provide the department with the ability to immediately increase current course offerings by 35%.
8. Given the data for distance learning, describe the trends related to success, retention, and student satisfaction. Discuss solutions to ensure that rates match or exceed those of comparable traditional format courses.	Distance learning classes are being offered for the first time in the current quarter. The instructor prior to teaching the course in the distance format will first teach the course in the standard lecture and lab format. The same texts and laboratory exercises will be used in both venues.
9. Optional: Provide any additional data relevant to your program. (Indicate the source of the data).	In 2009, there were 29,337 jobs in the Greater South Bay and Peninsula region in the occupations of computer and information systems managers and network and computer system administrators. It is estimated that by 2013, occupational jobs in these areas will increase by 11% (32,630 jobs). (Source: Economic Modeling Specialists, Inc. [EMSI] Complete Employment – Spring 2009).
10. Are you seeing trends that are not reflected in the data cited above? If yes, please explain.	An important emerging sector is Smart Grid and Smart Energy technologies that rely heavily on information communication technology (ICT). CNET is working with COIN and an emerging energy technology practice within CTIS to begin developing formal training in AMI (Advanced Metering Infrastructure) applications, which include smart meter integration with Home Area Networks (HAN), and Building Automation and Energy Management Systems (EMS/BMS). Part of this effort will be reshaping curriculum related to mesh networks and wireless networks for AMI, and part will be for developing a practice around HAN. A program to develop training for

	installing and integrating EMS/BMS with HAN and AMI will follow (if supported by DOE or other grant funded opportunities). Security will be paramount in deployment and operation of smart energy networks, as will reliability of wireless communications. "The electric power industry is in the early stages of a sea change. From the growing addition of intermittent, often distributed, renewable energy sources to new and efficient ways that residential, commercial and industrial users are consuming electricity, the underpinning grid infrastructure is transforming on an epic scale to that of a networked grid. The relatively slow-changing power transmission and distribution market is finding itself at the confluence of energy, telecommunications and information technology (IT) markets, driving necessary change and innovation in support of 21st century next-generation utility networks. Leveraging an intelligent network infrastructure, a smart grid enables short- and long-term applications and services that are emerging over the course of the next decade." (GTM Research, a Greentech Media company, at 'The Networked Grid' event Nov 4th, 2009) "The term "Smart Grid" in this refers to the networked application of digital technology to the energy delivery and consumption segments of the utility industry. More specifically, it incorporates advanced applications and use of distributed energy resources, communications, information management, advanced metering infrastructure (AMI), and automated control technologies to modernize, optimize, and transform electric power and gas infrastructure. The Smart Grid vision seeks to bring together these technologies to make the grid self-healing, more reliable, safer, and more efficient, as well as empower customers to use electricity more efficiently. It also seeks to contribute to a sustainable future with improvements to national security, economic growth, and climate change." (KEMA Smart Grid Vision)

	Central to smart grid technology is an electrical power distribution network that, in addition to transmitting electricity, includes two-way, digital communications between producers and consumers. For example, when power is least expensive throughout the day, it could turn on selected home appliances such as washing machines or factory processes that can run at arbitrary hours. A smart grid includes an intelligent monitoring system that keeps track of all electricity flowing in the system. It also incorporates the use of superconductive transmission lines for less power loss, as well as the capability of integrating alternative sources of electricity such as solar and wind. (Retrieved December 2009, Answers.com – Smart Grid). CTIS is developing programs in CNET, COIN, and other (undefined) areas to meet the need for training of a NEW energy workforce. Silicon Valley is home to solar energy pioneers Nanosolar and Miasolé, Electric Vehicle (EV) forms Tesla, EV charging startups Coulomb Technology and Better Place, Fuel Cell pioneer Bloom Energy, storage solutions developer Deeya energy, and Pacific Gas and Electric, committed to a low carbon energy future. As importantly, Silicon Valley is ground zero for Internet technology development, with networking pioneers Cisco and EPRI, the Electric Power Research Institute, now leading the drive for a smart electric grid. While smart meters provide the utility companies with better information and the ability to bill 'time of use' (TOU), the electric grid will not be 'intelligent', responsive, or predictive until AMI (Advanced Metering Infrastructure) is integrated into building automation systems. On the residential side – this would be Home Area Networking (HAN), and commercially, EMS/BMS (Energy management Systems / Building Management Systems). Programs to teach networking professionals the basics of building energy, and energy professions networking basics, are two areas of program

development for both CNET and CTIS.

Suggested curriculum:

Introduction to Smart Grid: This course will be an overview of smart grid technology including the modern electric grid, transmission and distribution networks, AMI (Advanced Metering Initiative), smart meters, and the goals of a smart energy system. Topics included smart energy concepts and practice; demand response (DR), communications protocols, electric grid sensor points (Phasor and SCADA); and organizations and initiatives involved in smart grid development. Does not require a CS/CIS foundation, but does require technical knowledge including basic software and Internet knowledge and the ability to construct diagrams, do basic calculations, read meters and instruments, and create basic laboratory reports.

Smart Grid for Networking Professionals: Smart Grid for Networking Professionals emphasizes the melding of electric grid technology with wireless, mesh, and hard wired systems. Goal is to provide networking professionals with a point of entry into smart grid / smart energy technology and systems, as well as, provide support for vendors (Cisco, Siemens, Itron, etc.). Includes key electrical concepts and training for integrating software solutions into electrical systems, with an emphasis on the hard-wired and wireless communication protocols. Requires a formal training in networking (provided through CNET) and familiarity with operation and maintenance of wireless and radio networks, including mesh network technology.

Beginning Home and Building Automation: Home and Building

	Automation is a 12 week course divided into two sections: Home Area Networks (HAN) and Building Automation Systems (BAS). It includes an introduction to EMS/BMS (Energy Management Systems/Building Management Systems) for commercial and residential applications. The goal is to provide a point of entry for technical professionals (and technicians) to help develop, deploy and maintain integrated software/hardware/networking solutions for management of energy and other key building functions. It does not require a CS/CIS foundation, but does assume technical knowledge of software, and ability to read and interpret building diagrams. **Introduction to Electricity and Building Energy Basics:** This course is an introduction to electricity and building energy for computer science and networking professionals desiring training for applications in smart grid technology and smart energy systems. It provides an overview of building energy systems, including electricity, natural gas, lighting, and water management. It includes installation of basic HAN (Home Area Networks) and integration of smart meter API with HAN and EMS/BMS. This course requires a technical foundation including software installation and configuration, and ability to read electrical diagrams and do basic energy calculations.

Summary of Planning Goals & Action Plans				
11. Identify 3-6 operational goals and link them to one or more college strategic initiatives or to your operations.				
Department Operational Goals	**College Strategic Initiatives**			
Identify 3-6 operational goals	Building a Community of Scholars	Putting Access into Action	Promoting a Collaborative Decision-making Environment	Operations Planning
Expand program accessibility through technology-driven delivery systems.	☐	☒	☐	☐
Retire outdated curricula and create new relevant courses.	☒	☐	☐	☐
Identify problem areas for	☐	☒	☐	☐

underrepresented populations.				
Establish strong career pathways.	☒	☐	☒	☐
Improve our ability to meet current and future industry demands.	☒	☐	☐	☐
Develop key workforce ICT certifications.	☒	☐	☒	☐

12. What is your plan for accomplishing your goals?

Department Operational Goals	Activities	
Expand program accessibility through technology-driven delivery systems.	In order to better serve these underrepresented students, Instructors will need to be trained in the use of CCC Confer.	
Retire outdated curricula and create new relevant courses.	Retired several courses in Fall 09. Will continue to review active courses and their standing with industry and program goals.	
Identify problem areas for underrepresented populations.	The Division as a whole will be looking to better identify barriers opposing student success. We will be developing a survey instrument that will seek to identify challenges, needs, and opportunities in raising student success and retention.	
Establish strong career pathways.	Scheduling better sequence offering for certificates so that online students can complete curricula online and evening students can complete curricula in evenings.	
Improve our ability to meet current and future industry demands.	Work closely with Advisory Committee, as well as, follow industry trends as reflected in workforce research.	
Develop key workforce ICT certifications.	Encourage faculty to attend seminars (CISCO, Microsoft, Google, Stanford, etc.). Leverage regional interactions (e.g., Mid-	

	Pacific Information Communication Technologies, M-PICT).	

13. Are additional resources needed to accomplish your department operational goals? If yes, identify the resource, as well as the purpose and rationale for each resource.

Identified Resource	Purpose	If requesting funding, provide a rationale of how each request **supports one or more college strategic initiative and/or supports student learning.**
NEW CNET Faculty	The addition of a new CNET faculty member would provide the department with the ability to immediately increase current course offerings by 35%.	This resource would directly influence Putting Access into Action, Building a Community of Scholars.

III. Curriculum

Curriculum Overview

1. How does your curriculum address the needs of diverse learners?	By virtue of multiple teaching modalities (i.e., lecture, lab, distance education), we make an effort to provide different approaches of content delivery for differing styles (e.g., lectures, labs, multimedia, etc.).

2. How does your curriculum respond to changing community, student, and employer needs?	The certificate programs and courses offered are mapped to Information Communication Technology certifications and training. As the industry requirements change, the departmental curriculum including the courses and certificates are updated to offer the most current and relevant skills. CNET Curriculum supports COIN (Computing on the Internet) through integration of knowledge and skills of operating systems, server architecture, security, and especially applications which integrate computing, sensor, and network architectures, such as the emerging smart grid (AMI) systems. Networking and OS are strong programs within CTIS, including opportunities for vocational growth, and certificates through Cisco Academy. Networking technologies include both security and operating systems, as these are to the technologies used in business networks. More recently wireless technology has been added as a core program, focusing on traditional business and home wireless networks, but some discussion of adding ZigBee protocol and other Home Area Networking (HAN) technology. Increasingly, the field of smart energy and smart grid technology is drawing on wireless and radio networks. The mobile Web is putting additional strain on telecommunications, including broadband data access for a significant number of wireless subscribers. Increasingly new 'smart phones' integrate Web, voice, data, and specialized services including GPS, with many new phones featuring full Web browsing access, and integrated social networking services (Facebook and Twitter). Data center technology is also growing in demand, including networking, operating systems and hardware, server clustering and virtualization, and energy and cooling technology. Opportunities exist for training building owners, facilities and small data center managers in server virtualization, passive cooling, and energy monitoring technology.

3. How does your curriculum support the needs of other certificates or majors?	Computer literacy and critical thinking, and exposure to leading edge technology.
4. Do your courses for the major align with transfer institutions?	CSU only. This is not our population's primary goal. These courses are not easily articulated given the heavy industry-driven focus. The primary goal of these courses and certificates is to enhance the skills and immediate employability of a transitioning workforce.
5. Do your courses have appropriate and necessary prerequisites? Identify any challenges and plans to address the challenges.	Yes. Faculty are extremely active with students in helping guide their career and academic pathways.
6. Review the attached curriculum report for currency. What is your plan to address the deficiencies? (Consider: Title V, course deactivation, updated prerequisites, cross-listed courses, measuring student learning outcomes, curriculum sheets, certificates and degrees).	COR development is an ongoing and continuous process. New courses and updating of existing courses begins in winter/spring and is completed in early fall. Because of the nature of our discipline, course development must be agile, focused, and rapid. Faculty are encouraged to 'own and manage' a suite of courses and continually revisit currency.
7. Does your program offer distance education courses?	Distance education courses for CNET are being offered for the first time in the current quarter.
8. If you offer distance education courses, list one or two short examples of how your distance education courses provide for effective interaction between students and faculty.	Distance education courses offered use the Etudes online course management system. ETUDES-NG CMS (Course Management System) includes online forums, chats, online private messaging, blogging, and wiki (and other collaborative) writing formats for comments. In addition, email, phone, and on campus office hours are available.
9. If you offer distance education courses, list one or two short examples of how your distance education courses provide for effective interaction among students.	The course management system provides for student-only discussion and postings.
College Skills (Pre-collegiate) Overview (Data Available Fall 2009-filling out this section is optional)	
10. What college skills should a student have before entering your program?	College-level English and math skills, basic arithmetic and computational skills, reading, writing, critical thinking, ability to communicate in basic English, and some familiarity with using Web-based communication and collaboration tools, such as email and content portals (Cisco and Microsoft Academy materials).

11. Given the data, comment on the effectiveness of the assessment and placement of college skills students into your program. (For MATH, ENGL and ESL only).	Students have the necessary English and Math skills to complete the coursework.	
12. In what ways are you addressing the needs of the college skills students in your program?	Providing networking, operating system, and security knowledge required in advanced degree programs.	
13. How are faculty in your program collaborating with other disciplines and services to meet the needs of college skills students?	Faculty participate in several campus committees: Academic Senate, ETAC, PARC, etc.	
Program Mapping		
14. If applicable, identify any sequence of courses that are part of your program. List in the order that they should be taken by students.	All certification programs are designated with a single number. The order in which the student should advance through the certification is indicated by an alphabetical designation. For example, CNET 75B should be taken before CNET 75C. The preferred sequence for Microsoft: CNET 75A, 75B, 75C, 75D, 75F. The preferred sequence for the CCNA program: CNET 54A, 54B, 54C, and 54D.	
15. For your courses that are part of a sequence – are the student learning outcomes well aligned with the next course in the sequence? Please work with the college researcher to answer this question - once your sequence of courses is identified.	Yes.	
16. If applicable, describe any capstone course, signature assignment (project, service learning, portfolio), or exam that demonstrates knowledge, skills, and abilities, indicating successful program completion?	Given that these programs are closely mapped to industry certifications, certification exams are an important "capstone" accomplishment for our students. There has also been discussion in creating a capstone course that would allow students to apply previous learning within a project-oriented capstone.	
Course Scheduling & Consistency		
17. Given available data, describe the trends in the scheduling of morning, afternoon, and evening classes, as well as Friday, Weekend, and distance education classes. Comment on the feasibility of offering classes at non-standard times.	Courses are offered in the afternoons, evenings and on the weekend. The majority of students work full time and are unable to attend the standard morning and afternoon schedule. The only viable options are evening, weekend, and distance education.	

18. Are required courses scheduled in appropriate sequence to permit students to complete the program in the prescribed length of time? If yes, describe the rationale upon which the sequence is based. If no, what is the plan to change the scheduling pattern? What are the barriers that prohibit implementation of the changes? Explain.	Courses are scheduled on a quarter-by-quarter basis. The first quarter, (Fall), may offer the A and B courses; the second quarter, (Winter), the C and D courses; and the third quarter, (Spring), the E and F courses. Individual course offerings may be standard or distance learning. The sequencing allows a student to complete all of the requirements in specified time frame. Summer classes are also offered based on student demand.	
19. How does the department determine that classes are taught consistently with the course outline of record?	The course syllabus follows the course outline. Instructor evaluations are also used to observe content alignment.	
Summary of Planning Goals and Action Plans		
20. What are your goals with respect to curriculum and how will those goals be measured?	We are working towards dramatically increasing our relationship with businesses. To lead in new and emerging technology education to meet future market employment demands. Part of this effort includes developing programs with emphasis in emerging energy applications, including Advanced Metering Initiatives (AMI), and with service organizations installing Home Area Networking (HAN), and EMS/BMS (Energy Management Systems/ Building Management Systems). The department will also create a curriculum development project plan that will identify tasks needed for new and existing courses, as well as, timelines for completion.	

21. Are additional resources needed to accomplish your curriculum goals? If yes, identify the resource, as well as the purpose and rationale for each resource.

Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**	

IV. Learning Outcomes

Student Learning Outcome and Program Learning Outcomes Assessment

1. Be sure and complete your **course-level student learning outcomes** assessment for each course through the C3MS system.
2. **Program Learning Outcomes** in this section will be updated annually and posted on the Learning Outcomes webpage.

• **Intended Program Outcome 1**: *What will the student think, feel, know or be able to do as a result of this educational experience.*
A successful student in this program will be able to design a network infrastructure to support specific user and business requirements.

This Program Learning Outcome meets the Core College Mission of:	Basic Skills ☐	Transfer ☐	Workforce X
Relationship to Institutional Learning Outcomes • *Communication* • *Computation* • *Critical Thinking* • *Community and Global Consciousness*	Means of Assessment/Criteria for Success *What are the criteria for success? What tools will be used to establish and measure success?*	Summary of Data: October 2011 *Summarize the findings. How close were the results to the criteria for success?*	Use of Results: October 2011 *What do the data tell us about our process? What, if anything, do we need to do to our program or department to improve? What resources are necessary?*
• *Communication* • *Critical Thinking*	Performance on lab assignments and exams	to be done Fall 2011	to be done Fall 2011

• **Intended Program Outcome 2**: *What will the student think, feel, know or be able to do as a result of this educational experience.*
A successful student in this program will be able to select the appropriate operating system, and operating system features and services to support to support specific user and business requirements.

This Program Learning Outcome meets the Core College Mission of:	Basic Skills ☐	Transfer ☐	Workforce X
Relationship to Institutional Learning	Means of Assessment/Criteria for	Summary of Data: October	Use of Results:

Outcomes • *Communication* • *Computation* • *Critical Thinking* • *Community and Global Consciousness*	Success *What are the criteria for success? What tools will be used to establish and measure success?*	2011 *Summarize the findings. How close were the results to the criteria for success?*	October 2011 *What do the data tell us about our process? What, if anything, do we need to do to our program or department to improve? What resources are necessary?*
• *Communication* • *Critical Thinking*	Performance on lab assignments and exams	to be done Fall 2011	to be done Fall 2011

• **Intended Program Outcome 3**: *What will the student think, feel, know or be able to do as a result of this educational experience.*

A successful student in this program will be able to optimize the performance, reliability, and availability of network services.

This Program Learning Outcome meets the Core College Mission of:	Basic Skills ☐	Transfer ☐	Workforce X
Relationship to Institutional Learning Outcomes • *Communication* • *Computation* • *Critical Thinking* • *Community and Global Consciousness*	Means of Assessment/Criteria for Success *What are the criteria for success? What tools will be used to establish and measure success?*	Summary of Data: October 2011 *Summarize the findings. How close were the results to the criteria for success?*	Use of Results: October 2011 *What do the data tell us about our process? What, if anything, do we need to do to our program or department to improve? What resources are necessary?*
• *Critical Thinking*	Performance on lab assignments and exams	to be done Fall 2011	to be done Fall 2011

• **Intended Program Outcome 4**: *What will the student think, feel, know or be able to do as a result of this educational experience.*
A successful student in this program will be able to design, implement, and maintain appropriate security services for network systems.

This Program Learning Outcome	Basic Skills	Transfer	Workforce

meets the Core College Mission of:	☐	☐	X
Relationship to Institutional Learning Outcomes • *Communication* • *Computation* • *Critical Thinking* • *Community and Global Consciousness*	Means of Assessment/Criteria for Success *What are the criteria for success? What tools will be used to establish and measure success?*	Summary of Data: October 2011 *Summarize the findings. How close were the results to the criteria for success?*	Use of Results: October 2011 *What do the data tell us about our process? What, if anything, do we need to do to our program or department to improve? What resources are necessary?*
• *Critical Thinking*	Performance on lab assignments and exams	to be done Fall 2011	to be done Fall 2011

V. Departmental Engagement

1. What standing committees, if any, does your department maintain? What are the committee charges and membership?	Curriculum Committee M-PICT Industry Advisory Division Meetings CNET Department meeting CTIS Lab Advisory
2. What interdepartmental collaboration beyond college skills has your department been involved in during the past 4 years?	Division Curriculum Committee and Division Meetings
3. What has your department done since its last program review to establish connections with schools, institutions, organizations, businesses, and corporations in the community?	Cisco Regional Academy Replaced all CNET curriculum wholesale Migrated courses from Windows 2000 to 2008 VMware Academy 4300 building design and technical architecture Security curriculum KCI/CTIS open lab Pearson-VUE testing center Prometric testing center (pending)

4. In what ways if any, are you or have you worked with area high schools to align curriculum from the high school to your course?	Faculty have worked closely with Central County Occupational Center/ROP (CCOC/ROP) faculty through the Cisco Academy framework. CTIS participates in The Silicon Valley Information and Communication Technology Collaborative (SVICT) which was formed by Santa Clara Unified School District (SCUSD, K-12), Santa Clara Adult Education (SCAE), Central County Occupational Center/ROP (CCOC/ROP), Foothill Community College, and Ohlone Community College, North Valley Workforce Investment Board (NOVA WIB), Work2Future WIB, EDD, Cisco Systems, and Mastermind Education Inc. in order to provide information and communication technology education and career awareness education to K-14 students and adults in the greater Silicon Valley area.
5. In what ways if any, are you working with CSUs, UCs, private, or out-of-state institutions to align courses and develop articulation agreements?	As mentioned previously, CNET courses are not easily articulated given the heavy industry-driven focus. The primary goal of these courses and certificates is to enhance the skills and immediate employability of a transitioning workforce. However, we have been active in working with the Computer Science Department of San Jose State University, as well as, working with faculty at UC Santa Cruz.
Summary of Planning Goals and Action Plans	
6. What are your goals with respect to departmental engagement and how will those goals be measured?	The department shall also seek out innovative joint projects that will help establish and promote academic and career pathways through articulation and internship opportunities.

7. Are additional resources needed to accomplish departmental engagement goals? If yes, identify the resource, as well as the purpose and rationale for each resource.

Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports**

		student learning.	

VI. Professional Development		
1. List a sampling of professional development activities that faculty and staff have engaged in during the last two years.		Faculty have been active in conferences, workshops, and industry events. Key events include Code Camp, Wireshark, M-PICT conference, and Cisco educational events.
2. What opportunities does your department take to share professional development experiences with colleagues?		This is an area in which the department can improve upon. The division shall host a Faculty Forum once a quarter, where CTIS faculty will be brought together to share professional development experiences, best practices, classroom management techniques, as well as, student retention strategies.
3. In what ways have faculty shared, discussed, and used professional development activities to improve program effectiveness?		Faculty members have used information presented at various conferences for new course development (e.g., Information Storage Management).
4. In what ways have staff shared, discussed, and used professional development activities to improve program effectiveness? What professional development needs do you have in the coming years?		As a result of professional development activities changes have been implemented in hardware, software, and applications used in our program.
5. Are there unmet or upcoming professional development needs among faculty in this program? If yes, then please explain a proposed plan of action for addressing this need and any necessary resources.		Developing awareness for energy systems, advanced metering, and energy control systems for buildings will be a new development in integrating computing and networking technology in the coming three to five years. PG&E and Cisco are both expected to develop training programs in this area.
Summary of Planning Goals and Action Plans		
6. What are your goals with respect to professional development and how will those goals be measured?		Maintaining instructor and curricular currency.
7. Are additional resources needed to accomplish professional development goals? If yes, identify the resource, as well as the purpose and rationale for each resource.		
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**

VII. Support Services

Support Services

Consider the support services needed by your program when reflecting over the following questions		Comments or explanations of barriers and solutions.
1. Is there adequate clerical or administrative support for this program?	**Yes** | No	Yes, currently, but we have concerns for the future as budget cutbacks are implemented for 2010-2011.
2. Are there sufficient college and departmental computer labs available to support this program?	Yes | **No**	Student and instructor computers and software in the computer labs have to be periodically upgraded or replaced. This is a byproduct of new operating systems, applications, and programs that are resource intensive and can no longer be supported by the current generation of computers. We also maintain highly specialized and complex labs (Cisco, Microsoft, VMware) that require constant management and administration.
3. Are the library and media resources provided by the college sufficient to support up-to-date program instruction?	Yes | **No**	Safari U - establishing eTextbooks for current course. We also need updated software licenses.
4. Are adequate services provided in compliance with program needs for meeting health and safety guidelines?	**Yes** | No	Yes – computer labs are straightforward to maintain
5. Are the custodial services to this program in compliance with program needs for meeting health and safety guidelines?	**Yes** | No	Yes - computer labs are straightforward to maintain
6. Are accommodations for students with disabilities adequate, including alternative media, testing, and tutorial?	**Yes** | No	Yes – Labs are ADA compliant.
7. Are general tutorial services adequate?	Yes | **No**	Although we have instructional associates and students who can provide assistance in basic computing, we have a real need for tutors that have experienced in our more advanced CNET courses. In order to raise student retention, tutors are especially needed for Cisco and Microsoft Networking courses.

8. Are academic counseling and advising services available and/or adequate to support students enrolled in the program?	**Yes** | No	Yes – adequate services, but enhanced services are desired as we would like to provide more program and career pathway information/guidance for our students.
9. Do students have access to and can they effectively use appropriate information resources?	**Yes** | No	Students have access to full library services, the Internet, and wireless connectivity.
10. Specifically related to distance learning, do you have appropriate faculty support services and/or effective training for faculty teaching online?	**Yes** | No	Faculty who teach distant learning courses are required to attend extensive training in the Etudes course management system used by the College. Faculty are provided with continual ongoing support and training.
Marketing & Outreach		
11. What impact do you feel the college catalog, class schedule, and online schedule of classes have on marketing your program? Does the marketing accurately reflect your program, requirements, and services available?	Online schedule of classes has the most impact on marketing our program – the biggest increase in enrollment is seen in students who come to us through our website. CNET enrollment tends to have heavier walk-in student adds in the first week than other departments. HEIGHTS articles are effective, but there are too few opportunities to promote more than one or two offerings.	
12. What impact does the college or departmental website have on marketing your program?	The Division has its own website which provides links to all administrative staff and faculty including email addresses, class schedule, staff availability, campus location, and office hours. Additional links include the College home page, College class schedule, registration, and student resources. The Division website is introduced and demonstrated in the first session of each course.	
13. Is there any additional assistance from marketing that would benefit your program? If yes, explain.	It would be helpful if we could get the email addresses of students who have taken the prerequisites for classes we are about to offer, so we could send an email announcement directly to them. Faculty have been effective in reaching out to students from their past courses. It would also be helpful if the Division could receive help in developing a marketing plan for programs.	

14. If you were to collaborate with the Outreach staff, what activities would be beneficial in reaching new students?		It is important for the College to be able to educate potential students as to real career opportunities that exist. There is a great deal of misinformation. If we can help place better educated students on career and academic pathways, then there will be a chance for greater student focus which should result in higher student retention and program completion.
Programs, clubs, organizations, and special activities for students		
15. List the clubs that are designed specifically for students in this program. Describe their significant accomplishments.		The students have organized a local Association of Computing Machinery (ACM), which has about 60 members. The effort has been mostly student-driven. There are untapped possibilities in having students compete both locally and nationally. The Division has provided an opportunity for Foothill ACM students to meet with the San Jose State Computing Club. Joint activities should be further encouraged. Since a good portion of CNET students are professionals working in the field, participation in student clubs has not been active.
16. List any awards, honors, scholarships, or other notable accomplishments of students in this program.		Many of our students have been actively engaged in the NASA/AMES internship program. Raising student accomplishments is an important area for us to further develop.
Summary of Planning Goals and Action Plans		
17. What are your goals with respect to support services and how will those goals be measured?		Continue improving our working relationship and communication with support staff. The reinstatement of a lab advisory committee will be crucial in supporting these goals. Success can be measured through lab availability and up-time.
18. Are additional resources needed to accomplish your support services goals? If yes, identify the resource, as well as the purpose and rationale for each resource.		
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**

VIII. Career and Technical Education Programs	
Response to Labor Market Demand	
1. How does your program meet labor market demand? Cite specific examples and sources.	Enterprise networking is a constantly evolving discipline. Operating systems, the nature of network traffic, and user applications are constantly in flux. Market demand is met by concurrent changes in course and certificate offerings.
2. Given the number of enrollments projected for the program and necessary to support the program, are there enough openings locally to permit placement of the expected number of graduates?	Currently demand for trained IT professionals exceeds the available supply. However, the IT industry as whole is unpredictable. The industry is marked by cyclical changes that cannot be predicted.
3. Has the job market been: declining slowly? steady? growing slowly? growing rapidly? newly emerging?	Current status is growing rapidly. In one emerging application, smart energy monitoring and management systems, we expect significant demand for training in the next three to five years.
4. What is the average starting salary a student can expect to make after completing a certificate or degree?	Average starting salary is $60,000 per year. Highly skilled networking professionals often earn $80,000 annually or more, especially when trained in connected fields such as security, energy management, etc.
5. What is the projected average percentage of salary increase in 2 years? 4 years?	Salary increases of 2 to 4 % per year.
Response to Program Credibility/Viability	
6. If advanced degrees are typically needed for career advancement, will the courses required for this program transfer towards completion of the requirements for those degrees?	The courses that are offered provide the needed skills in the installation, configuration, and maintenance of computer network infrastructure, including operating systems, protocols, directory services, routers, switches, network security, virtual and wireless technologies. A student will not be able to advance in the field without a complete understanding of these fundamental networking technologies.
7. If yes, are the courses in your program aligned and/or articulated with the four-year institutions.	Yes

8. Will this preparation permit students to stay current in their field? Does the program teach basic principles and theory, as well as applications? Is it current? Is it of sufficient rigor to assure the capacity to continue to follow the literature and learn new techniques? Is it of sufficient generality to allow for later shifts in career?	Courses and Certificate programs are continually upgraded to meet changes in operating systems, applications, and protocols. Expansion of CNET into smart grid / smart energy applications will allow networking professionals to expand their application into emerging and fast growing fields.	
9. Does this preparation provide a significant secondary expertise to primary careers? If yes, explain the purpose of the training – is it designed primarily or in part to meet the needs of those already employed for upward mobility, entrepreneurship, or other career upgrade?	Several of our students are currently employed within the industry. Many are here for the expressed purpose in gaining new skills to enhance their professional growth and development. Course offerings provide entry-level employment, retraining, and also provide managers with the necessary skills to understand, direct, and effectively administer underlying network staff and resources.	
10. Describe any pre-collegiate or noncredit pathways that exist to direct students into the program?	This is an area that the department had begun discussing prior to the recent economic crisis. Currently, many of our students are working professionals who are seeking advanced skills development. There is a great need for “bridge” courses that could provide basic skills students with a viable path into professional entry-level ICT careers.	

11. How does this program prepare students for competitive employment?	The department seeks to enhance students' knowledge in information communication technology, administration and management. Programs are designed to raise skills in systems analysis, critical thinking, active listening, judgment and decision making, monitoring, speaking, systems evaluation, time management, active learning, complex problem solving, programming, and troubleshooting. Specific industry areas skills include, but not limited to, (EMSI Descriptions): Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures.	
Advisory Board		

12. List your advisory board members. The list of advisory board members should include their job titles as well as their affiliations, and an accompanying explanation should make clear that the professionals on this committee represent those within the industry who would hire graduates of a proposed CTE program.	There is a real need to expand a department-specific ICT advisory group. Faculty have been working with an impressive advisory group through our M-PICT relationship (Cisco, Juniper Networks). CNET Faculty have also been active in the Division Advisory Committee. Advisory board members who have directly worked with CNET faculty are: **Mahmood Khan, MBA, B.Sc., (*PMP) -** Mahmood Khan is the President of Global Enterprise Strategy and Implementation (GESI). Prior to forming GESI, Mahmood served as a Program/Project Manager-Practice Principal with Hewlett Packard Consulting and Integration. Prior to HP and during the past 20+ years in IT, he has worked at IBM Global Services, start-up Bay Area consulting company, ROLM/Siemens and Wang. Most of his experience has been with large customers in Telecommunication, Financial/Banking and Manufacturing industries to transform enterprise IT, application development, and global operations. **Donna Dulo, MS, MA, MSCIS, MBA – Department of Defense -** Donna is a mathematician and computer scientist for the Department of Defense currently heading the Department of Computational Statistics for the US Army in Monterey.	
13. List the dates and number of members attending of your most recent advisory board meetings.		

14. What have been the major outcomes of your advisory board meetings? Of those outcomes, which have been acted upon, and what is your plan of action with regard to other outcomes discussed?	The Advisory Board provides feedback and industry perspectives related to CTIS program development and direction. As a result of our last meeting, it was recommended that: In addition to the technical skills, employers are looking for people with… → People skills → Teamwork skills → Reading, writing and presentation skills → Judgment skills → Strong understanding of ethics and personal responsibility. → Focus on value or "wealth" creation. Students should be prepared to face global competition. There seems to be an EDD (Education Deficiency Disorder) in the United States. USA is great for innovation but many good jobs are going outside. The group has also discussed exploring new program in emerging areas such as: **Data Center Virtualization** Grid computing as a utility is driving a new set of data center economics that is fundamental to the shift we are seeing in many other areas, some detailed below. For example, companies like 3Tera offer tools which allow complex Web applications to be built, deployed and managed using visual tools on massive utility computing grids will fundamentally change how future data centers will used as well as the underlying cost structure of deploying and managing Web applications.
Program Accreditation	
15. Is this program subject to approval by specialized state, regional, or national accrediting agencies?	No
16. What is the program's accreditation status?	N/A

17. Indicate recommendations of the most recent accreditation evaluation of the program and corrective actions taken or planned. Most recent accreditation report and all additional pertinent documentation and explanations should be available on site for consultant review.	N/A	
18. Provide a brief analysis of student performance on licensure or board exams on first attempt.	N/A	
19. What indicators does your program use to determine success of our students after completion?	N/A	
20. Does your program survey employers for satisfaction of our students who have earned a degree/certificate? Provide brief analysis of employer satisfaction.	N/A	
21. Does the department's analysis of labor market demand, advisory board recommendations, and accreditation status (if applicable) reflect the data?	N/A	
22. Have any/all issues been identified in the program plan and are they adequately addressed with appropriate action plans? Explain.	N/A	
Summary of Planning Goals and Action Plans		

23. What are your 4-year goals based on areas identified in the Career and Technical Education section of the program plan and how will those goals be measured?	Institutions of higher education have a social obligation to offer individuals an opportunity to improve their lives through better education. It is essential that despite current economic conditions, we find creative and innovative means to increase **access and awareness** so that underserved populations have the ability to begin a path of self-improvement. In addition to raising access and awareness, we must endeavor to remove all possible barriers that stand in the way of student success and persistence. Multiple studies have shown that an institution's constant pursuit of **excellence in teaching and learning** has a tremendous positive effect upon student success and persistence. The development of clear strategic objectives that guide institutional objectives can lead to better program development and student learning outcomes. In addition to clear learning outcomes, there is significant research that observes students' early and frequent interaction with institutional faculty and staff can lead to higher retention levels. High levels of interaction lead to greater feeling of academic competence along with an improved sense of self-efficacy. All operations should be grounded in this philosophy. The development of **workforce readiness and communication** is fundamental need in order to improve our community. When students enter or re-enter the workforce, their newly acquired skills make them more productive, while enhancing their individual earning potential and fueling local economic growth. In order to improve and promote **program effectiveness, planning and assessment** it is necessary to seek ways to identify, collect, and evaluate meaningful data that could lead to improved instruction and higher academic quality. We will work closely with the Office of Curriculum and Instruction to identify existing (and new) data sources that might be utilized for better

		program development and decision making. From a project management perspective, we shall endeavor to (1) improve institutional methods of identification, servicing, and progress tracking for career technical education students; (2) improve career and academic counseling resources for CTE students focusing on student program selection and student retention; (3) research and implement an ePortfolio system for CTE student career planning and workforce preparation; (4) create a scalable, multidisciplinary Workforce Literacy Skills Program; (5) create a new model for inter-organizational CTE resource and service coordination; (6) create a new pathways model for internship and job placement opportunities leading to higher wage and high demand areas.	
24. Are additional resources needed to accomplish career and technical education goals? If yes, identify the resource, as well as the purpose and rationale for each resource.			
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**	

IX. Resource Planning: Personnel, Technology, Facilities, and Budget	
Faculty	
1. How does your PT/FT ratio impact the program?	The PT/FT ratio is 1:2 Given consistent growth in enrollment, WSCH, productivity, and job demand, the department needs to grow our FTEF by one position. The addition of a new CNET faculty member would provide the department with the ability to immediately increase current course offerings by 35%.
2. What staffing needs do you anticipate over the next four years. (Consider: retirements, PDL, reassigned time, turnover, growth or reduction of the program)	It has been extremely challenging to recruit and retain high-quality certified part-time faculty to meet the growing demands of this department. In reviewing CTIS enrollments from 1997-2006, the CNET department represents 16% of overall division enrollments. There is great deal of work needed in developing new curriculum that will meet the growing demands for ICT education. Courses are also being developed for VMware enterprise virtualization technology. The CTIS division is participating in two major grants projects specifically designed for enhancing ICT education. We are one of four community colleges participating in the NSF funded Mid-Pacific Information Communication Technology (M-PICT) consortium. One of our stated goals within the grant is to grow the number of underrepresented populations in pursuing ICT education. Our primary need in CNET is to add 1 additional Cisco certified faculty position. Our current Cisco certified faculty member is teaching to capacity. It has been extremely challenging to find certified part-time faculty that are consistently available for both instruction and curriculum development. The addition of a new faculty member would allow the division to double our current Cisco course offerings. Reliance upon one faculty member has limited our ability to keep in pace with growing demand.
Classified Staff	

3. What staffing needs do you anticipate over the next four years. (Consider: retirements, PDL, reassigned time, turnover, growth or reduction of the program)	CTIS has ten laboratories and 8 classrooms with over 330 computers to maintain and update. In addition to the classroom labs, we have a VMware lab that utilizes 31 servers, 7 routers, and 4 switches. The Cisco lab is comprised of 24 Dell PCs, 3 Servers, 39 routers and 32 switches. One instructional computer laboratory administrator has been working with these systems with occasional help from other staff. The administrator's duties have also been "shared" with other division technology needs. Given the complexity and high availability need for these systems, a dedicated administrator would be ideal.	
Technology and Equipment		
4. Are the existing equipment and supplies adequate for meeting the needs of the instructional program?	Lab computers need periodic upgrades to meet the resource demands of new operating systems, applications, and network traffic.	
5. Do you have adequate resources to support ADA needs in your physical and/or online courses and classrooms?	Yes	
6. Is the technology used in your distance education courses appropriate to the nature and objectives of your courses? Please explain how it is appropriate or what changes are underway to make it appropriate. Explain.	Yes	
Technology & Equipment Definitions		
• **Non-instructional Equipment and Supplies:** includes equipment for "office use" that is non-instructional and that is not used in a lab or classroom – it includes non-programmatic equipment for individual instructors and staff, such as a desktop computer for office use. Desktop technology (computers, printers, scanners, faxes) and software requests are processed through your Dean or Director.		
• **Instructional Equipment and Supplies:** includes technology, software, and supplies used in courses or labs, including occupational program equipment. Instructional program equipment requests are prioritized by the department and then by the Dean or Director.		
• **Durable Equipment and Furniture:** includes non-instructional, non-technology equipment (chairs, tables, filing cabinets, vehicles, etc.) necessary to improve the operational functioning of the program/department.		
• **Note:** It is recommended that divisions perform and maintain an inventory of all their technology and equipment.		
Facilities		
7. Are your facilities accessible to students with disabilities?	Yes	

8. List needs for upgrades for existing spaces	Servers for the VMware lab have been set up in a storage room in the 4300 building. The long term goal is to convert this storage room into an instructional lab space. Given the heat generated by the 31 servers, there is a need to upgrade the HVAC system. When discussing the need with facilities, the upgrade was estimated to require $50k.	
9. List any new spaces that are needed	Conversion of current storage room into an instructional CNET lab.	
10. Identify any long-term maintenance needs.	Standard building maintenance and repair including student desks/chairs, carpets, paint, and doorway equipment are continually needed. There is a particular problem with the doors in that through age and use, people must “slam” the door in order to secure the lock.	
11. Are available general use facilities, such as classrooms, laboratories, and faculty office/work space adequate to support the program? Please explain.	No. Instructional: Networking hardware and software to support language and networking classes. Routers, WiFi, security software, online software, servers to augment online courses that our CMS (Etudes) does not support.	
12. Are work orders, repairs, and support from district maintenance adequate and timely? Please explain.	Yes	
Budget		
13. Are the A-budget and B-budget allocations sufficient to meet student needs in your department?	No. Continually declining B budgets have raised many challenges in maintaining quality operations and services by the division. We have been also to leverage community donations of hardware to offset our expenditures. Staff have also been very frugal in finding low cost solutions for our continual maintenance and repair needs.	
14. Describe areas where your budget may be inadequate to fulfill program goals and mission.	We do not currently have the budget to supplement student learning through tutorial services. We would like to be able to recruit and pay specialized student tutors that would be able to support struggling students. Our inability to provide this essential support has limited the ability of putting access into action. As we receive students who are academically lesser prepared, attrition rates raise significantly.	

15. Are there ways to use existing funds differently within your department to meet changing needs?		We are already utilizing cost saving strategies to their maximum and will continue to do so.
Summary of Planning Goals and Action Plans		
16. What are your goals with respect to resource planning and how will those goals be measured?		As a result of this program review, departments will meet quarterly to discuss resource planning, prioritization, and use. Changes will be reflected in annual updates to the program review.
17. Are additional resources needed to accomplish your resource planning goals? If yes, identify the resource, as well as the purpose and rationale for each resource.		
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**
HVAC Upgrade	To adequately cool room/lab that currently houses 31 servers, but will grow as program expands.	The investment directly supports operations planning and protects high-end equipment that was secured through donation, but would be impossible to easily replace.
Server upgrades	To consolidate servers for energy savings to the College and to increase reliability of server services	The investment directly supports operations planning

X. Final Summary of Goals, Commitments to Action, and Resource Requests

1. Upon review of this program plan, provide a comprehensive summary of goals met or in progress and resources awarded from the previous program plan.

Key Division Priorities:

- Access and awareness
- Excellence in teaching and learning
- Workforce readiness and communication
- Program effectiveness – planning and assessment

Key CNET Departmental Objectives: The Department strives to create a student-centered learning environment that

supports:

- Training professional workers and technicians,
- Training students in current and emerging technologies, techniques, and methodologies related to information communication technology,
- To serve adult learners for life-long learning.

In order to meet these objectives, the Department shall:

- Maintain and enhance instructor and curricular currency.
- Identify and address factors influencing student drops and late Ws.
- Identify ways to encourage and increase certificate/degree program completion.
- Retire outdated curricula and create new relevant courses.
- Identify problem areas for underrepresented populations.
- Examine and address student equity issues in the areas of retention, success, and non-success.
- Improve transfer success.
- Establish strong career pathways.
- Improve our ability to meet current and future industry demands.
- Continue strategic scheduling that supports certificate/degree completion.
- Seek increased internship opportunities for our students.
- Increase our industry partnerships through advisory committee, internships, and workforce program development.
- Work closely with the College marketing department in planning and implementing better promotion for programs.
- Develop and implement “bridge” courses that could provide basic skills students with a viable path into professional ICT careers.
- Improve institutional methods of identification, servicing, and progress tracking for career technical education students.
- Improve career and academic counseling resources for CTE students focusing on student program selection and student retention.
- Create a new pathways model for internship and job placement opportunities leading to higher wage and high demand areas.

Goal /Purpose - Met or In Progress	Resource(s) Awarded	Related Learning Outcomes	Related Strategic Initiative or Core Mission
Increase our industry partnerships through advisory committee,	None.	Design a network infrastructure to support specific user and	Workforce

internships, and workforce program development		business requirements.	

2. Upon review of this program plan, provide a summary of current or continuing goals and resources needed.

Note: If you are requesting resources this year, these items have to be included in your current program review. If you want the college to understand your full range of need, list every current and upcoming resource need in this section.

Goal/Purpose – Current or Continuing	**Resource(s) Requested** (Costs need to be included)	**Related Learning Outcomes**	**Related Strategic Initiative or Core Mission**
NEW CNET Faculty	The addition of a new CNET faculty member would provide the department with the ability to immediately increase current course offerings by 35%.	Optimize the performance, reliability, and availability of network services.	Workforce
HVAC and server upgrades; Lab computers need periodic upgrades to meet the resource demands of new operating systems, applications, and network traffic.	To adequately cool room/lab that currently houses 31 servers, but will grow as program expands. $50,000	Optimize the performance, reliability, and availability of network services.	Workforce

Judy Baker	
Supervising Administrator Signature	*Completion Date December 17, 2011*