2018 Network Engineering Technology Annual Program Plan

NETX Network Engineering Technology

I.A.   Program Profile: Purpose

Describe the program(s) to be reviewed. What is the purpose of the program and how does it contribute to the mission of Skyline College?

Narrative

Mission: To provide fundamental and advanced Career Technical Education in the field of Information Technology as it relates to end-user device support, networking technologies, security, and systems administration.

Network Engineering Technology Department's Goals:

1. To provide students the requisite knowledge and skills for entry level employment

2. To provide working professionals the advanced knowledge and skills for career advancement

3. To provide all students the knowledge and skills prerequisite to obtaining industry-recognized certifications.

The program's goals are to provide inexperienced students with entry-level skills necessary for employment in the Network Engineering field and to provide working professionals with advanced training for job retention or advancement. These goals are reflected in the form of an A.S. Degree and Certificates, all based on professional curriculum drawn from industry practices and standards. The pedagogy employs a combination of hands-on application of skills, formal education in theory and application, and critical thinking and problem solving.

The program contributes to the mission of Skyline College with "student-centered education leading to transfer, career advancement, basic skills development and personal enrichment," and by "preparing students to be ... critical thinkers, proficient users of technology, effective communicators, socially responsible lifelong learners." Course content provides "relevant, recent and evolving curriculum (including) emerging areas of study (in technology)."

The program contributes to the mission of the District by fostering teamwork and individual effort, "encouraging students to develop their general understanding of human effort and achievement," and by providing courses which "allow students to transfer to baccalaureate institutions." The Network Engineering program provides "occupational education and training programs directed toward career development, in cooperation with business, industry, labor and public service agencies." The program contributes to occupational training, workforce development and the mission and goals of the California Community Colleges,

advancing "community and industry partnerships, and workforce and economic development."

I.B. Program Planning Team

Annual program planning is intended to be a collaborative process which promotes dialogue and reflection. Please identify all individuals who contributed to or shaped the narrative. Include names and the title or role of each person.

Narrative

Contributors

Norman del Prado - Program Coordinator/Professor

Ray Hernandez - Dean of SMT

Walter Hanley - Part Time Faculty / Working Professional

Roger Lohmann - Part Time Faculty / Working Professional

Peter Dignadice - Graduate / Working Professional

II.A. **Analysis: Progress on Prior Program Objectives (Goals) and Activities**
Describe the progress made on previously established program objectives (goals) including identification of achievements or areas in which further effort is needed. New programs which have not yet established CPR/APP objectives should discuss progress on program implementation or activities.

Narrative
1- Marketing Material for NETX Program
a. Started to update previous Telecom material to new NETX program. Coordinating with SMT Program Coordinator and Dean Hernandez in getting material updated, approved printed and incorporated on website. Planning to include past graduate student's testimonials.

2- Outreach by NETX
a. Participate in the following on campus activities
i. Meet your Majors
ii. High School Recruitments - Sequoia High School District
iii. Meeting with skyline college counselor

3- From our 2017 Comprehensive Program Review President Regina and Dean Hernandez have supported and elevated the priority of developing a Cybersecurity and Cloud certificate.
a. In progress researching other education institutions offering similar degrees and planning to attend training classes.

II.B.   Analysis: Program Environment
Describe any recent external or internal changes impacting the program or which are expected to impact the program in the next year. Please include when the specified changes occurred or are expected to occur.

Narrative
No major impact on the program are anticipated. We are updating our program to reflect the industry's demand for our graduates to have focus on cybersecurity and cloud infrastructure.

II.C. **Analysis: Student Learning Outcomes (SLOs and PSLOs)**

(1) Instructional Programs Only: Describe what was learned from the assessment of course SLOs for the current and past year.

(2) Student Service Programs Only: If PSLOs are being assessed this year (3-year cycle), describe what was learned. If no assessment was done because this is an off-cycle year, please state that this item is not applicable.

Narrative

As of the 2016-2019 Assessment Cycle, we are in track to complete all course.

Our classes report students are meeting or exceeding our SLO standards. Hands on activity using industry equipment have been historical the most beneficial to student's learning.

For Spring 2018, there will be 3 courses to be assessed: NETX 413 - Wireless, NETX 420 - PC Repair and NETX 423 - Mobile device. This will be first offering NETX 423 - Mobile device.

No changes in the SLOs or Assessment Tools is planned.

III.A. Reflection: Considering Key Findings

Consider the previous analysis of progress achieved, program environment, and course-level SLOs or PSLOs (if applicable). What are the key findings and/or conclusions drawn? Discuss how what was learned can be used to improve the program's effectiveness.

Narrative

Our Program's performance continues to exceed college rates. Program demographics remain stable. Criteria is met with all SLOs. Feedback recently employed graduates and employers validate our program's strategy in core courses and new courses in meeting industry practices. The valuable practical hands-on and case based scenario on industry-standard equipment remains a vital ingredient of the Program's success.

Productivity measured by Load during 2016-2017 was lower than previous years; at 358 from previous 403, and the Load is below the College rate of 513. The lower Program Load can be attributed to lower Headcount Census, which is historically related to improvements in the job sector. In many cases, students are selecting employment over additional education. This has been the historical trend for past 3 decades.

Student characteristics of gender and age are historically, markedly different from the College; the majority 83% are male with 11% female, and the predominant age groups are 23-28 25% and 29-39 35% reflect an older, male population of working professionals. Ethnicity of program students approximates that of the College. The Educational Goals of program students continues trending toward with degree and transfer 68% and CTE certificate 22%. The trend toward positive student valuation of the AS Degree with or without transfer is strongly encouraged by program instructors.

Outcomes for Success are up at 87% and exceeds the College 73% rates for the period.

III.B. Reflection: ISLOs

If your program participated in assessment of ISLOs this year:

(1) What are the findings and/or conclusions drawn?

(2) Does the program intend to make any changes or investigate further based on the findings? If so, briefly describe what the program intends to do.

Narrative

The department did not participate.

IV.A. **Strategy for Program Enhancement: Continuation/Modification**
Indicate whether the program is continuing implementation of the last CPR strategy or revising the strategy. Please describe the modifications if revisions are intended.

Note: Any new strategies should be linked to Institutional Goals through creation of objectives in the next section. If the program has not yet participated in comprehensive program review, an annual or multi-year strategy can be defined in this item.

Narrative
Progress toward the recommendations from the prior Program Review (May 2017):

1. Focusing on new industry technologies in cyber security and cloud base infrastructure
   a. Researching other educational institution offering related certificates
   b. Researching industry needs
   c. Requesting and will be attending related training

IV.B. **Strategy for Program Enhancement: Action Plan and Resource Requests**

Based on the most recent CPR and any desired modifications, develop an annual action plan with related resource requests. No narrative response will be entered in this section, but the objectives you create will be printed automatically in the APP report under this item.

(1) To begin, click on PLANNING at the top of the page, then CREATE A NEW OBJECTIVE. To view previously created objectives, click PLANNING at the top of the page, then VIEW MY OBJECTIVE.
(2) IMPORTANT! Make sure to associate each objective to this standard in the APP. Need help? Contact the PRIE Office for further instructions. Institutional Goals.

Narrative

Our program has been successful in providing working professionals and college students the education to be employed in the industry but the training our program provides on current industry equipment.   Industry advisors and students who have graduated and currently employed in industry have provided testimonials to importance and value of learning on real current industry equipment.

Associated Objectives
📕 493-Develop Cybersecurity Certificate 📕 561-Outreach Program - Travelling network lab 📕 557-Update and Maintaining equipment - hardware and software
📕 Budget and Objectives of Network Engineering Technology Department

Objectives of Network Engineering Technology Department

Planning Year: 2018-2019

Planning Year: 2018-2019

Unit Code	Planning Unit	Unit Manager
2414NETX00	**Network Engineering Technology**	**Del Prado, Norman**

Objective Status: New/In Progress

493   Develop Cybersecurity Certificate

The industry, as result of consumer and busines use and as well as evolving Internet of Things has created a demand requiring our for our network engineers graduates to be adapt to network security practises and hands on experience Cybersecurity hardware and software tools. Cybersecurity has to be incorporate at different levels of network infrastructure.

557   Update and Maintaining equipment - hardware and software

Our students have been successful in gaining employment or being promoted to new position as a result of skills acquired from hands on experience on current industry standard equipment offered by our Network Engineering Program.

561   Outreach Program - Travelling network lab

In improve our outreach program we need to develop a portable network lab that demonstrates the valuable hands on experience that students acquire from our program. We have portable rack used in cloud (data center) and network infrastructure equipment such as firewall, routers, switch, wireless access point, analyzers and cabling. This will be used in presentations on campus and outside campus presentation. When available used in our introduction courses.