2019-20 Network Engineering Technology Annual Program Plan

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 & Consultant

Ray Hernandez - Dean of SMT

Dean Scurries - Part Time Faculty / Working Professional

Roger Lohman - 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. Our proposed NETX program material was approved by Skyline marketing communication. We have used in our presentations on campus to other potential student candidates and high school recruitment. Past graduate student's testimonials were not allowed on the program material but added to NETX link. We will continue to enhance our NETX web page with additional information to assist counselor and potential students and working professionals

2. Outreach by NETX faculty, graduates and advance program
   a. Participate in the following on campus activities
      i. Meet your Majors
      ii. High School Recruitment - Sequoia High School District
      iii. Meeting with skyline college counselor - Meta Major

   We will investigate options in the SWP for dual enrollment and adult education pathway. The success of this pathways is provide classes that have current industry equipment (hardware and software) for students to gain the knowledge and skill sets to meet the current needs of the industry.

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. Cybersecurity certificate, Dean Hernandez and I agreed on strategy to offer 2 additional courses and update our existing classes with security and relevant hardware and software.
   b. Cloud certificate is still in being researched. One conclusion is a virtualization class such as VM Ware should be offered.

   We will continue to research 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
With the advent of the Corona Virus Pandemic, we shifted our priorities and effort to converting all our in class network lab activities and lectures to be provided online. This not the best learning experience for our students but will salvage the existing in class disruption. The other preempt priority was relocation, consolidation and redesign of 3 network lab/class rooms into 2 lecture classroom. There were other required program effort that affected our progress such as impact on the program are anticipated. Priority to relocate and redesign our network lab classes is taking

After consulting our Advisory Committee, they stressed the importance of those topic to be incorporated into existing classes if we pursue banking NETX 423 or NETX 450.

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.

In the Fall 2018, NETX 423 - Mobile device was evaluated and meet SLO.

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 industry case based scenario on industry standard equipment remains a vital ingredient of the Program's success. Productivity measured by Load during 2017-2018 was higher than previous years; at 445 by 24.3 increase from previous 358 and the Load is below the College rate of 520 which is expected from similar technical programs. 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 82.1 % are male with 11.4% female, and the predominant age groups are 23-28 30%and 29-39 32.5% 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 71.5% and CTE certificate 27%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 81.5% and exceeds the College 74.6rates for the period. Retention is 89.7% exceeds College 87.3%.

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. Identified courses to be included in the cyber security certificate

2. Continuing to research courses or certificate in cloud base infrastructure

3. Recruitment - Established communication with Counselor and High School/Adult Education for pathways

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. Need help? Contact the PRIE Office for further instructions.

Narrative
See planning module

Associated Objectives
837-Develop course and labs for cybersecurity certificate

734-Outreach Program - Travelling network lab

838-Update and Maintain network lab equpme - hardware and software

Enhanced Budget with Objectives and Tasks
Enhanced Budget with Objectives of Network Engineering Technology unit