Skyline College

Program Name:

Network Engineering Technologies

Program Review
Executive Summary

Program Mission and Goals

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.

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.

Three Strengths of the Program

First Strength: Curriculum Focused on Marketable Employment Skills

The NETX curriculum prepares students with marketable skills and knowledge. The program's content is based on the skills and knowledge that employers in the IT industry tell us they require from their new hires and employees seeking career advancement. Students routinely report applying their newly learned skills and knowledge on the job.

Second Strength: Industry Experienced Instructors Promote Success & Retention

NETX program instructors are working Information Technology professionals; their varied and specialized experience allows them to connect hands-on skills with conceptual knowledge in a practical, common sense manner appealing to adult learners. According to PRIE, NETX has historically evidenced high retention and success rates, and, while many factors contribute to this success, we believe much of this success owes to the program's instructional staff.

Third Strength: Classroom Lab Environments Duplicate the Real World IT Workplace

The NETX program's lab facilities duplicate the hardware and software found in real-world IT industry infrastructures; moreover, the program's facilities keep pace with emerging technologies as the IT industry evolves. Authentic learning environments allow students to easily transfer their skills and knowledge to the workplace. Learning in our labs is as close to learning on-the-job as we can make it.

Three Suggestions for Improvement

First Suggestion: Marketing Materials for the NETX Program

The NETX program is focused on increasing its visibility within the community as a source of Information Technology Career Technical Education. NETX believes its current marketing materials are insufficient; additionally, the program's pages on the college Web site paint an incomplete picture of the NETX program and its successful, working graduates.

NETX is currently working with the Center for Workforce Development to develop viable marketing materials which promote the training and job opportunities available to its students. The program is also aligning itself with the California Community Colleges Information Technology Technician Pathway (ITTP) to advertise its course offerings and certification pathways to prospective students. NETX will also step up its efforts to work with the college to develop a Web presence which adequately represents the success of the program to prospective students.

Second Suggestion: Outreach by NETX

The Network Engineering Technologies program (NETX) began as a Telecommunications program (TCOM), with the mission of addressing skills gaps among working professionals in the telecommunications industry and offering classes mostly during the evening hours. Presently, NETX realizes that it is overlooking potential candidates among the college and high school student populations.

The NETX program plans to reach out to the daytime student population at the college, especially those with demographics which are underrepresented in the program, specifically the female student population and all students in the 18-22 age demographic. Additionally, the program plans to reach out to the community's high school student populations.

To accomplish these goals, the program is currently building a working relationship with the Center for Workforce Development and other CTE resources at the college. NETX is committing to active participation in "Meet Your Major," "Expanding Your Horizons," and other college events. The program is actively engaging with the college counseling services. And NETX is exploring possible Career Pathways within the community's high schools.

Third Suggestion: Creating NETX Internships

The NETX program believes it can better serve its students by creating a formal internship program in cooperation with community businesses; this is an especially valuable opportunity for students who have little or no work history in the IT field.

NETX is committed to an active partnership with the CTE and Career resources at the College to explore and implement a sustaining internship program which can serve its students and the interests of the community.

Short Summary of Findings

The NETX program derives its strength from real world learning environments, curriculum focused on marketable skills and knowledge, and instructors with a wealth of on-the-job experience in the IT industry. The program curriculum is continually updated to reflect the practices and emerging technologies within the IT industry. As a Career Technical Education program, NETX contributes to realizing the college and district missions and goals, and its course level assessments map successfully to the college ISLOs for Citizenship, Critical Thinking, Effective Communication, Information Literacy and Lifelong Wellness.

NETX is assuming an active part among the community colleges in the BACCC to share curriculum and is exploring the use of remote facilities, such as NetLab+. NETX will shortly list its career pathways in the California Community College Information Technology Technician Pathway (ITTP). The program is updating its marketing materials, and plans an extensive outreach to the college's daytime and underrepresented students as well as the community's high school students.

The resources required to update existing curriculum and create new course offerings in response to the continuing evolution of technology requires considerable resources, both hardware and software as well as instructor time to develop a curriculum focused on marketable skills and knowledge. Adequate funding for the hardware and software resources to align the program with the evolving IT industry has always been of concern to the program.

Faculty Signatures

Norman del Prado	Walter Hanley	
Type in name & Sign	*Type in name & Sign*	*Type in name & Sign*
Type in name & Sign	*Type in name & Sign*	*Type in name & Sign*
Type in name & Sign	*Type in name & Sign*	*Type in name & Sign*

Division Dean: _____
Type in name & Sign

Date Submitted: _____

Program Title: **Network Engineering Technologies**

Date Submitted: **31st of March 30, 2017**

1. **Planning Group Participants** (include PT& FT faculty, staff, students, stakeholders)
   List Names and Positions:
   Norman del Prado – Program Coordinator/Professor
   Walter Hanley – Assistant Professor
   Raymond Hernandez – Dean SMT
   Peter Dignadice – Student

2. **Contact Person** (include e-mail and telephone):

   Norman del Prado
   delpradon@smccd.edu
   (650)738-4495

3. **Program Information**

   3A. Program Personnel

   Identify the number of personnel (administrators, faculty, classified, volunteers, and student workers) in the program:

FT Faculty:	**1**	**PT/OL Faculty (FTE):**	**4**
FT Classified:		**PT Classified (FTE):**	
Volunteers:	**2**	**Student Workers:**	**1**

3B. Program Mission and Goals

State the goals/focus of the program and how the program contributes to the mission and priorities of the College and District. Discuss how this program coordinates, impacts and interacts with other programs in the College. Explain how this program meets the needs of our diverse community. (200 word limit recommended)

The NETX program's mission of providing fundamental and advanced Career Technical Education (CTE) in the field of Information Technology supports the District's stated mission for CTE programs to "... provide career and technical education and training programs directed toward career development, in cooperation with business, industry, labor, and public service agencies...." The NETX program curriculum is industry driven and sensitive to community needs. In keeping with the College's stated mission and values, NETX offers an all-inclusive environment for students in which diversity is welcomed; the IT community itself, with which the program is closely aligned, is both global and diverse in its makeup. Program faculty is committed to helping every student achieve intellectual, cultural, social, economic, and personal fulfillment.

4. Summary of Student Learning Outcomes and Program Data

4A. Drawing from the TracDat PSLO report, summarize recent course and/or program SLO assessment, identify trends and discuss areas in need of improvement.
Submit the TracDat PSLO report with the completed comprehensive program review report.
Tool: https://sanmateo.tracdat.com/tracdat/

Respond to the following:

- Review the PSLO report and note any trends over the last five years
  - Instruction: Highlight the major areas on the course and program level in which students are doing well and those in need of improvement.
  - Student Services: Highlight the major areas in which students are doing well and those in need of improvement, including on the course level when applicable.
  - Career Technical Education: Note any trends in the last three years compared to the preceding three years or further.
- Identify changes that have occurred in your program as a result of annual SLO assessment.
- Explain any modifications to the program's SLO assessment process or schedule.
- Note that the PSLOs on TracDat match the ones listed on the departmental/ service area website and in the College Catalog.

Type your answer here:

PSLO report is attached.

NETX is a Career Technical Education program.

The trend we can identify is success in the assessment of all course-level SLOs, in which 17 courses with a combined total of 43 active SLOs have met or exceeded their success criteria in the past two assessment cycles (2010-2013 and 2013-2015). Concurrent with that success, two course-level SLOs, one each for NETX 430 and NETX 440, required reassessment when the criteria for each was not met; however, during reassessment at the next course offering those same SLO assessments resulted in the criteria being met or exceeded---this with no change to the success criteria, the procedures for measurement, or the assessment tools. For the record, each course has three active SLOs, including the SLOs in question, which are concurrently assessed; unaccountably, the other two SLOs which were concurrently assessed for each class met or exceeded the success criteria. These two events remain unexplained; we consider them to be anomalies.

As a result of the annual SLO assessment, NETX has added to the number of or changed the SLOs for several courses, effective Fall 2017.

- NETX 400 has three new SLOs which reflect the course modifications updating the curriculum; they include Lab, Project Design, and Certification Preparation.
- NETX 411 has a new SLO specific to the Certification Preparation.

- NETX 413 has a new SLO specific to the Certification Preparation.
- NETX 440 has three new SLOs which reflect the course modifications updating the curriculum; they include Lab, Project Design, and Certification Preparation.

The NETX assessment process has changed during the past six years. The three changes are:

1. The retirement of all student self-evaluating SLOs, which were too loosely construed to be of benefit
2. The rewording of some SLOs to make clearer what they assess, without change to the measurement tools or criteria used in assessment
3. The addition of SLOs to some courses to create a consensus among all courses that course-level SLOs are of three basic types which map directly to the PSLOs.

The schedule for assessing each NETX course at least once during every assessment cycle has not changed; those course-level SLOs which fail to meet the success criteria are reassessed at the next course offering as a matter of routine.

The PSLOs on TracDat for the NETX Program are correct; those on the NETX portion of the Skyline Web site are not, and the requested changes have been submitted.

4B. Summarize courses/services in the program that map to institutional student learning outcomes and discuss the results of the assessment and analysis.

Respond to the following:

- Explain what the course level assessment results reveal about student fulfillment of ISLOs.
- If the department participated in campus wide assessment, explain what insights were obtained.

Type your answer here:

Each of the three NETX PSLOs has a course-level SLO which maps directly to it, and each PSLO, as well as its SLO, maps directly to the relevant Skyline ISLOs:

1. Demonstrate the prerequisite skills to configure and troubleshoot networked environments
    a. Course-level assessment
        i. Lab performance measured by a Lab Checklist
    b. ISLOs
        i. Citizenship #7
        ii. Critical Thinking #1 and #3
        iii. Effective Communication #1 and #4
        iv. Lifelong Wellness #3
2. Apply conceptual knowledge to the design of a network project or to the written analysis of a network-related topic
    a. Course-level assessment
        i. Design project or written paper measured by Rubric tools

    b. ISLOs
        i. Critical Thinking #3
        ii. Effective Communication #2
        iii. Information Literacy #1 and #2
3. Prepare students for IT industry-recognized certifications
    a. Course-level assessment
        i. Exams consisting of multiple-choice and fill-in questions
    b. ISLOs
        i. Critical Thinking #1 and #3
        ii. Effective Communication #1
        iii. Lifelong Wellness #4

The ISLOs to which NETX maps are integral to the course-level SLOs and the PSLOs, and as the success criteria for each has been met or exceeded, we believe the NETX program students are fulfilling the applicable Skyline ISLOs.

Over the past six years, covering two assessment cycles, NETX course-level SLOs which assess lab performance have consistently met or exceeded the criteria for success. As part of the assessment of "configuration and troubleshooting of networked environments" in lab settings, each student's Critical Thinking as well as Effective Communication skills becomes part of the evaluation; instructor coaching to improve these skills is part of the lab experience. Additionally, a student's contribution to teamwork is evaluated; feedback from the instructor is provided to foster the appropriate Citizenship skills. Students are routinely encouraged to make repeated attempts at lab assignments; in fact, lab assignments are rarely ever completed in a single attempt. Persistence and resilience are encouraged as factors contributing to student success, aligning with one measure of Lifelong Wellness.

Similarly, NETX course-level SLOs which assess design and analysis performance have consistently met or exceeded the criteria for success. In the instructor evaluation of successful "application of conceptual knowledge to design or to analysis," Critical Thinking, Effective Communication, and Information Literacy are parts of the instructor's feedback and evaluation; feedback is offered to the student from the inception of the design or analysis project through to the final product and grading.

Again, similarly, NETX course-level SLOs which assess certification preparedness have consistently met or exceeded the criteria for success. For successful "certification preparedness," students are coached to learn or hone existing Critical Thinking skills as well as Effective Communication skills so they may achieve scores sufficient to pass the various tests. In alignment with Lifelong Wellness and the concept of lifelong learning, students are acquainted with the certification testing process, wherein the emphasis on knowledge and skills shifts according to the trends and technology changes within the IT industry. Most important to this ISLO is recertification; nearly all industry-recognized certifications expire and retesting within a three or four year cycle is required to maintain certification.

4C. Summarize results of student data packets from the Office of Planning, Research and Institutional Effectiveness (PRIE), and where appropriate, any other relevant data.

Tool: http://www.skylinecollege.edu/prie/programdata.php

Respond to the following:

- Review 5-year data to describe trends in student success, retention, demographics.
- Were any student populations disproportionately impacted or underperforming?
- Analyze trends and discuss plans to address significant findings.
- Analyze trends in student success with respect to mode of delivery and/or technology. For instructional programs, address any differences between on-campus and distance education

Type your answer here:

- **The 5-year data trends in student success and retention and illustrates the following:**
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    - **NETX student success** ranges from 83% to 90% which is 19% to 29.9% higher as compared to the College Wide data. NETX students succeed, we believe, as a result of dedicated faculty (who are themselves working IT professionals) and the program's focus on marketable skills and knowledge.
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	Success				
	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
NETX	90.3%	83.1%	85.9%	85.6%	86.4%
College Wide	69.5%	69.8%	69.7%	70.8%	70.0%
Delta	20.8%	13.3%	16.2%	14.8%	16.4%
Percentage over	**29.9%**	**19.1%**	**23.2%**	**20.9%**	**23.4%**

    - **NETX student retention** ranges from 86.7% to 93.7%, which is 2.2% to 11% higher than the College Wide Data. NETX retains students, in part, by providing learning environments which duplicate the IT workplace (which we believe makes learning meaningful) and by offering curriculum which emphasizes marketable skills. Additionally, NETX allows students who are new to the IT field to study alongside working IT professionals who are also students.
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	Retention				
	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
NETX	93.7%	86.7%	90.0%	91.5%	90.6%
College Wide	84.4%	84.8%	85.0%	84.8%	86.3%
Delta	9.3%	1.9%	5.0%	6.7%	4.3%
Percentage over	**11.0%**	**2.2%**	**5.9%**	**7.9%**	**5.0%**

- **<u>Review 5-year data to describe trends in demographics.</u>**

  (please see sections below on "Age Demographics" and "Gender Gap")

- **<u>Student populations disproportionately impacted or underperforming</u>** .

  - The data shows that no portion of the NETX population is either disproportionately impacted nor underperforming. With the exception of the American Indian/Alaska Native ethnic group, the NETX student enrollment shows retention and success rates which meet or exceed the college wide rates. The American Indian/Alaska Native population constitutes less than 0.05% of the enrollment, and, as such, represents an outlier. No significance can be attached to the data for that ethnic group.

	2015-2016			Total		
	Enrollment	Success	Retention	Enrollment	Success	Retention
Asian	76	91%	93%	76	91%	93%
Black - Non-Hispanic	19	89%	89%	19	89%	89%
Filipino	69	88%	94%	69	88%	94%
Hispanic/Latino	48	77%	88%	48	77%	88%
Pacific Islander	4	50%	50%	4	50%	50%
White Non-Hispanic	62	84%	92%	62	84%	92%
Multi Races	50	82%	90%	50	82%	90%
Unreported	12	100%	100%	12	100%	100%
Total	340	86%	91%	340	86%	91%

		Enrollments	Success Rate	Retention Rate
2015-2016	Female	22	77.3%	86.4%
2015-2016	Male	311	85.9%	91.6%
2015-2016	Unreported	7	100.0%	100.0%
2015-2016	Total	340	85.6%	91.5%

(please see sections below on "Age Demographics" and "Gender Gap")

- **Analyze trends and discuss plans to address significant findings.**

  - **Age demographics** show the majority of NETX students, approximately 60%, in the 23 to 28 and 29 to 39 age groups. The college wide data show the majority of the college student population, approximately 43%, in the 18 to 22 age group, of which NETX attracts only 17%. The NETX program has concluded that it could potentially attract a greater percentage of the 18 to 22 age group if it reached out to that group. This issue is addressed in the Executive Summary.

Skyline College Campus Age Demographics						
	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	
Age Under 18	1,317 7.6%	1,455 8.5%	1,645 9.6%	1,696 10.0%	1,913 11.4%	
Age 18 - 22	7,316 42.5%	7,420 43.2%	7,398 43.2%	7,537 44.4%	7,452 44.6%	Majority
Age 23 - 28	3,654 21.2%	3,659 21.3%	3,719 21.7%	3,694 21.8%	3,606 21.6%	Majority
Age 29 - 39	2,378 13.8%	2,316 13.5%	2,253 13.2%	2,260 13.3%	2,106 12.6%	
Age 40 - 49	1,297 7.5%	1,172 6.8%	1,010 5.9%	893 5.3%	835 5.0%	
Age 50 - 59	818 4.7%	745 4.3%	697 4.1%	573 3.4%	517 3.1%	
Age 60 +	412 2.4%	394 2.3%	386 2.3%	325 1.9%	294 1.8%	
Age Unreported	37 0.2%	19 0.1%	6 0.0%	1 0.0%		
Total	**17,229**	**17,180**	**17,114**	**16,979**	**16,723**	

NETX Age Demographics						
	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	
Age Under 18	1 0.6%	1 0.7%	1 0.7%	2 1.6%	2 1.4%	
Age 18 - 22	30 18.3%	23 15.6%	21 15.0%	19 14.7%	17 12.1%	
Age 23 - 28	39 23.8%	39 26.5%	44 31.4%	40 31.0%	44 31.2%	Majority
Age 29 - 39	58 35.4%	46 31.3%	45 32.1%	40 31.0%	45 31.9%	Majority
Age 40 - 49	24 14.6%	25 17.0%	18 12.9%	18 14.0%	20 14.2%	
Age 50 - 59	7 4.3%	9 6.1%	10 7.1%	9 7.0%	12 8.5%	
Age 60 +	5 3.0%	4 2.7%	1 0.7%	1 0.8%	1 0.7%	
Total	**164**	**147**	**140**	**129**	**141**	

Gender Gap is quite apparent in the data. Female students represent 8% of NETX program; yet, female students represent on average 53% of the college population. The NETX program has concluded that it might attract a greater percentage of the female student population if it reached out to that group. This issue is addressed in the Executive Summary. For the record, it must be noted that women enjoy the same or greater success in the IT field as men do; many of the most familiar names in the IT industry are women

NETX Gender Headcount

	Female		Male		Unreported	
2011-2012	13	7.9%	144	87.8%	7	4.3%
2012-2013	13	8.8%	128	87.1%	6	4.1%
2013-2014	8	5.7%	126	90.0%	6	4.3%
2014-2015	8	6.2%	119	92.2%	2	1.6%
2015-2016	12	8.5%	122	86.5%	7	5.0%
Total	**39**	**8.1%**	**422**	**88.1%**	**18**	**3.8%**

College Wide Gender Headcount

	Female		Male		Unreported	
2011-2012	9,036	52.4%	7,770	45.1%	423	2.5%
2012-2013	9,187	53.5%	7,621	44.4%	372	2.2%
2013-2014	8,865	51.8%	7,843	45.8%	406	2.4%
2014-2015	8,719	51.4%	7,790	45.9%	470	2.8%
2015-2016	8,748	52.3%	7,483	44.7%	492	2.9%
Total	**25,719**	**52.5%**	**21,893**	**44.7%**	**1,374**	**2.8%**

- **Analyze trends in student success with respect to mode of delivery and/or technology.**

  - Our chief mode of on-campus, face-to-face curriculum delivery has been repeatedly cited by students as their reason for attending NETX at Skyline, as well as a critical element of their success in learning. Moreover, the social networking which occurs in the program contributes to employment and life-long friendships. NETX stresses teamwork, and teamwork is the foundation of nearly all IT workplaces.
  - The industry equipment NETX provides for its students results in a meaningful learning environment from which learned skills easily transfer to the job site, where the same or similar equipment exists. Moreover, for most students who are engaged in the core curriculum of NETX, the presence of a skilled and experienced IT practitioner as their instructor leads to a greater engagement with the curriculum. Students routinely cite the NETX faculty as a major reason for their success. NETX at Skyline is one of the few community colleges to provide students with authentic learning environments and experienced IT professionals as instructors.
  - As the program begins offering specialized, advanced certificates and training in subjects such as system administration, cybersecurity, and project management, NETX will explore the combinations of hybrid and distance learning to complement our traditional face-to-face curriculum delivery.

4D. Program Enrollment and Efficiency

For programs with curricular offerings, state the last three years of fall semester FTES, FTE and LOAD. Spring semester data may also be submitted as needed. For programs without curriculum offerings, and those with curriculum offerings and services, please provide information on the efficiency of services. Assess the efficiency of the program. (Program efficiency information can be obtained from PRIE).

Type your answer here:

TERM	YEAR	FTEF	FTES	LOAD
Fall	2013	1.03	21.9	490
Fall	2014	1.34	24.49	535
Fall	2015	2.11	28.81	410
Spring	2014	0.93	20.78	668
Spring	2015	1.11	20.6	555
Spring	2016	1.71	23.33	410

NETX has one full time professor and four-part time instructors; all are experienced IT professionals. The LOAD was originally calculated with cross listed courses in Computer Science. Beginning in the Fall of 2015, LOAD calculation was based *exclusively* on NETX courses. The 2015/2016 LOAD is within range of other similar CTE programs. Our goal is to increase enrollment while maintaining our high success and retention rates. As discussed earlier, NETX recognizes a need to reach out to the student population age group of 18-22 and the female student population, and generally improve our marketing (and thus visibility) within the community.

4E. Career Technical Education Program Required Information and Data (CTE Programs only)

Tools: Major Employers in San Mateo County:
http://www.labormarketinfo.edd.ca.gov/majorer/countymajorer.asp?CountyCode=000081

Staffing Patterns in Local Industries and Occupations:
http://www.labormarketinfo.edd.ca.gov/iomatrix/staffing-patterns1.asp

Respond to the following:

- Review the program's Gainful Employment Disclosure Data. Identify any areas of concern.
- Discuss the role of the Advisory Committee and provide minutes of the most recent Advisory Committee meeting.
- Describe how changes in business, community and employment needs, new technology, and new transfer requirements could affect the program.

Type your answer here:

- **Gainful Employment Disclosure Data**

NETX "Gainful Employment Disclosure Data" is found on the program's pages of the Skyline Web site under the heading, "Career Outlook." The present data is out-of-date.

The information on the NETX Web pages needs updating.

Based on the latest data from *www.edd.ca.gov* and *www.bls.gov* the information should include the following.

For students who complete the A.S. Network Engineering degree:

- **Computer User Support Specialists**
  - SOC 15-1151
  - A.S. Degree
  - CA yearly median salary, $58,500
  - CA Annual Average Job Openings - 2,330
  - Projected growth - 24.6%
- **Computer Network Support Specialists**
  - SOC 15-1152
  - A.S. Degree
  - CA yearly median salary, $75,600
  - CA Annual Average Job Openings - 640
  - Projected growth - 19.8%

For students who plan to transfer to a baccalaureate institution after completing the A.S Network Engineering degree:

- **Network and Computer Systems Administrators**
  - SOC 15-1142
  - Bachelor's Degree
  - CA yearly median salary, $90,000
  - CA Annual Average Job Openings - 1,450
  - Projected growth - 20.6%
- **Information Security Analysts** ("Cybersecurity")
  - SOC 15-1122
  - Bachelor's Degree
  - CA yearly median salary, $108,700
  - CA Annual Average Job Openings - 320 - 1000
  - Projected growth - 26.2%
  - Fastest Growing occupation in computers and networking
- **Computer and Information Systems Managers**
  - SOC 11-3021
  - Bachelor's. Degree
  - Work Experience
  - CA yearly median salary, $157,000
  - CA Annual Average Job Openings - 2,120 - 5,900
  - Projected growth - 30.3%

Additionally, both federal (bls.gov) and state (edd.ca.gov) Web sites emphasize that occupations designated as computer or network related have a markedly faster growth rate than all other classified occupations.

- **Discuss the role of the Advisory Committee and provide minutes of the most recent Advisory Committee meeting**

The Advisory Committee consists of experienced IT professionals, including senior technical engineers and senior project managers. The committee members represent varied industries, including health care from Stanford and Kaiser, the federal government from the Department of Veterans Affairs, IT Consulting from World Wide Technology, and Airport Transportation from SFO International. NETX faculty, who are also experienced IT professionals, meet with the committee in formal, annual meetings---as well as ad hoc meetings--- for advice in keeping the curriculum current and of equal benefit to students and employers. The Committee agendas include course updates, certificate updates, emerging technologies, department news, and, ultimately, the Advisory Committee's recommendations for action. Following the annual meeting, NETX faculty evaluates the committee's proposals, ranking each according to its benefit to the student's education, and implementing each as budget and time permit.

See attached NETX Advisory Meeting 14th of October 2017

- **<u>Changes in business, employment, technology, and transfer requirements</u>**

Change is entrenched in the IT industry; the field of computers and networks is a moving target in which invention and innovation are commonplace. And, as nearly everything in both our personal and professional environments is computer-driven and network-connected, the IT field

relies on newly trained talent and re-trained professionals to keep moving.

The NETX curriculum offers courses that supply the foundation for emerging technology such as Cybersecurity, Internet of Things, and Cloud based solutions. This is substantiated by our success and retention rate of many working IT students. Because our faculty are working IT professionals in such industries as healthcare, finance, and transportation, we can make appropriate adjustments to the program. We can incorporate new topics, and develop new courses. As a consequence of changes in business and technology, NETX is currently investigating the following:

"Cybersecurity," in part, is taught as NETX 435 (Network Security) and has been a part of our core curriculum since the A.S. degree was approved by the state; we are seeking to expand the curriculum as a result of a heightened awareness on the part of business and industry to the importance of security principles and knowledgeable, skilled security personnel.

Linux is increasingly a core part of business and industry infrastructures; NETX reactivated its Linux curriculum in 2015 in the form of NETX 443, and as of Fall 2016 is a Red Hat Enterprise Linux Academy. We are seeking to expand our Linux curriculum. Linux is also an integral part of many Engineering fields, and may be a candidate for cross-listings with the newly created Engineering program and the growing Computer Science program .

Project Management is a key component of effective and efficient IT build-outs, infrastructure upgrading, and new infrastructure construction. Additionally, Project Management course work specific to Information Technology has recently been added to the curriculum of many community colleges which align their curriculum to the California State Information Technology Technician Pathway (ITTP). We are investigating curriculum options for including Project Management within the NETX curriculum.

In participation with District Office on job research of IT department in San Mateo County, we have developed a new course on mobile device support to be offered in Spring 2018.

We are unaware of any new transfer requirements which might impact the NETX program.

5. Curricular Offerings

Tools: CurricUNET: http://www.curricunet.com/smcccd

5A. Program Curriculum and Courses. If your program does not offer curriculum please state "N/A".

Respond to the following:

- All courses, including prerequisites, must be reviewed and updated at a minimum of every six years. (Be sure to complete Appendix D: Course Outline and Prerequisite Checklist Table).
- List courses that have been banked/deleted.
- NOTE: Be sure to add any new courses to the department's three-year calendar of assessment and request that they be added to TracDat.
- NOTE: If new courses were added since the last CPR, be sure that they've been mapped to ISLOs and PSLOs on TracDat, including relevant interdisciplinary degrees.

Type your answer here:

All NETX courses have been reviewed, updated, and approved by the Curriculum Committee, effective for Fall 2017.

No courses have been banked or deleted.

New courses added to the curriculum in TracDat:

- NETX 423 End User Mobile Connectivity, which has not yet been offered is included in TracDat
- NETX 670 Cooperative Education in Networking Technologies, which is newly added to TracDat; the SLOs will be assessed for the first time in the current assessment cycle for 2016-2017.

The mapping of SLO to PSLO and to ISLO is complete, except for NETX 423 End User Mobile Connectivity, which is in progress and will be completed Spring 2017.

Additionally, NETX has put forth program modifications to reflect course additions, course modifications, and industry-related trends. New electives have been added to the A.S. degree and CA, and our basic certificates have been updated to reflect industry practices.

5B. Identify Patterns of Curriculum Offerings. If your program does not offer curriculum please state "N/A".

Reflections:

- Review the 2-year curriculum cycle of course offerings to ensure timely completion of certificates, degrees, and transfer.
- Identify strengths of the curriculum.
- Identify issues and possible solutions.
- Discuss plans for future curricular development and/or program modification.

Type your answer here:

- **Two-year Curriculum Cycle**

  NETX is a fall-semester-start program. We offer core and elective courses during evenings and Saturday mornings. Full-time students can complete the unit requirements for the degree or the certificate of achievement in 4 semesters. Many of our students attend part-time (they work during the daytime), and for part-time students the count of semesters to completion varies according to unit load per semester. NETX is currently working toward a pathway of course offerings aligned toward the various industry-recognized certifications which enhance employment opportunities. This pathway and the two year curriculum cycle are not mutually exclusive.

- **Strengths of Curriculum**

  The NETX curriculum prepares students with marketable skills and knowledge. The program's content is based on the skills and knowledge that employers in the IT industry tell us they require from their new hires and employees seeking career advancement. Students routinely report applying their newly learned skills and knowledge on the job.

- **Issues and Solutions**

  The overarching issue for NETX involves both updating and aligning the program curriculum to changes in the technology industry, as well as creating new curriculum to teach new skills and knowledge associated with the IT industry's adoption of newer technology. The solution is chiefly that of funding for faculty hours, resources, and for the equipment on which new skills and knowledge can be taught.

- **Future Curricular Development & Program Modification**

  Because NETX aligns closely with the trends and technology adoption of the IT industry, the program has reactivated its Linux course, created a VoIP course, and is ready to offer a course specific to network- and internet-connected mobile devices. (These courses are examples of "solutions" in the previous section.)

  As noted earlier, NETX is planning an advanced course for Linux, an entirely new course in Project Management, and additional advanced specializations in topics such as system administration, program management, and design.

  As business and industry face new challenges to the security of data stored on networked devices and of data traveling across networks, NETX is considering its options to expand the Network Security curriculum, quite probably by adding an additional course. It should be noted that Network Security (popularly labeled, "cybersecurity") has been a core course in the NETX program curriculum since the inception of the A.S. Networking degree.

  Recently, NETX updated its certificate offerings to reflect changes in IT industry hiring practices and standard occupational codes (SOC). NETX also updated the elective course offerings which apply to those certificates and to the A.S. and CA.

6. Action Plan

Provide your action plan based on the analysis and reflections provided in the previous sections.
Tool: https://sanmateo.tracdat.com/tracdat/

Actions:

- Identify next steps to be taken and set a timeline.
- Identify questions that will serve as a focus of inquiry for the next Annual Program Plan and/or Program Review.
    - Determine the assessments; set the timeline for tabulating the data and analyzing results.
    - Describe what you expect to learn from the assessment efforts.

Type your answer here:

The NETX Action Plan

1. Goal: Assessment of all course-level SLOs during the 2017-2018 assessment year
    a. SLOs for which criterion is not met will be reassessed at the next course offering, which may be within the same assessment year but not later than the 2018-2019 assessment year
2. Enter the new SLOs and re-worded SLOs into TracDat during the Summer 2017, prior to the start of Fall 2017
3. Assign SLO assessments to the appropriate instructors for Fall 2017
    a. Provide all Fall 2017 instructors with the updated SLOs for their courses as recorded in CurricUNET
    b. Provide all Fall 2017 instructors with updated Syllabi of record for their courses, as recorded in CurricUNET
    c. Collect the Fall 2017 SLO assessment data from each instructor during the grading period
4. Tabulate and assess data at the conclusion of Fall 2017 for courses offered during that term
5. Assign SLO assessments to the appropriate instructors for Spring 2018
    a. Provide all Spring 2018 instructors with the updated SLOs for their courses as recorded in CurricUNET
    b. Provide all Spring 2018 instructors with updated Syllabi of record for their courses, as recorded in CurricUNET
    c. Collect the Spring 2018 SLO assessment data from each instructor during the grading period
6. Tabulate and assess data at the conclusion of Spring 2018 for courses offered during that term
7. Verify that all assessment data appears in TracDat by mid-summer 2018, including any action plans for reassessment
8. Repeat the assessment process for 2018-2019 as necessary for courses offered only once per academic year

NETX expects to learn whether the course-level SLOs continue the trend of success.

7. Resource Identification

7A. Professional Development needs

Actions:

- List the professional development activities the faculty and staff participated in this year.
- Explain how professional development activities in the past six years have improved student learning outcomes.
- Describe professional development plans for next year.

Type your answer here:

- **Professional Development Activities 2016-2017**

Collectively, NETX faculty and staff have earned the following industry certifications and contributed to organizations:

- CompTIA A+ Certification
- ACMA - Aruba Certified Mobility Associate
- UC Berkeley Executive Education – Negotiations and Influence Program
- Partnering Institute Organization – Partnering Summit
- Contributing members of the Committee for Nation Cybersecurity Curriculum Planning
- Established Skyline NETX as an official Red Hat Academy (Linux)

- **Professional Development Activities in the Past Six Years**

Collectively, NETX faculty and staff have earned certifications and participated in the following professional development activities:

- BACCC Cybersecurity Conference
- BACCC NetLab+
- CompTIA Linux+
- IDCA – Data Center Infrastructure Specialist
- IDCA – Data Center Operation Specialist
- ISC2 – Certified Information Security Professional
- Linux Professional Institute Certification
- Novell/SUSE Administrator Certification
- PMP – Project Management Professional
- PMP – Agile Certified Professional
- Verint – Video Software Management – Nextiva ICS Training
- Novell/SUSE Administrator Certification

Linux certifications were an integral part of preparation for teaching NETX 443, Introduction to Linux Administration; having successfully navigated the certification requirements allows faculty to more effectively deliver the Linux curriculum to students.

Attendance at the BACCC Cybersecurity conference allows the NETX faculty to share ideas and concepts for their security curriculum, which improves the program's curriculum. The attendance at BACCC NetLab+ allowed for a hands-on faculty introduction to a remote lab environment.

Certifications earned by NETX faculty allow faculty and staff to reflect and integrate more industry required skillsets and incorporate newer advancements into all of the current curriculum.

- **Future Professional Development Activities**

Currently, NETX faculty are continuing their education in the areas of cybersecurity, program management, and system administration:

- CISSP – Certified Information Systems Security Professional
- PMP – Project Management Professional
- CompTIA Network+ certification
- Red Hat (RHEL) academy instructor certification

7B. Office of Planning, Research & Institutional Effectiveness requests

Actions:

- List your program's data requests from the Office of Planning, Research & Institutional Effectiveness.
- Explain how the requests will serve the Student/Program/Division/College needs.

Type your answer here:

To enhance the understanding of students' choices between the Certificate of Achievement and the A.S. degree in Network Engineering, we requested:

- Data on number of students with existing college degrees enrolling in NETX courses
- Data on number of NETX students who transfer to baccalaureate institutions
- Data on the number of students who earn an AS degree in Network Engineering
- Data on the number of students who earn a CA in Network Engineering
- Data on the number of students who earn neither an AS degree or CA

To better understand the time-to-completion and pathways for NETX students, we requested:

- Data on the number of full time versus part-time students enrolled in NETX

7C. Faculty and Staff hiring, Instructional Equipment and Facilities Requests

Complete the table on the following page:

Comprehensive Program Review: Resource Needs Summary Table

Program: **Date:**

	Needs	How does this request align with your assessment of student outcomes?	How does this request align with your action plan?	Estimated cost for facilities and equipment
Personnel	1. Lab technician to maintain equipment for core courses 2. 3.	Working equipment conditions are necessary for student learning and program effectiveness	Equipment needs to be maintained and replaced to provide an industry compatible network in which to learn and practice skills on	To be determined
Equipment	1. Cybersecurity hardware and software 2. Microsoft Software 3. Video for security 4. Protocol Analyzer	Using current industry hardware and software maintains the program's effectiveness and enhances student learning outcomes	Updating software and additional software & equipment is vital to provide our students in meeting industry standards and practice	1. $4.5K 2. $2.5K 3. $4.75K 4. $2.5K
Facilities	1. Replace 4 old projectors in class 2. 3. 4.	Provides a classroom that is conducive to better learning	Assists instructors and students to have a more effective learning environment in classrooms	1. 4 x $900 = $3.6K

APPENDIX A

VISION, MISSION, VALUES AND GOALS OF SKYLINE COLLEGE

Please check current catalog for most recent goal statements.

Vision Statement

Skyline College inspires a global and diverse community of learners to achieve intellectual, cultural, social, economic and personal fulfillment.

Mission Statement

To empower and transform a global community of learners.

Values Statement

Education is the foundation of our civilized democratic society.
Thus:

Campus Climate: We value a campus-wide climate that reflects a 'students first philosophy' with mutual respect between all constituencies and appreciation for diversity. Both instruction and student services are dedicated to providing every student with an avenue to success.

Open Access: We are committed to the availability of quality educational programs and services for every member of our community regardless of level of preparation, socio-economic status, cultural, religious or ethnic background, or disability. We are committed to providing students with open access to programs and responsive student services that enable them to advance steadily toward their goals.

Student Success: We value students' success in achieving their goals, and strengthening their voices as they transform their lives through their educational experience.

Academic Excellence: We value excellence in all aspects of our mission as a comprehensive community college offering preparation for transfer to a baccalaureate institution, workforce and economic development through career technical education programs and certificates, Associate of Arts and Associate of Science degrees, basic skills development, and lifelong learning. We are committed to academic rigor and quality with relevant, recent, and evolving curriculum and well-equipped programs that include new and emerging areas of study. We are dedicated to an educational climate that values creativity, innovation and freedom of intellectual exploration, discovery, thought, and exchange of ideas.

Community Connection: We value a deep engagement with the community we serve and our role as an academic and cultural center for community including business, industry, labor, non-profits, government and the arts. We are dedicated to maintaining a college culture and institutional climate that is warm and welcoming to all.

Shared Governance: We value just, fair, inclusive, and well understood, transparent governance processes based upon open and honest communication.

Sustainability: We value an institutional culture that represents a strong commitment to environmental sustainability and justice. We are committed to the tenets of sustainability "To meet present needs without compromising the ability of future generations to meet their needs."

APPENDIX B

Definition of Terms

WSCH: Weekly Student Contact Hours are based on the first census week of a Fall term. They do not include second census week data, but they do include all positive attendance data for the term (converted to WSCH) including classes which start after the first census

FTE: The full-time equivalent faculty count is determined by the set of rules provided to each college at the time the data is requested. Generally, the figures are the decimal fraction of the teaching hours or units ascribed to the faculty member for teaching work done. Non-teaching time is specifically excluded so that it does not affect the value of the data. Work done by non-certified-personnel is not included.

LOAD: Teaching Load is taken as the ratio of WSCH to FTE

N GRADES: The total number of grades awarded (A+B+C+D+F+CR+NCR+I+W)

RETENTION: The sum of all non-W grades divided by N grades times 100, expressed as %

SUCCESS: A+B+C+CR grades divided by N grades times 100, expressed as %

APPENDIX C

FREQUENTLY ASKED QUESTIONS

1. Why are faculty asked to perform Program Review?

Faculty are the members of the campus community who best understand the intricacies of the courses and the body of work within programs. Faculty work each day with students and staff within these programs and are best suited to understand the strengths and needs of specific programs. Because Program Review is also used for budget and planning, it is imperative that faculty perspective is included in that process.

2. How do I know that all the work I put into this document will have any impact?

A well thought through and completed Program Review will have its greatest impact on the program and its faculty/staff. Evaluation of practices, procedures and student outcomes is the hallmark of successful educational programs and institutions. A thoughtful analysis of the results and findings of the Program Review should be used to improve student outcomes. The Curriculum Committee and College Council have developed a process which requires the Program Review to impact the College planning, budget, SLOAC and resource allocation processes.

3. Why the oral presentation to curriculum committee?

The oral presentation of your Program Review serves two purposes. Primarily, it will allow the program exposure to a cross-section of the campus community. Many members of this community are not aware of the accomplishments of programs or their needs. It allows each program to shine! Secondly, it allows the Program Review process to become more personal. Committee members and program personnel will have the opportunity to interact, question each other, and respond to the Program Review. Finally, it will help the College do systematic planning and coordinate our efforts.

4. I am a one-person department – I don't have the capability or time to perform this review.

Each Division Dean is available to assist you in gathering information and preparation of the self-study. Please utilize him or her. Also, keep track of the amount of time spent on the self-study. When submitting your evaluation of the Program Review process, please include the total hours involved in the process. This will help with future planning and modifications to the review process.

5. How will the self-study questions be kept current and useful?

The Curriculum Committee, through the Academic Senate, will have that responsibility.

Appendix D

Program: **Network Engineering Technologies NETX** **Semester**: **Spring 2017**

COURSE OUTLINE AND PREREQUISITE CHECKLIST TABLE							
1	2	3	4		5	6	7
Prefix & Number	Course Title	Curric -UNET Review Date (Month /Year)	Transfer		G.E.	Prerequisites, Co-requisites, and/or Recommended Preparations	Reviewed
			CSU	UC			
NETX 400	Introduction to Local Area Network	3/1/17	X			None	Yes
NETX 401	Survey of Networking and Wireless Tech	3/1/17	X			None	Yes
NETX 410	Structured Wiring and Cabling	3/15/17	X			None	Yes
NETX 411	Fiber Optics Technology	3/1/17	X			None	Yes
NETX 413	Wireless Local Area Networks	3/1/17	X			Pre-req – NETX 400 Intro Local Area Network	Yes
NETX 420	PC Configuration & Repair	3/1/17	X			None	Yes
NETX 421	A+ Certification Exam Prep	3/1/17	X			Pre/co-requisite – NETX 420 PC Configuration & Repair	Yes
NETX 423	Mobile Device Connectivity Support	3/15/17	X			None	Yes
NETX 430	Introduction to Routers	3/1/17	X			Pre-req – NETX 400 Intro Local Area Network	Yes
NETX 431	Network Switches-Concepts & Application	3/15/17	X			Pre-req – NETX 400 Intro Local Area Network	Yes
NETX 432	Routing Concepts & Applications	3/15/17	X			Pre-req – NETX 430 Intro to Routers	Yes
NETX 435	Network Security	3/15/17	X			Pre-req – NETX 430 Intro to Routers	Yes

COURSE OUTLINE AND PREREQUISITE CHECKLIST TABLE

1	2	3	4		5	6	7
Prefix & Number	**Course Title**	**Curric -UNET Review Date (Month /Year)**	**Transfer**		**G.E.**	**Prerequisites, Co-requisites, and/or Recommended Preparations**	**Reviewed**
			CSU	**UC**			
NETX 439	Troubleshooting the Internetwork	3/15/17	X			Pre-req – NETX 431 Switch & NETX 432 Routing Concepts	Yes
NETX 440	Intro to Microsoft Server Administration	3/15/17	X			Pre-req – NETX 400 Intro to Local Area Network	Yes
NETX 443	Intro to Linux Administration	3/15/17	X			None	Yes
NETX 450	Voice Over IP (VoIP) Essentials	3/15/17	X			Pre-req – NETX 430 Routers & NETX 431 Switches	Yes
NETX 670	Cooperative Ed in Network Eng Tech	3/15/17	X			None	Yes

COURSE OUTLINE AND PREREQUISITE CHECKLIST TABLE

1	2	3	4		5	6	7
Prefix & Number	**Course Title**	**Curric -UNET Review Date (Month /Year)**	**Transfer**		**G.E.**	**Prerequisites, Co-requisites, and/or Recommended Preparations**	**Reviewed**
			CSU	**UC**			

APPENDIX E
SKYLINE COLLEGE

INSTRUCTIONAL AND STUDENT SERVICES PROGRAM REVIEW

RESPONSE SHEET

Program: Network Engineering Technologies

Thank you for your time and effort in preparing this Program Review. Your Resource Needs Summary has been shared with the College Budget Committee and the Resource Needs Summary and Executive Summary, with recommendations, has been shared with the College Council.

College President

Comments:

_____
Signature

Separate boxes for each

College Vice President(s)

Comments:

_____
Signature

Curriculum Committee

Comments:

_____
Signature

Appendix F
Skyline
College

Evaluation of the Program Review Process

To improve the Program Review process your help and suggestions are instrumental. We ask that all parties responsible for preparation of this review have input into the evaluation. After completion of the Program Review process, please take a few moments to complete and return this evaluation to the chair of the Curriculum Committee.

Estimate the total number of hours to complete your Program Review:

1. Was the time frame for completion of Program Review adequate? If not, explain.

   One more additional would have helped.

2. Was the instrument clear and understandable? Was it easy to use? If not, explain and offer suggestions for improvement.

   Yes. Instrument clear and understandable. Adequate.

3. Were the questions relevant? If not, please explain and offer suggestions.

   Mostly yes. But to support some questions requires data after student's graduate

4. Did you find the Program Review process to have value? If not, please explain and offer suggestions.

   Yes. To provide a strategy for future development of program

5. Was the data you received from the Office of Planning, Research and Institutional Effectiveness complete and presented in a clear format? Would you like additional data?

   Yes. But additional data required that identified in the CPR.

6. Please offer any comments that could improve and/or streamline Program Review.

Appendix G
Skyline College

Program Review Completion Check off Sheet

Before submitting your self-study report, please make sure that all forms are submitted by using the checklist below:

		Checked if Completed
1.	Executive Summary	X
2.	Program Review Self-Study (including TracDat PSLO report)	X
3.	Resource Needs Summary Table	X
4.	Course Outline and Prerequisite Checklist Table (Appendix D)	X
5.	Response Sheet (Appendix E)	X
6.	Evaluation of the Program Review Process (Appendix F)	X

Approved by Curriculum Committee 11/6/13
Revised 10/26/16

NETX Advisory Committee
14th October 2016
11:00 AM – 12:30

Attending:

Norman del Prado, Chair
Professor, NETX Program Coordinator
Project Manager – SFO BAB Project Manager
delpradon@smccd.edu

Walter Hanley, Small Business IT Specialist, Instructional Designer
Owner config.sys; Microsoft Partner, Pacifica, CA
hanleyw@smccd.edu - 650-743-7398

Ahmad Rezazadah Sr. Network Engineer
Sandford Hospital, Palo Alto, CA
ARezazadeh@stanfordhealthcare.org - 650-430-4406

Sam Zandi, Network Architect, CCIE, Senior Network Engineer, NetXperts
Design security, data, voice and video infrastructure for large scale companies.
szandi@netxperts.com - 415-536-8045

Roger Eric Lohmann, Emergency Preparedness Division Chief
Department of Veterans Affairs, Office of Information Technology
Manager, Information Systems Contingency and Disaster Recovery
lohmannr@smccd.edu - 360-816-2770

Patrick Kelly, IT Consultant,
Retired – Kaiser Permanente – Program Manager
Patrickkel11@gmail.com 925-352-5447

Agenda

- Courses Updates
- Certificate Updates
- Emerging Technologies
- Other News
- Advisory Committee's Recommendations

NETX Advisory Committee
14th October 2016
11:00 AM – 12:30

Notes

- Course Updates
  - I. VOIP courses offered enrollment 20+
  - II. Mobile Device Support class: lecture material and lab material completed
  - III. WIFI course will incorporate Aruba equipment
    - Instructor Aruba certified
  - IV. Linux class offered
    - Instructor Linux certified

- Certificate Updates
  - I. Endorsement Certificate
    - Center for Career and Workforce Programs
    - Walter Hanley working on skill based certificates
  - II. Proposed Specialization Certificate
    - System's Administration – MS & Linux
    - Design
    - Project management

- Emerging Technology
  - I. Advisory
    - Caution with technology to incorporate into existing course vs developing a new course such as cybersecurity, IoT, Cloud solutions
    - Focus on demands of IT industry versus marketing campaign
  - II. Potential new classes or topics for program to reflect industry needs
    - Cyber security
      - Security fundamental
      - Expand on your existing security class
      - Video – IP cameras
    - Project Management - PMP
    - Network Design
      - Advance course that will incorporate topics: cabling, WIFI, VOIP switches, routers, system administration and security
    - Virtualization
      - Basic class using VM
    - Data Center Fundamental
      - Build out of IDF, MDF
    - Storage fundamentals
    - Building Management System
      - Intelligence in monitoring and managing water, electricity, air conditioning

NETX Advisory Committee
14th October 2016
11:00 AM – 12:30

- Other News
  I. Provided workshop training to SMCCD technician – Aaron Soo
     - SMCCD donated switches for other classes
  II. Participated Expanding Your Horizon
     - Network Engineering Staff -Walter Hanley with Wendy Lum and Ana Castro
  III. SMCCD recruitment of Asian High School Student
     - Provide workshop and guess speakers for half day affair
  IV. Program Recruitment Strategy
     - Reach out district or specific high school with IT courses
     - Improve Campus wide recruiting through counselors

- Advisory Committees Recommendations
  I. Program focus on the critical foundation necessary to succeed in learning emerging technology
  II. Some new emerging technology should be addressed as topics in exiting courses
  III. Research the demand and interest on specializations
     - System administration
     - Security
     - Project management
     - Network design
  IV. Use of remotely accessible lab for advance courses eg NETLab
  V. Revive CCNA Certification Prep Course
     - Certification required by most all employers/agencies
     - Offer during the summer
  - Internship Program
     - Requirement of a coordinator to manage and maintain internships
  - Improve visibility through
     - website and revive student's success stories
     - updated marketing literature

Assessment: Department Four Column

NETX CPR 2017

SKY Dept - Network Engineering Technologies

Department Assessment Coordinator: Norman del Prado

PSLOs	*Assessment Methods*	*Results*	*Actions*
Networking Technology Skills - Demonstrate the prerequisite skills to configure and troubleshoot networked environments. **PSLO Status:** Active **Planning Year:** 2013-2014, 2014-2015, 2015-2016 **Start Date:** 10/27/2012	**Presentation/Performance -** Course-level laboratory performance SLO(s) **Success Criterion:** For each three-year assessment cycle, at least 90% of program courses meet or exceed their respective success criteria (i.e., "criterion met") for application of network-related skills in laboratory work.	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met During the three-year assessment cycle (2013-2016), 100% of the program courses met or exceeded their respective SLO success criteria (i.e., "criterion met") for application of network-related skills in laboratory work. (08/01/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** NdP with Cortes, Frank, Hanley, Lohmann, Scurries	
Networking Technology Concepts and Theory - Apply conceptual knowledge to the design of a network project or to the written analysis of a network-related topic. **PSLO Status:** Active **Planning Year:** 2013-2014, 2014-2015, 2015-2016 **Start Date:** 10/27/2012	**Capstone Assignment/Project -** Course-level design project or written analysis SLO(s) **Success Criterion:** For each three-year assessment cycle, at least 90% of program courses meet or exceed their respective success criteria (i.e., "criterion met") for application of network theory and concepts in design or written analysis.	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met During the three-year assessment cycle (2013-2016), 100% of the program courses met or exceeded their respective SLO success criteria (i.e., "criterion met") for application of network theory and concepts in design or written analysis. (08/01/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** NdP discuss with Cortes, Frank, Hanley, Lohmann, Scurries	
Certification Preparation - Prepare students for IT industry-recognized certifications. **PSLO Status:** Active **Planning Year:** 2013-2014, 2014-2015, 2015-2016 **Start Date:** 10/27/2012	**Exam -** Course level final exam SLO(s) **Success Criterion:** For each three-year assessment cycle, at least 90% of program courses meet or exceed their respective success criteria (i.e., "criterion met") for certification preparedness.	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met During the three-year assessment cycle (2013-2016), 100% of the program courses met or exceeded their respective SLO success criteria (i.e., "criterion met") for certification preparedness. (08/01/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** NdP discuss	

PSLOs	Assessment Methods	Results	Actions
		with Cortes, Frank, Hanley, Lohmann, Scurries	

Relationships and Assessment: Course Outcomes by PSLOs

NETX CPR 2017 PSLO REPORT

SKY Dept - Network Engineering Technologies

Department Assessment Coordinator: Norman del Prado

Networking Technology Skills - Demonstrate the prerequisite skills to configure and troubleshoot networked environments.

SKY ELEC 110 : Intro Fundamentals Electronics

Assemble and troubleshoot - Assemble and troubleshoot simple series and parallel circuits, using standard tools and test equipment, while obeying recognized work safety guidelines.

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Final Project **Success Criterion:** 70% of students will assemble and trouble shoot simple series and parallel circuits completing the project with at least a 2 or better on final project evaluation scale (or receive a score of 70% of 100%). **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 100% of students received a score of 70% or greater for their project (05/26/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Frank discuss with NdP **Related Documents:** elec110 slo_spr16_project.xls	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met 83.3% of students score 2+ on the final project evaluation scale (12/19/2012) **Related Documents:** FInal Project Rubric Amplifier Documentation Power Supply Documentation	

SKY ELEC 110 : Intro Fundamentals Electronics

Assemble and troubleshoot - Assemble and troubleshoot simple series and parallel circuits, using standard tools and test equipment, while obeying recognized work safety guidelines.

Assemble and troubleshoot - Assemble and troubleshoot simple series and parallel circuits, using standard tools and test equipment, while obeying recognized work safety guidelines.

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Final Project **Success Criterion:** 70% of students will assemble and trouble shoot simple series and parallel circuits completing the project with at least a 2 or better on final project evaluation scale (or receive a score of 70% of 100%). **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 100% of students received a score of 70% or greater for their project (05/26/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Frank discuss with NdP **Related Documents:** elec110 slo_spr16_project.xls	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met 83.3% of students score 2+ on the final project evaluation scale (12/19/2012) **Related Documents:** FInal Project Rubric Amplifier Documentation Power Supply Documentation	

SKY NETX 400 : Networking Essentials

<style isBold='true' isItalic='null' isUnderline='null' size='11' Forecolor='#162a57' Backcolor='null' fontName='Calibri' >Complete Cisco CCNA 1 On-line Modules - </style>75% of students complete Cisco on-line Modules & Quizzes with aggregate score of 75% or greater

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Objective Test - Multiple Choice, Fill In	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met	

SKY NETX 400 : Networking Essentials

<style isBold='true' isItalic='null' isUnderline='null' size='11' Forecolor='#162a57' Backcolor='null' fontName='Calibri' >Complete Cisco CCNA 1 On-line Modules - </style>75% of students complete Cisco on-line Modules & Quizzes with aggregate score of 75% or greater

Assessment Methods	*Result*	*Actions*
Success Criterion: 75% of the students will earn 75% or greater aggregate score for all modules **Schedule:** Fall 2012	84% of students earned 75% or greater score for all modules (05/25/2016) **Who discussed the assessment, results and/or action plans? When?** **Where (e.g., dept. meeting)?:** NdP discuss with Q Cortes (who teaches other 400 course offering) **Related Documents:** NETX_400_LAN_Spring2016SLO_NdP.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 82% of students completed all modules with an aggregate score of 75% or greater (12/28/2012) **Related Documents:** COMP_TCOM 480 Compiled Design_Quiz_On-lin Mods-LABS Results_Fall 2012.xls	

<style isBold='true' isItalic='null' isUnderline='null' size='11' Forecolor='#162a57' Backcolor='null' fontName='Calibri' >Complete Cisco CCNA 1 On-line Modules - </style>75% of students complete Cisco on-line Modules & Quizzes with aggregate score of 75% or greater

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Objective Test - Multiple Choice, Fill In **Success Criterion:** 75% of the students will earn 75% or greater aggregate score for all modules **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 84% of students earned 75% or greater score for all modules (05/25/2016) **Who discussed the assessment, results and/or action plans? When?** **Where (e.g., dept. meeting)?:** NdP discuss with Q Cortes (who teaches other 400 course offering) **Related Documents:** NETX_400_LAN_Spring2016SLO_NdP.xlsx	

SKY NETX 400 : Networking Essentials

<style isBold='true' isItalic='null' isUnderline='null' size='11' Forecolor='#162a57' Backcolor='null' fontName='Calibri' >Complete Cisco CCNA 1 On-line Modules - </style>75% of students complete Cisco on-line Modules & Quizzes with aggregate score of 75% or greater

Assessment Methods	*Result*	*Actions*
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 82% of students completed all modules with an aggregate score of 75% or greater (12/28/2012) **Related Documents:** COMP_TCOM 480 Compiled Design_Quiz_On-lin Mods-LABS Results_Fall 2012.xls	

SKY NETX 410 : Structured Wiring & Cabling

Install and troubleshoot - Install and troubleshoot single-line stations, network distribution frames and panels and electronic key systems panels

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Lab Checklist **Success Criterion:** At least 75% of students receive a score of 75% or greater for all lab activities	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criteria Met as 100% of Students Received a Grade of 75% or Greater (12/28/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Discussed with Norman del Prado 12/28/15 **Related Documents:** NETX_410_STRUCTURED_WIRING_AND_CABLING_LAB_CHECKLIST.pdf NETX_410_SLOs_Fall_2015_2015-2016_Cycle.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:**	

SKY NETX 410 : Structured Wiring & Cabling

Install and troubleshoot - Install and troubleshoot single-line stations, network distribution frames and panels and electronic key systems panels

Assessment Methods	*Result*	*Actions*
	TCOM_410_Cabling-Wiring_SP-13_Results.xlsx	

Install and troubleshoot - Install and troubleshoot single-line stations, network distribution frames and panels and electronic key systems panels

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Lab Checklist **Success Criterion:** At least 75% of students receive a score of 75% or greater for all lab activities	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criteria Met as 100% of Students Received a Grade of 75% or Greater (12/28/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Discussed with Norman del Prado 12/28/15 **Related Documents:** NETX_410_STRUCTURED_WIRING_AND_CABLING_LAB_CHECKLIST.pdf NETX_410_SLOs_Fall_2015_2015-2016_Cycle.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_410_Cabling-Wiring_SP-13_Results.xlsx	

SKY NETX 411 : Fiber Optics Technology

Test, troubleshoot and repair - Test, troubleshoot and repair fiber optic systems using industry standard tools

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*

SKY NETX 411 : Fiber Optics Technology

Test, troubleshoot and repair - Test, troubleshoot and repair fiber optic systems using industry standard tools

Assessment Methods	*Result*	*Actions*
Other - Practical Test - Installation & Troubleshooting + Objective Test - Multiple Choice/ Fill In **Success Criterion:** 75% of the students will earn 75% or higher on the test **Schedule:** Spring 2013	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 92% of students earned score of 75% or greater (05/26/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Dean Scurries discuss with NdP **Related Documents:** NetX411_Fiber-Optics_SP-16 SLO Results.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_460_Fiber-Optics_SP-13 Results.xlsx	

Test, troubleshoot and repair - Test, troubleshoot and repair fiber optic systems using industry standard tools

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Other - Practical Test - Installation & Troubleshooting + Objective Test - Multiple Choice/ Fill In **Success Criterion:** 75% of the students will earn 75% or higher on the test **Schedule:** Spring 2013	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 92% of students earned score of 75% or greater (05/26/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Dean Scurries discuss with NdP **Related Documents:** NetX411_Fiber-Optics_SP-16 SLO Results.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013)	

SKY NETX 411 : Fiber Optics Technology

Test, troubleshoot and repair - Test, troubleshoot and repair fiber optic systems using industry standard tools

Assessment Methods	*Result*	*Actions*
	Related Documents: TCOM_460_Fiber-Optics_SP-13 Results.xlsx	

SKY NETX 413 : Wireless Local Area Networks

Wireless LAN Implementation (labs) - Build, test and repair a Wireless LAN using accepted industry methods, tools and standards

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Checklist to Labs **Success Criterion:** At least 70% of students receive score of 70% or greater **Schedule:** Fall 2013	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met Criteria Met - 100% of students received a score of 70% or greater (12/20/2013) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Lohmann with NdP **Related Documents:** TCOM 465 Compiled Lab Results_Fall 2013.xls	

SKY NETX 420: PC Repair

Upgrade and troubleshoot - Upgrade and troubleshoot computer hardware and software

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Lab Checklist to student performance **Success Criterion:** At least 70% of students receive score of 70% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 81% of students earned score of 70% or greater (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:**	

SKY NETX 420: PC Repair

Upgrade and troubleshoot - Upgrade and troubleshoot computer hardware and software

Assessment Methods	*Result*	*Actions*
Related Documents: COMP_TCOM_451_SLO__ASSESSMENT_PLAN_rev_1.pdf	Lohmann discuss with NdP **Related Documents:** NETX 420 Compiled Lab Results_Spring 2016.xls	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 85% of students received a grade of 70% or greater (12/28/2012) **Related Documents:** Copy of COMP_TCOM 451 Compiled Lab Results_Fall 2012.xls	

Upgrade and troubleshoot - Upgrade and troubleshoot computer hardware and software

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Lab Checklist to student performance **Success Criterion:** At least 70% of students receive score of 70% or greater **Related Documents:** COMP_TCOM_451_SLO__ASSESSMENT_PLAN_rev_1.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 81% of students earned score of 70% or greater (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Lohmann discuss with NdP **Related Documents:** NETX 420 Compiled Lab Results_Spring 2016.xls	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 85% of students received a grade of 70% or greater (12/28/2012) **Related Documents:** Copy of COMP_TCOM 451 Compiled Lab Results_Fall 2012.xls	

SKY NETX 421 : PC Repair - A+

C/NC - Complete all on-line study modules and practice tests

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Other - On-line learning modules & practice tests **Success Criterion:** 75% of students complete all the modules and practice tests **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 77% of all students completed the on-line modules and practice tests (12/21/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discuss with NdP **Related Documents:** NETX 421 F15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 96% of students completed all on-line modules and practice tests (12/28/2012) **Related Documents:** COMP_TCOM 452 Compiled Final Class Grade Results_Fall 2012.xls	

C/NC - Complete all on-line study modules and practice tests

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Other - On-line learning modules & practice tests **Success Criterion:** 75% of students complete all the modules and practice tests **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 77% of all students completed the on-line modules and practice tests (12/21/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discuss with NdP **Related Documents:** NETX 421 F15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 96% of students completed all on-line modules and practice tests	

SKY NETX 421 : PC Repair - A+

C/NC - Complete all on-line study modules and practice tests

Assessment Methods	*Result*	*Actions*
	(12/28/2012) **Related Documents:** COMP_TCOM 452 Compiled Final Class Grade Results_Fall 2012.xls	

SKY NETX 430 : Router

Routing Implementation (labs) - Implement and troubleshoot basic routing configurations in small to medium internetworking environments

Course Outcome Status: Active
Start Date: 01/20/2011
End Date: 05/27/2011

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Checklist to Team Project **Success Criterion:** At least 80% of students receive score of 75% or greater **Schedule:** Administered once per semester in final weeks of class **Related Documents:** TCOM_482_ROUTER_LAB_CHECKLIST_rev_1.docx	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--95% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_482_ROUTER_LAB_CHECKLIST_rev_1.docx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 92% of students received a score of 75% or greater (12/28/2012)	
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 90% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011)	

SKY NETX 430 : Router

Routing Implementation (labs) - Implement and troubleshoot basic routing configurations in small to medium internetworking environments

Assessment Methods	*Result*	*Actions*
	Related Documents: Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Implementation (labs) - Implement and troubleshoot basic routing configurations in small to medium internetworking environments

Course Outcome Status: Active
Start Date: 01/20/2011
End Date: 05/27/2011

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Checklist to Team Project **Success Criterion:** At least 80% of students receive score of 75% or greater **Schedule:** Administered once per semester in final weeks of class **Related Documents:** TCOM_482_ROUTER_LAB_CHECKLIST_rev_1.docx	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--95% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_482_ROUTER_LAB_CHECKLIST_rev_1.docx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 92% of students received a score of 75% or greater (12/28/2012)	
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 90% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Implementation (labs) - Implement and troubleshoot basic routing configurations in small to medium internetworking environments

SKY NETX 430 : Router

Routing Implementation (labs) - Implement and troubleshoot basic routing configurations in small to medium internetworking environments

Course Outcome Status: Active
Start Date: 01/20/2011
End Date: 05/27/2011

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Checklist to Team Project **Success Criterion:** At least 80% of students receive score of 75% or greater **Schedule:** Administered once per semester in final weeks of class **Related Documents:** TCOM_482_ROUTER_LAB_CHECKLIST_rev_1.docx	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--95% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_482_ROUTER_LAB_CHECKLIST_rev_1.docx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 92% of students received a score of 75% or greater (12/28/2012)	
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 90% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Implementation (labs) - Implement and troubleshoot basic routing configurations in small to medium internetworking environments

Course Outcome Status: Active
Start Date: 01/20/2011
End Date: 05/27/2011

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Checklist to Team Project	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met	

SKY NETX 430 : Router

Routing Implementation (labs) - Implement and troubleshoot basic routing configurations in small to medium internetworking environments

Assessment Methods	*Result*	*Actions*
Success Criterion: At least 80% of students receive score of 75% or greater **Schedule:** Administered once per semester in final weeks of class **Related Documents:** TCOM_482_ROUTER_LAB_CHECKLIST_rev_1.docx	Criterion met--95% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_482_ROUTER_LAB_CHECKLIST_rev_1.docx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 92% of students received a score of 75% or greater (12/28/2012)	
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 90% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

SKY NETX 431 : Network Switches-Concepts&Apps

Basic Switch Configuration (labs) - Implement and troubleshoot basic switch configurations, using vlans and trunking in a network configuration based on industry standards

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply checklist to team project **Success Criterion:** At least 80% of students receive a score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:**	

SKY NETX 431 : Network Switches-Concepts&Apps

Basic Switch Configuration (labs) - Implement and troubleshoot basic switch configurations, using vlans and trunking in a network configuration based on industry standards

Assessment Methods	*Result*	*Actions*
Schedule: Fall 2012	TCOM_483_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_483_SWITCH_LAB_CHECKLIST.pdf	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met--100% of students received a score of 75% or greater (12/28/2012)	

Basic Switch Configuration (labs) - Implement and troubleshoot basic switch configurations, using vlans and trunking in a network configuration based on industry standards

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply checklist to team project **Success Criterion:** At least 80% of students receive a score of 75% or greater **Schedule:** Fall 2012	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_483_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_483_SWITCH_LAB_CHECKLIST.pdf	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met--100% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 432 : Advanced Routing

Advanced Routing Implementation (lab) - Implement and troubleshoot advanced routing configurations in small to medium internetworking environment, using industry standards

Course Outcome Status: Active
Start Date: 08/27/2012

SKY NETX 432 : Advanced Routing

Advanced Routing Implementation (lab) - Implement and troubleshoot advanced routing configurations in small to medium internetworking environment, using industry standards

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Lab Checklist to Team Project **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_484_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_484_ROUTER_LAB_CHECKLIST.pdf	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students receive a score of 75% or greater (12/28/2012)	

Advanced Routing Implementation (lab) - Implement and troubleshoot advanced routing configurations in small to medium internetworking environment, using industry standards

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Lab Checklist to Team Project **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_484_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_484_ROUTER_LAB_CHECKLIST.pdf	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students receive a score of 75% or greater (12/28/2012)	

SKY NETX 435 : Security

Firewall (security) Implementation (labs) - Implement and troubleshoot basic firewall (security) administration using industry standards

SKY NETX 435 : Security

Firewall (security) Implementation (labs) - Implement and troubleshoot basic firewall (security) administration using industry standards

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Checklist to Team Project **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---89% of students received a score of 75% or greater (12/12/2015) **Related Documents:** NETX_435_NETWORK_SECURITY_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 96% of students received a score of 75% or greater (12/28/2012)	

Firewall (security) Implementation (labs) - Implement and troubleshoot basic firewall (security) administration using industry standards

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Checklist to Team Project **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---89% of students received a score of 75% or greater (12/12/2015) **Related Documents:** NETX_435_NETWORK_SECURITY_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 96% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 439 : Troubleshooting

Troubleshooting Network Connectivity (labs) - Troubleshoot network connectivity issues using industry best practices in analyzing, documenting and implementing solutions

Course Outcome Status: Active

SKY NETX 439 : Troubleshooting

Troubleshooting Network Connectivity (labs) - Troubleshoot network connectivity issues using industry best practices in analyzing, documenting and implementing solutions

Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply lab checklist to team project **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---89% of students received a score of 75% or greater (12/17/2015) **Related Documents:** NETX_439_TROUBLESHOOTING_INTERNETWORK_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a score of 75% or greater (12/28/2012)	

Troubleshooting Network Connectivity (labs) - Troubleshoot network connectivity issues using industry best practices in analyzing, documenting and implementing solutions

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply lab checklist to team project **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---89% of students received a score of 75% or greater (12/17/2015) **Related Documents:** NETX_439_TROUBLESHOOTING_INTERNETWORK_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 440 : Microsoft

SKY NETX 440 : Microsoft

Build, troubleshoot and repair a server-administrated LAN - Build, troubleshoot and repair a server-administrated LAN using industry accepted methodology and tools

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Lab Checklist **Success Criterion:** 70% of the students will earn 75% or higher on the lab checklist **Schedule:** Fall 2012	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met 100% of students received a score of 75% or greater for all labs (05/30/2014) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discuss with NdP **Related Documents:** NETX 440_SP14R.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 74% of students received a score of 70% or greater (05/24/2013) **Related Documents:** COMP_TCOM 481 Compiled Lab Results_Spring 2013.xls	

Build, troubleshoot and repair a server-administrated LAN - Build, troubleshoot and repair a server-administrated LAN using industry accepted methodology and tools

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Apply Lab Checklist **Success Criterion:** 70% of the students will earn 75% or higher on the lab checklist **Schedule:** Fall 2012	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met 100% of students received a score of 75% or greater for all labs (05/30/2014) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discuss with NdP **Related Documents:** NETX 440_SP14R.xlsx	

SKY NETX 440 : Microsoft

Build, troubleshoot and repair a server-administrated LAN - Build, troubleshoot and repair a server-administrated LAN using industry accepted methodology and tools

Assessment Methods	*Result*	*Actions*
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 74% of students received a score of 70% or greater (05/24/2013) **Related Documents:** COMP_TCOM 481 Compiled Lab Results_Spring 2013.xls	

SKY NETX 443 : Linux

Install, update, and configure Linux on a desktop PC - At least 85% of students will successfully install, attach to network, and update a Linux OS, using a manual, traditional FHS format.

Course Outcome Status: Active
Start Date: 08/17/2015

Assessment Methods	*Result*	*Actions*
Other - Classroom, instructor-led activity. **Success Criterion:** At least 85% of students install, network, and update the system without irreversible error. **Related Documents:** NETX_443_INTRODUCTION_LINUX_ADMIN_INSTALL_UPDATE_LAB_CHECKLIST.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 100% of students successfully completed install/update tasks (12/18/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Hanley discuss with NdP **Related Documents:** NETX_443_SLOs_Fall_2015_2015-2016_Cycle.xlsx NETX_443_INTRODUCTION_LINUX_ADMIN_INSTALL_UPDATE_LAB_CHECKLIST.pdf	

Perform basic administrative tasks related to end user support within a networked environment - At least 75% of students will receive a grade of 75% or greater in their completion of classroom lab activities configuring and troubleshooting a Linux system in a networked environment.

Course Outcome Status: Active
Start Date: 08/17/2015

SKY NETX 443 : Linux

Perform basic administrative tasks related to end user support within a networked environment - At least 75% of students will receive a grade of 75% or greater in their completion of classroom lab activities configuring and troubleshooting a Linux system in a networked environment.

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Lab checklist of basic configuration for Linux systems in a networked environment. **Success Criterion:** At least 75% of students receive a grade of 75% or greater for completion of the lab assignments (on checklist). **Related Documents:** NETX_443_INTRODUCTION_LINUX_ADMIN_LABS_CHECKLIST.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 87% of students scored 75% or greater for Lab assignments (12/18/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Hanley discussed with NdP **Related Documents:** NETX_443_SLOs_Fall_2015_2015-2016_Cycle.xlsx NETX_443_INTRODUCTION_LINUX_ADMIN_LABS_CHECKLIST.pdf	

SKY NETX 450 : Voice Over IP (VoIP)

VoIP Implementation (labs) - Implement and troubleshoot a small-scale VoIP network environment

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Lab performance & knowledge checklist **Success Criterion:** At least 70% of students score 75% or greater on lab performance checklist	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 84% of students scored 75% or greater on lab performance checklist (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** NdP with faculty **Related Documents:** NETX_450_VoIP_Spring2016SLO_NdP.xlsx	

SKY NETX 670: Cooperative Education in Network Engineering

SKY NETX 670: Cooperative Education in Network Engineering

Goal Creation - Learn to establish and clarify realistic goals and objectives within the workplace.

Course Outcome Status: Active
Start Date: 01/17/2017

Workplace Communication - Learn to engage and work cooperatively with the work supervisor in the pursuit of shared workplace goals.

Course Outcome Status: Active
Start Date: 01/17/2017

Evaluations & Feedback - Weigh self-evaluation of workplace performance with the evaluation and feedback of the work supervisor.

Course Outcome Status: Active
Start Date: 01/17/2017

Networking Technology Concepts and Theory - Apply conceptual knowledge to the design of a network project or to the written analysis of a network-related topic.

SKY NETX 401 : Survey of Telecommunications

Specific technologies - Identify specific technologies used in voice and data communications

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Students will research and present a written and illustrated report on one aspect of the Internet of Things (IoT). **Success Criterion:** At least 75% of the students will receive a grade of 75% or greater for their research and presentation.	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criteria Met - 77% of students received a grade of 75% or greater for their research and presentation (08/30/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Discussed with Norman del Prado 8/30/16 **Related Documents:** NETX_401_PROJECT_RUBRIC_INSTRUCTOR_REVIEW.pdf NETX_401_SLOs_Summer_2016_for_2015-2016_Cycle.xlsx	

SKY NETX 410 : Structured Wiring & Cabling

Design and document - Design and document single-line stations, network distribution frames and panels and electronic key systems panels, according to industry standards

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Design Project **Success Criterion:** At least 75% of students receive a grade of 75% or greater for design project **Schedule:** Spring 2013	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criteria Met - 88% of Students Received a Grade of 75% or Greater (12/28/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Discussed with Norman del Prado on 12/27/16. **Related Documents:** NETX_410_DESIGN_PROJECT_RUBRIC.pdf	

SKY NETX 410 : Structured Wiring & Cabling

Design and document - Design and document single-line stations, network distribution frames and panels and electronic key systems panels, according to industry standards

Assessment Methods	*Result*	*Actions*
	NETX_410_SLOs_Fall_2015_2015-2016_Cycle.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_410_Cabling-Wiring_SP-13_Results.xlsx	

Design and document - Design and document single-line stations, network distribution frames and panels and electronic key systems panels, according to industry standards

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Design Project **Success Criterion:** At least 75% of students receive a grade of 75% or greater for design project **Schedule:** Spring 2013	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criteria Met - 88% of Students Received a Grade of 75% or Greater (12/28/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Discussed with Norman del Prado on 12/27/16. **Related Documents:** NETX_410_DESIGN_PROJECT_RUBRIC.pdf NETX_410_SLOs_Fall_2015_2015-2016_Cycle.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_410_Cabling-Wiring_SP-13_Results.xlsx	

SKY NETX 410 : Structured Wiring & Cabling

Design and document - Design and document single-line stations, network distribution frames and panels and electronic key systems panels, according to industry standards

SKY NETX 411 : Fiber Optics Technology

Design and document - Design and document fiber optic systems to industry standards

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Industry Standards Checklist **Success Criterion:** At least 75% of students receive a grade of 75% for design	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 85% of students earned a score of 75% or greater on project (05/26/2016) **Who discussed the assessment, results and/or action plans? When?** **Where (e.g., dept. meeting)?:** Dean Scurries discuss with NdP **Related Documents:** NetX411_Fiber-Optics_SP-16 SLO Results.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 86% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_460_Fiber-Optics_SP-13 Results.xlsx	

Design and document - Design and document fiber optic systems to industry standards

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Industry Standards Checklist **Success Criterion:** At least 75% of students receive a grade of 75% for design	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 85% of students earned a score of 75% or greater on project (05/26/2016) **Who discussed the assessment, results and/or action plans? When?**	

SKY NETX 411 : Fiber Optics Technology

Design and document - Design and document fiber optic systems to industry standards

Assessment Methods	*Result*	*Actions*
	Where (e.g., dept. meeting)?: Dean Scurries discuss with NdP **Related Documents:** NetX411_Fiber-Optics_SP-16 SLO Results.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 86% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_460_Fiber-Optics_SP-13 Results.xlsx	

SKY NETX 413 : Wireless Local Area Networks

Wireless LAN Design Project - Design and document a Wireless LAN to industry standards

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - 8 Category, 100 point Rubric **Success Criterion:** At least 70% of students receive score of 70% or greater **Schedule:** Fall 2013	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met Criteria Met - 83% of students received a score of 70% or greater (12/20/2013) **Who discussed the assessment, results and/or action plans? When?** **Where (e.g., dept. meeting)?:** Lohmann with NdP **Related Documents:** TCOM 465 Compiled Project Results_Fall 2013.xls	

SKY NETX 420: PC Repair

Design and document a computer - Design and document a computer of his/her own design, including justification for elements employed

Course Outcome Status: Active

SKY NETX 420: PC Repair

Design and document a computer - Design and document a computer of his/her own design, including justification for elements employed

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to project **Success Criterion:** At least 70% of students receive score of 70% or greater **Related Documents:** COMP_TCOM_ 451_PC REPAIR_PROJECT_RUBRIC.pdf COMP_TCOM_451_SLO__ASSESSMENT_PLAN_rev_1.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 81% of students earned score of 70% or greater (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Lohmann discuss with NdP **Related Documents:** NETX 420 Compiled Project Results_Spring 2016.xls	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 90% of students received a grade of 70% or greater (12/28/2012) **Related Documents:** Copy of COMP_TCOM 451 Compiled Project Results_Fall 2012.xls	

Design and document a computer - Design and document a computer of his/her own design, including justification for elements employed

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to project **Success Criterion:** At least 70% of students receive score of 70% or greater **Related Documents:** COMP_TCOM_ 451_PC REPAIR_PROJECT_RUBRIC.pdf COMP_TCOM_451_SLO__ASSESSMENT_PLAN_rev_1.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 81% of students earned score of 70% or greater (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Lohmann discuss with NdP **Related Documents:** NETX 420 Compiled Project Results_Spring 2016.xls	
	Reporting Cycle: 2012 - 2013	

SKY NETX 420: PC Repair

Design and document a computer - Design and document a computer of his/her own design, including justification for elements employed

Assessment Methods	*Result*	*Actions*
	Result Type: Criterion met Criterion Met-- 90% of students received a grade of 70% or greater (12/28/2012) **Related Documents:** Copy of COMP_TCOM 451 Compiled Project Results_Fall 2012.xls	

SKY NETX 430 : Router

Routing Design Project - Design and document a small, wide area IP network, employing industry standards

Course Outcome Status: Active
Start Date: 01/24/2011

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to project **Success Criterion:** At least 80% of students receive score of 75% or greater **Schedule:** Administered once each semester in final week of class **Related Documents:** ROUTING_PROJECT_RUBRIC.docx	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--81% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx ROUTING_PROJECT_RUBRIC.docx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 85% of students received a score of 75% or greater (12/28/2012)	
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 80% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met	

SKY NETX 430 : Router

Routing Design Project - Design and document a small, wide area IP network, employing industry standards

Assessment Methods	*Result*	*Actions*
	Criterion Met-- 81% of Students Scored 75% or Greater (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Design Project - Design and document a small, wide area IP network, employing industry standards

Course Outcome Status: Active
Start Date: 01/24/2011

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to project **Success Criterion:** At least 80% of students receive score of 75% or greater **Schedule:** Administered once each semester in final week of class **Related Documents:** ROUTING_PROJECT_RUBRIC.docx	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--81% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx ROUTING_PROJECT_RUBRIC.docx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 85% of students received a score of 75% or greater (12/28/2012)	
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 80% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 81% of Students Scored 75% or Greater (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

SKY NETX 430 : Router

Routing Design Project - Design and document a small, wide area IP network, employing industry standards

Course Outcome Status: Active
Start Date: 01/24/2011

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to project **Success Criterion:** At least 80% of students receive score of 75% or greater **Schedule:** Administered once each semester in final week of class **Related Documents:** ROUTING_PROJECT_RUBRIC.docx	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--81% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx ROUTING_PROJECT_RUBRIC.docx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 85% of students received a score of 75% or greater (12/28/2012)	
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 80% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 81% of Students Scored 75% or Greater (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Design Project - Design and document a small, wide area IP network, employing industry standards

Course Outcome Status: Active
Start Date: 01/24/2011

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to project	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met	

SKY NETX 430 : Router

Routing Design Project - Design and document a small, wide area IP network, employing industry standards

Assessment Methods	*Result*	*Actions*
Success Criterion: At least 80% of students receive score of 75% or greater **Schedule:** Administered once each semester in final week of class **Related Documents:** ROUTING_PROJECT_RUBRIC.docx	Criterion met--81% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx ROUTING_PROJECT_RUBRIC.docx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 85% of students received a score of 75% or greater (12/28/2012)	
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 80% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 81% of Students Scored 75% or Greater (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

SKY NETX 431 : Network Switches-Concepts&Apps

Switching Design Project - Design and document a multi-switched VLAN/IP trunked network, employing industry standards

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to project **Success Criterion:** At least 80% of students receive a score of 75% or	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--81% of students scored 75% or greater (12/19/2014) **Related Documents:**	

SKY NETX 431 : Network Switches-Concepts&Apps

Switching Design Project - Design and document a multi-switched VLAN/IP trunked network, employing industry standards

Assessment Methods	*Result*	*Actions*
greater	TCOM_483_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_483_SWITCHING_PROJECT_RUBRIC.pdf	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a score of 75% or greater (12/28/2012)	

Switching Design Project - Design and document a multi-switched VLAN/IP trunked network, employing industry standards

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to project **Success Criterion:** At least 80% of students receive a score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--81% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_483_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_483_SWITCHING_PROJECT_RUBRIC.pdf	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 432 : Advanced Routing

Advanced Routing Design Project - Design and document an advanced routing schema using a wide area topology and advanced routing protocols

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*

Networking Technology Concepts and Theory - Apply conceptual knowledge to the design of a network project or to the written analysis of a network-related topic.

SKY NETX 432 : Advanced Routing

Advanced Routing Design Project - Design and document an advanced routing schema using a wide area topology and advanced routing protocols

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to Design Project **Success Criterion:** At least 80% of students receive score of 75% or greater **Schedule:** Fall 2012	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--81% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_484_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_484_ADVANCED_ROUTING_PROJECT_RUBRIC.pdf	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a score of 75% or greater (12/28/2012)	

Advanced Routing Design Project - Design and document an advanced routing schema using a wide area topology and advanced routing protocols

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to Design Project **Success Criterion:** At least 80% of students receive score of 75% or greater **Schedule:** Fall 2012	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--81% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_484_Checklist-Rubric-Final_DATA_Fall_2014.xlsx TCOM_484_ADVANCED_ROUTING_PROJECT_RUBRIC.pdf	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 435 : Security

Network Security Expository Paper - Write an expository, illustrated paper on a tool or topic directly related to network security.

Course Outcome Status: Active

Networking Technology Concepts and Theory - Apply conceptual knowledge to the design of a network project or to the written analysis of a network-related topic.

SKY NETX 435 : Security

Network Security Expository Paper - Write an expository, illustrated paper on a tool or topic directly related to network security.

Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to paper **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---81% of students received a score of 75% or greater (12/12/2015) **Related Documents:** NETX_435_NETWORK_SECURITY_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 85% of students received a score of 75% or greater (12/28/2012)	

Network Security Expository Paper - Write an expository, illustrated paper on a tool or topic directly related to network security.

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to paper **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---81% of students received a score of 75% or greater (12/12/2015) **Related Documents:** NETX_435_NETWORK_SECURITY_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 85% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 439 : Troubleshooting

Network Troubleshooting Expository Paper - Write an expository, illustrated paper on a tool or topic directly related to troubleshooting TCP/IP networks.

Course Outcome Status: Active
Start Date: 08/27/2012

SKY NETX 439 : Troubleshooting

Network Troubleshooting Expository Paper - Write an expository, illustrated paper on a tool or topic directly related to troubleshooting TCP/IP networks.

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to paper **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---84% of students received a score of 75% or greater (12/17/2015) **Related Documents:** NETX_439_TROUBLESHOOTING_INTERNETWORK_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 94% of students received a score of 75% or greater (12/28/2012)	

Network Troubleshooting Expository Paper - Write an expository, illustrated paper on a tool or topic directly related to troubleshooting TCP/IP networks.

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Rubric to paper **Success Criterion:** At least 80% of students receive score of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---84% of students received a score of 75% or greater (12/17/2015) **Related Documents:** NETX_439_TROUBLESHOOTING_INTERNETWORK_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 94% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 440 : Microsoft

Design and document - Design and document a server-administrated LAN to industry specifications

Course Outcome Status: Active

SKY NETX 440 : Microsoft

Design and document - Design and document a server-administrated LAN to industry specifications

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Project Design Rubric to student project **Success Criterion:** At least 70% of students earn a grade of 70% or better	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met Criteria met: 89.5% of students scored 70% or better (05/30/2014) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discuss with NdP **Related Documents:** NETX 440_SP14R.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion not met Criterion Not Met-- 61% of students received a grade of 70% or greater (05/24/2013) **Related Documents:** COMP_TCOM 481 Compiled Project Results_Spring 2013.xls	**Action:** Repeat assessment for this SLO next time course is offered (07/17/2013) **Action Plan Category:** Conduct Further Assessment

Design and document - Design and document a server-administrated LAN to industry specifications

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Capstone Assignment/Project - Apply Project Design Rubric to student project **Success Criterion:** At least 70% of students earn a grade of 70% or better	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met Criteria met: 89.5% of students scored 70% or better (05/30/2014) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discuss with NdP **Related Documents:** NETX 440_SP14R.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion not met	**Action:** Repeat assessment for this SLO next time course is offered

SKY NETX 440 : Microsoft

Design and document - Design and document a server-administrated LAN to industry specifications

Assessment Methods	*Result*	*Actions*
	Criterion Not Met-- 61% of students received a grade of 70% or greater (05/24/2013) **Related Documents:** COMP_TCOM 481 Compiled Project Results_Spring 2013.xls	(07/17/2013) **Action Plan Category:** Conduct Further Assessment

SKY NETX 443 : Linux

Perform basic administrative tasks related to end user support within a networked environment - At least 75% of students will receive a grade of 75% or greater in their completion of classroom lab activities configuring and troubleshooting a Linux system in a networked environment.

Course Outcome Status: Active
Start Date: 08/17/2015

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Lab checklist of basic configuration for Linux systems in a networked environment. **Success Criterion:** At least 75% of students receive a grade of 75% or greater for completion of the lab assignments (on checklist). **Related Documents:** NETX_443_INTRODUCTION_LINUX_ADMIN_LABS_CHECKLIST.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 87% of students scored 75% or greater for Lab assignments (12/18/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Hanley discussed with NdP **Related Documents:** NETX_443_SLOs_Fall_2015_2015-2016_Cycle.xlsx NETX_443_INTRODUCTION_LINUX_ADMIN_LABS_CHECKLIST.pdf	

SKY NETX 670: Cooperative Education in Network Engineering

Goal Creation - Learn to establish and clarify realistic goals and objectives within the workplace.

Course Outcome Status: Active
Start Date: 01/17/2017

Certification Preparation - Prepare students for IT industry-recognized certifications.

SKY ELEC 110 : Intro Fundamentals Electronics

Fundamental electrical parameters - Evaluate the fundamental electrical parameters of simple electronic circuits, using Ohm?s Law and other mathematical formulae.

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Multiple choice & fill-in final exam **Success Criterion:** At least 70% of students receive a score of 70% or greater on the exam	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 100% of students received a score of 70% or greater on the final exam (05/26/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Frank discuss with NdP **Related Documents:** elec110 slo_spr16_final.xls	

SKY NETX 400 : Networking Essentials

Take Cisco CCNA 1 On-line Final Exam - 75% of Students Score 75% or greater on Cisco CCNA 1 Final Exam

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice/Fill-in Exam **Success Criterion:** 75% of students score 75% or greater on exam	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 88% of students earned score of 75% or greater on final exam (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** NdP discuss with Q Cortes (who teaches other 400 course offering) **Related Documents:** NETX_400_LAN_Spring2016SLO_NdP.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 90% of students scored 75% or greater on exam (12/28/2012) **Related Documents:**	

SKY NETX 400 : Networking Essentials

Take Cisco CCNA 1 On-line Final Exam - 75% of Students Score 75% or greater on Cisco CCNA 1 Final Exam

Assessment Methods	*Result*	*Actions*
	COMP_TCOM 480 Compiled Final Exam Results_Fall 2012.xls	

Take Cisco CCNA 1 On-line Final Exam - 75% of Students Score 75% or greater on Cisco CCNA 1 Final Exam

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice/Fill-in Exam **Success Criterion:** 75% of students score 75% or greater on exam	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 88% of students earned score of 75% or greater on final exam (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** NdP discuss with Q Cortes (who teaches other 400 course offering) **Related Documents:** NETX_400_LAN_Spring2016SLO_NdP.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 90% of students scored 75% or greater on exam (12/28/2012) **Related Documents:** COMP_TCOM 480 Compiled Final Exam Results_Fall 2012.xls	

SKY NETX 401 : Survey of Telecommunications

Describe origins and evolution - Describe the origins and evolution of modern electronic communications

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*

SKY NETX 401 : Survey of Telecommunications

Describe origins and evolution - Describe the origins and evolution of modern electronic communications

Assessment Methods	*Result*	*Actions*
Exam - Objective Test, Fill in, multiple choice **Success Criterion:** 70% of students achieve 75% higher than on total points **Schedule:** Summer 2013	**Reporting Cycle:** 2012 - 2013 **Result Type:** Criterion met 87% of the students scored above 75% on the final test (10/15/2013) **Related Documents:** TCOM100Summer2013FinalExam	

SKY NETX 410 : Structured Wiring & Cabling

Pass written exams - Pass written exams covering the practices and standards of the structured wiring and cabling industry, specifically EIA TIA 568 and 570

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Multiple choice/fill-in Final Exam **Success Criterion:** At least 75% of students receive a grade of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criteria Met - 88% of Students Received a Grade of 75% or Greater (12/28/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Discussed with Norman del Prado 12/28/15 **Related Documents:** NETX_410_SLOs_Fall_2015_2015-2016_Cycle.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_410_Cabling-Wiring_SP-13_Results.xlsx	

Pass written exams - Pass written exams covering the practices and standards of the structured wiring and cabling industry, specifically EIA TIA 568 and 570

Course Outcome Status: Active

SKY NETX 410 : Structured Wiring & Cabling

Pass written exams - Pass written exams covering the practices and standards of the structured wiring and cabling industry, specifically EIA TIA 568 and 570

Assessment Methods	*Result*	*Actions*
Exam - Multiple choice/fill-in Final Exam **Success Criterion:** At least 75% of students receive a grade of 75% or greater	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criteria Met - 88% of Students Received a Grade of 75% or Greater (12/28/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Discussed with Norman del Prado 12/28/15 **Related Documents:** NETX_410_SLOs_Fall_2015_2015-2016_Cycle.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_410_Cabling-Wiring_SP-13_Results.xlsx	

SKY NETX 411 : Fiber Optics Technology

Test, troubleshoot and repair - Test, troubleshoot and repair fiber optic systems using industry standard tools

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Other - Practical Test - Installation & Troubleshooting + Objective Test - Multiple Choice/ Fill In **Success Criterion:** 75% of the students will earn 75% or higher on the test **Schedule:** Spring 2013	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 92% of students earned score of 75% or greater (05/26/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Dean Scurries discuss with NdP **Related Documents:** NetX411_Fiber-Optics_SP-16 SLO Results.xlsx	

SKY NETX 411 : Fiber Optics Technology

Test, troubleshoot and repair - Test, troubleshoot and repair fiber optic systems using industry standard tools

Assessment Methods	*Result*	*Actions*
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_460_Fiber-Optics_SP-13 Results.xlsx	

Test, troubleshoot and repair - Test, troubleshoot and repair fiber optic systems using industry standard tools

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Other - Practical Test - Installation & Troubleshooting + Objective Test - Multiple Choice/ Fill In **Success Criterion:** 75% of the students will earn 75% or higher on the test **Schedule:** Spring 2013	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 92% of students earned score of 75% or greater (05/26/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Dean Scurries discuss with NdP **Related Documents:** NetX411_Fiber-Optics_SP-16 SLO Results.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 100% of students received a grade of 75% or greater (05/24/2013) **Related Documents:** TCOM_460_Fiber-Optics_SP-13 Results.xlsx	

SKY NETX 413 : Wireless Local Area Networks

Wireless LAN Knowledge Test - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active

SKY NETX 413 : Wireless Local Area Networks

Wireless LAN Knowledge Test - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice Exam **Success Criterion:** At least 70% of students earn 70% or greater on exam **Schedule:** Fall 2013	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met Criteria Met - 100% of students received a score of 70% or greater (12/20/2013) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Lohmann with NdP **Related Documents:** TCOM 465 Compiled Final Exam Results_Fall 2013.xls	

SKY NETX 420: PC Repair

Pass written exams - Pass written exams covering theory and practice similar to the A+ certification

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Objective Test - Multiple Choice, Fill In **Success Criterion:** 70% of the students will earn 70% or higher on the test **Schedule:** Fall 2012 **Related Documents:** COMP_TCOM_451_SLO__ASSESSMENT_PLAN_rev_1.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 86% of students earned score of 70% or greater (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Lohmann discuss with NdP **Related Documents:** NETX 420 Compiled Final Exam Results_Spring 2016.xls	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 75% of students received a grade of 70% or greater (12/28/2012) **Related Documents:** Copy of COMP_TCOM 451 Compiled Final Exam Results_Fall 2012.xls	

SKY NETX 420: PC Repair

Pass written exams - Pass written exams covering theory and practice similar to the A+ certification

Pass written exams - Pass written exams covering theory and practice similar to the A+ certification

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Objective Test - Multiple Choice, Fill In **Success Criterion:** 70% of the students will earn 70% or higher on the test **Schedule:** Fall 2012 **Related Documents:** COMP_TCOM_451_SLO__ASSESSMENT_PLAN_rev_1.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 86% of students earned score of 70% or greater (05/25/2016) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Lohmann discuss with NdP **Related Documents:** NETX 420 Compiled Final Exam Results_Spring 2016.xls	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 75% of students received a grade of 70% or greater (12/28/2012) **Related Documents:** Copy of COMP_TCOM 451 Compiled Final Exam Results_Fall 2012.xls	

SKY NETX 421 : PC Repair - A+

C/NC - Complete all on-line study modules and practice tests

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Other - On-line learning modules & practice tests **Success Criterion:** 75% of students complete all the modules and practice tests **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 77% of all students completed the on-line modules and practice tests (12/21/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes	

SKY NETX 421 : PC Repair - A+

C/NC - Complete all on-line study modules and practice tests

Assessment Methods	*Result*	*Actions*
	discuss with NdP **Related Documents:** NETX 421 F15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 96% of students completed all on-line modules and practice tests (12/28/2012) **Related Documents:** COMP_TCOM 452 Compiled Final Class Grade Results_Fall 2012.xls	

C/NC - Complete all on-line study modules and practice tests

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Other - On-line learning modules & practice tests **Success Criterion:** 75% of students complete all the modules and practice tests **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 77% of all students completed the on-line modules and practice tests (12/21/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discuss with NdP **Related Documents:** NETX 421 F15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 96% of students completed all on-line modules and practice tests (12/28/2012) **Related Documents:** COMP_TCOM 452 Compiled Final Class Grade Results_Fall 2012.xls	

SKY NETX 421 : PC Repair - A+

C/NC - Complete all on-line study modules and practice tests

SKY NETX 430 : Router

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 01/24/2011
End Date: 05/26/2011

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice Exam **Success Criterion:** At least 70% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 89% of students received a score of 75% or greater (05/24/2013)	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion not met Criterion Not Met--50% of students received a score of 75% or greater (12/28/2012)	**Action:** With two previous semesters of data which meet or exceed the Success Criterion, these results (Fall 2012 Semester) are an unexpected anomaly, especially as the student performance exceeds the Success Criterion for the Labs and Design Project. TCOM 482 will be assessed again in Spring 2013. (01/30/2013) **Action Plan Category:** Conduct Further Assessment
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 95% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011	

SKY NETX 430 : Router

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
	Result Type: Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 01/24/2011
End Date: 05/26/2011

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice Exam **Success Criterion:** At least 70% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 89% of students received a score of 75% or greater (05/24/2013)	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion not met Criterion Not Met--50% of students received a score of 75% or greater (12/28/2012)	**Action:** With two previous semesters of data which meet or exceed the Success Criterion, these results (Fall 2012 Semester) are an unexpected anomaly, especially as the student performance exceeds the Success Criterion for the Labs and Design Project. TCOM 482 will be assessed again in Spring 2013. (01/30/2013) **Action Plan Category:** Conduct Further Assessment
	Reporting Cycle: 2011 - 2012	

SKY NETX 430 : Router

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
	Result Type: Criterion met Criterion Met-- 95% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 01/24/2011
End Date: 05/26/2011

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice Exam **Success Criterion:** At least 70% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 89% of students received a score of 75% or greater (05/24/2013)	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion not met Criterion Not Met--50% of students received a score of 75% or greater (12/28/2012)	**Action:** With two previous semesters of data which meet or exceed the Success Criterion, these results (Fall 2012 Semester) are an unexpected anomaly, especially as the student performance exceeds the Success Criterion for the Labs and Design

SKY NETX 430 : Router

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
		Project. TCOM 482 will be assessed again in Spring 2013. (01/30/2013) **Action Plan Category:** Conduct Further Assessment
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 95% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 01/24/2011
End Date: 05/26/2011

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice Exam **Success Criterion:** At least 70% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 89% of students received a score of 75% or greater (05/24/2013)	
	Reporting Cycle: 2012 - 2013	**Action:** With two previous semesters

SKY NETX 430 : Router

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
	Result Type: Criterion not met Criterion Not Met--50% of students received a score of 75% or greater (12/28/2012)	of data which meet or exceed the Success Criterion, these results (Fall 2012 Semester) are an unexpected anomaly, especially as the student performance exceeds the Success Criterion for the Labs and Design Project. TCOM 482 will be assessed again in Spring 2013. (01/30/2013) **Action Plan Category:** Conduct Further Assessment
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 95% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 01/24/2011
End Date: 05/26/2011

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice Exam **Success Criterion:** At least 70% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--90% of students scored 75% or greater (12/19/2014) **Related Documents:**	

SKY NETX 430 : Router

Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
	TCOM_482_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 89% of students received a score of 75% or greater (05/24/2013)	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion not met Criterion Not Met--50% of students received a score of 75% or greater (12/28/2012)	**Action:** With two previous semesters of data which meet or exceed the Success Criterion, these results (Fall 2012 Semester) are an unexpected anomaly, especially as the student performance exceeds the Success Criterion for the Labs and Design Project. TCOM 482 will be assessed again in Spring 2013. (01/30/2013) **Action Plan Category:** Conduct Further Assessment
	Reporting Cycle: 2011 - 2012 **Result Type:** Criterion met Criterion Met-- 95% of students received a score of 75% or greater (09/07/2012) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2012.xlsx	
	Reporting Cycle: 2010 - 2011 **Result Type:** Criterion met Criterion Met-- 95% of Students Scored 75% or Greater. (08/12/2011) **Related Documents:** Rubric-Checklist-Final_DATA_SP_2011.xlsx	

SKY NETX 431 : Network Switches-Concepts&Apps

Switching Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 08/27/2012

SKY NETX 431 : Network Switches-Concepts&Apps

Switching Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice, Fill In **Success Criterion:** At least 70% of students receive a score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--86% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_483_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 76% of students received a score of 75% or greater (12/28/2012)	

Switching Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice, Fill In **Success Criterion:** At least 70% of students receive a score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--86% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_483_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 76% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 432 : Advanced Routing

Advanced Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*

SKY NETX 432 : Advanced Routing

Advanced Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice, Fill-in **Success Criterion:** At least 70% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--100% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_484_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 76% of students received a score of 75% or greater (12/28/2012)	

Advanced Routing Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice, Fill-in **Success Criterion:** At least 70% of students receive score of 75% or greater	**Reporting Cycle:** 2014 - 2015 **Result Type:** Criterion met Criterion met--100% of students scored 75% or greater (12/19/2014) **Related Documents:** TCOM_484_Checklist-Rubric-Final_DATA_Fall_2014.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 76% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 435 : Security

Network Security Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*

SKY NETX 435 : Security

Network Security Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice, Fill In **Success Criterion:** 70% of the students will earn 75% or higher on the test **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---74% of students earned 75% or higher on the test (12/12/2015) **Related Documents:** NETX_435_NETWORK_SECURITY_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 78% of students received a score of 75% or greater (12/28/2012)	

Network Security Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Exam - Multiple Choice, Fill In **Success Criterion:** 70% of the students will earn 75% or higher on the test **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---74% of students earned 75% or higher on the test (12/12/2015) **Related Documents:** NETX_435_NETWORK_SECURITY_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 78% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 439 : Troubleshooting

Network Troubleshooting Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*

SKY NETX 439 : Troubleshooting

Network Troubleshooting Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Assessment Methods	*Result*	*Actions*
Exam - Objective Test - Multiple Choice, Fill In **Success Criterion:** 70% of the students will earn 75% or higher on the test **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---73% of students received a grade of 75% or greater (12/17/2015) **Related Documents:** NETX_439_TROUBLESHOOTING_INTERNETWORK_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 71% of students received a score of 75% or greater (12/28/2012)	

Network Troubleshooting Knowledge Test (final) - Prepare for Industry Certification (Knowledge)

Course Outcome Status: Active
Start Date: 08/27/2012

Assessment Methods	*Result*	*Actions*
Exam - Objective Test - Multiple Choice, Fill In **Success Criterion:** 70% of the students will earn 75% or higher on the test **Schedule:** Fall 2012	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met Criterion Met---73% of students received a grade of 75% or greater (12/17/2015) **Related Documents:** NETX_439_TROUBLESHOOTING_INTERNETWORK_SLO-DATA_FALL-15.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 71% of students received a score of 75% or greater (12/28/2012)	

SKY NETX 440 : Microsoft

Final Exam - Prepare for industry certifications

Course Outcome Status: Active

SKY NETX 440 : Microsoft

Final Exam - Prepare for industry certifications

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice & Fill-in **Success Criterion:** At least 70% of students earn a grade of 70% or greater on the final exam	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met 100% of students scored 70% or greater on the final exam (05/30/2014) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discussed with NdP **Related Documents:** NETX 440_SP14R.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met Criterion Met-- 74% of students received score of 70% or greater (05/24/2013) **Related Documents:** COMP_TCOM 481 Compiled Final Exam Results_Spring 2013.xls	

Final Exam - Prepare for industry certifications

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice & Fill-in **Success Criterion:** At least 70% of students earn a grade of 70% or greater on the final exam	**Reporting Cycle:** 2013 - 2014 **Result Type:** Criterion met 100% of students scored 70% or greater on the final exam (05/30/2014) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Cortes discussed with NdP **Related Documents:** NETX 440_SP14R.xlsx	
	Reporting Cycle: 2012 - 2013 **Result Type:** Criterion met	

SKY NETX 440 : Microsoft

Final Exam - Prepare for industry certifications

Assessment Methods	*Result*	*Actions*
	Criterion Met-- 74% of students received score of 70% or greater (05/24/2013) **Related Documents:** COMP_TCOM 481 Compiled Final Exam Results_Spring 2013.xls	

SKY NETX 443 : Linux

Install, update, and configure Linux on a desktop PC - At least 85% of students will successfully install, attach to network, and update a Linux OS, using a manual, traditional FHS format.

Course Outcome Status: Active
Start Date: 08/17/2015

Assessment Methods	*Result*	*Actions*
Other - Classroom, instructor-led activity. **Success Criterion:** At least 85% of students install, network, and update the system without irreversible error. **Related Documents:** NETX_443_INTRODUCTION_LINUX_ADMIN_INSTALL_UPDATE_LAB_CHECKLIST.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 100% of students successfully completed install/update tasks (12/18/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Hanley discuss with NdP **Related Documents:** NETX_443_SLOs_Fall_2015_2015-2016_Cycle.xlsx NETX_443_INTRODUCTION_LINUX_ADMIN_INSTALL_UPDATE_LAB_CHECKLIST.pdf	

Perform basic administrative tasks related to end user support within a networked environment - At least 75% of students will receive a grade of 75% or greater in their completion of classroom lab activities configuring and troubleshooting a Linux system in a networked environment.

Course Outcome Status: Active
Start Date: 08/17/2015

Assessment Methods	*Result*	*Actions*

SKY NETX 443 : Linux

Perform basic administrative tasks related to end user support within a networked environment - At least 75% of students will receive a grade of 75% or greater in their completion of classroom lab activities configuring and troubleshooting a Linux system in a networked environment.

Assessment Methods	*Result*	*Actions*
Presentation/Performance - Lab checklist of basic configuration for Linux systems in a networked environment. **Success Criterion:** At least 75% of students receive a grade of 75% or greater for completion of the lab assignments (on checklist). **Related Documents:** NETX_443_INTRODUCTION_LINUX_ADMIN_LABS_CHECKLIST.pdf	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 87% of students scored 75% or greater for Lab assignments (12/18/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Hanley discussed with NdP **Related Documents:** NETX_443_SLOs_Fall_2015_2015-2016_Cycle.xlsx NETX_443_INTRODUCTION_LINUX_ADMIN_LABS_CHECKLIST.pdf	

Prepare for industry-recognized Linux certifications - At least 75% of students will receive a grade of 70% or greater for a multiple-choice/fill-in test of theory, principles, and configuration of a Linux system.

Course Outcome Status: Active
Start Date: 08/17/2015

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice and fill-in exam covering theory, principles, and configuration of a Linux system. **Success Criterion:** At least 75% of students earn a grade of 70% or greater on the exam.	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 81% of students earned score of 75% or greater on exam (12/18/2015) **Who discussed the assessment, results and/or action plans? When? Where (e.g., dept. meeting)?:** Hanley discuss with NdP **Related Documents:** NETX_443_SLOs_Fall_2015_2015-2016_Cycle.xlsx	

SKY NETX 450 : Voice Over IP (VoIP)

SKY NETX 450 : Voice Over IP (VoIP)

VoIP Knowledge Test (exam) - Demonstrate knowledge of the basic theory and basic components of a VoIP infrastructure

Course Outcome Status: Active

Assessment Methods	*Result*	*Actions*
Exam - Multiple-choice exam **Success Criterion:** At least 70% of students score 75%or greater on exam	**Reporting Cycle:** 2015- 2016 **Result Type:** Criterion met 80% of students scored 75% or greater on final exam (05/25/2016) **Who discussed the assessment, results and/or action plans? When?** **Where (e.g., dept. meeting)?:** NdP with faculty **Related Documents:** NETX_450_VoIP_Spring2016SLO_NdP.xlsx	