CENTRAL NEW MEXICO COMMUNITY COLLEGE
ASSESSMENT REPORT
Due to SAAC by October 15

PART 1: CONTACT & PROGRAM IDENTIFICATION

Report Year and Contact Information:			
2015-2016	Robert Hennigan	rhennigan@cnm.edu	224-3920
Academic Year	**Contact Person**	**Email**	**Phone Number**

Subject of this Assessment Report:		
Program: Network Administration	**Gen Ed Area:**	**Discipline Area**:
☐ Certificate ☐ AA ☐ AS ☒ AAS	Applicable to: ☐ AA/AS ☐ AAS	Network Administration / Cisco Academy

PART 2: EVIDENCE OF OVERALL PROGRAM EFFECTIVENESS

Summary of Program Successes:

For the Fall 2015 – Summer 2016 terms, there were twenty one (21) students who completed the Capstone project for the Network Administration concentration. Of those students, the average score on their Capstone projects was 83.30%. This score is admirably higher than in the past period, which suggests that the newer faculty members and their enthusiasm is helping attract more serious candidates.

Description and Evaluation of Recent Changes Made in Support of Student Learning:

Student performance for these cohorts is noticeably better than the previous group. The introduction of new faculty and an increase in the emphasis on skills based learning might be the reason.

PART 3: REPORT ON RECENT ASSESSMENT OF STUDENT LEARNING

Student Learning Outcome(s) Assessed: *To add rows: right –click in cell below and select "Insert," "Insert Rows Above"*	**Classes/Cohorts Assessed:**
Student can use Network Protocol Models to explain communication between devices on a data network.	CIS 1425, 2420.2423,2425, 2427 and Capstone
Student can cable and create networks in accordance with stated objectives	Same as above
Student can create a logical diagram and translate it to a physical implementation on a network.	Same as above
Student can design a network with mathematical literacy and effectively implement the design to create a functioning network.	Same as above
Student can create a LAN environment implementing VLANs and wireless devices.	Same as above
Student can create WAN environment implementing appropriate protocols for current networking technologies.	Same as above
Student can implement practical network security applications on the network.	Same as above
Student can problem solve and troubleshoot data networks.	Same as above

Measurement Tool(s) Used: *To add rows: right –click in cell below and select "Insert," "Insert Rows Above"*	*Enter X's for type of tool*				**Initial Achievement Target or Expectation:**
	Internal	**External**	**Direct**	**Indirect**	
A comprehensive electronic pre-certification exam				x	Students are expected to achieve a passing score of 71.
Performance based projects (skills exams) used in classes CIS 1425, 2420,2423,2425,2427, as well as the Capstone project.	x		x		The Network Administration exit competencies are evaluated using a Rubrics with a scale of 4=excellent, 3=good, 2=fair, and 1=poor. We believe a score of 3+ for 75% of our students is an attainable goal.

Assessment Findings:

Outcomes 1-8: A total of 21 Network Administration students completed the Network Administration assessment activities in the Capstone course in Fall, 2015 and Spring/Summer 2016. The results are as follows:

	COMP 1	COMP 2	COMP 3	COMP 4	COMP 5	COMP 6	COMP 7	COMP 8
SCORE	Protocols	Design	Document	Net Math	LAN VLANs	WANs	Security	Trouble Shooting
4	7	7	7	7	7	7	7	7
3.5	4	4	4	4	4	4	4	4
3	9	9	9	9	9	9	9	9
2.5	1	1	1	1	1	1	1	1
2.0								
1.0								

Using the Achievement Target of 3+ criteria for 75% of our students, the raw data is:

	COMP 1	COMP 2	COMP 3	COMP 4	COMP 5	COMP 6	COMP 7	COMP 8
SCORE	Protocols	Design	Document	Net Math	LAN VLANs	WANs	Security	Trouble Shooting
3+	20	20	20	20	20	20	20	20
<3	1	1	1	1	1	1	1	1
Meet Target3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Linux Outcomes:

Criteria	Outcomes
For Install and maintain Linux operating systems	The rate of students the scored 80% or more was 100%
For Locate Help resources in the Linux operating systems	The rate of students the scored 80% or more was 99.7%

For Use the package management utility to administer the Linux operating systems	The rate of students the scored 80% or more was 99.5%
For Explain the fundamental properties of the shell	The rate of students the scored 80% or more was 83.56%
For Administrate Linux operating systems using Command Line Interface (CLI) and Graphic User Interface (GUI)	The rate of students the scored 80% or more was 84.76%
For Manage jobs, processes and run levels in the Linux operating systems	The rate of students the scored 80% or more was 96%
For Able to configure the peripheral devices and perform network services.	The rate of students the scored 80% or more was 77%
For Conduct troubleshooting, performance evaluation and security features	The rate of students the scored 80% or more was 84%
For Compose administration shell scripts	The rate of students the scored 80% or more was 99.1%

Analysis and Interpretation of Assessment Findings:
The program is achieving the desired results. The job market is strong in this field. Additional entry level class was required this fall semester.

Action Plan in Support of Student Learning:

Recommendations, Proposals, and/or Funding Requests:
N/A

PART 4: EMBEDDED OUTCOMES

Critical Thinking and Life Skills/Teamwork Development within Programs: a) Please describe how Critical Thinking assessment is embedded within your program assessment. b) Please describe how Life Skills/Teamwork assessment is embedded within your program assessment.
a) By its nature, Network Administration involves critical thinking. Class homework assignments, class hands on labs, and skills projects all incorporate critical thinking as the beginning point to successful completion.
b) Student homework assignments, skills projects, and all labs are evaluated based on timeliness, quality, and accuracy of work. Students must demonstrate that the networks they build can reach external locations on the Internet. Late work is discouraged.

PART 5: ASSESSMENT CYCLE PLAN (Copy and paste from original plan if unchanged)

Cycle Years:	Plan Description:

Student Learning Outcomes:	When Measured:	Where Measured:	How Measured:
1. Use network protocol models to explain the layers of communications in data networks.	Outcomes 1-8 CIS Network Administration students were assessed in their final semester via the CIS 2999 Capstone course.	Outcomes 1-8 CIS Network Administration students were assessed in their final semester via the CIS 2999 Capstone course.	Students were assessed via two different methods in their Capstone Project: 1) The student was assigned a skills test in which they had to simulate a company with complex network requirements. The student had to

			design the network, select the appropriate devices, connect and configure them, and demonstrate to the instructor that it functioned correctly. DIRECT methods were used to assess student performance. (1-8) 2) The second part of the Capstone project required the student to complete a comprehensive written exam that fairly measures their comprehension and preparedness to complete an industry recognized certification exam. EXTERNAL methods were used to assess student performance
2. Employ basic cabling and network designs to connect devices in accordance with stated objectives.	Same as 1	Same as 1	Same as 1
3. Develop a logical diagram and translate it to a physical implementation.	Same as 1	Same as 1	Same as 1
4. Demonstrate network mathematical literacy both in theory and application as it applies to networks	Same as 1	Same as 1	Same as 1
5. Design, address, construct and test LANs containing multiple VLANs as well as wireless devices.	Same as 1	Same as 1	Same as 1
6. Design, address, construct and test WAN topologies selecting from current networking technologies	Same as 1	Same as 1	Same as 1
7. Demonstrate the practical application of skills needed to design, implement, and support network security.	Same as 1	Same as 1	Same as 1
8. Demonstrate problem solving ability with data networks.	Same as 1	Same as 1	Same as 1