UNIVERSITY OF ARKANSAS
PULASKI TECH

Assessment Report:
2018-2019 – Program Level

The University of Arkansas – Pulaski Technical College calls for each program (AS, AA, AAS, CP, and TC) to have an assessment plan for each academic year that includes the following:

- **Program Learning Objectives**
- **Procedures for assessing the achievement of student learning**
- **Procedures for analyzing and interpreting assessment results for the continuous improvment of the program.**

A primary goal for each instructional department's assessment is to include at least one direct measure of student learning, which is accomplished usually through the use of locally developed tests, student portfolios, capstone assessment measures, embedded assignments, or through licensure exams and standardized national tests. In addition to direct measures, most areas may also use indirect methods to assess student achievement. Graduation rates and graduation and employer surveys are frequently used as indirect indicators of student achievement.

This form presents template of questions that must, at minimum, be addressed by instructional departments when filing an assessment plan. While an electronic version of this form will be made available, instructional departments may include additional information not specifically addressed in this form as long as the template questions are addressed.

Other Assessment Considerations:

- The College expects programs/departments/divisions to make curriculum changes and budget requests based in part upon assessment findings. Assessment of student learning should be a catalyst for quality instruction and improvement across the college community.
- All programs will be asked to submit an annual assessment report to the Assessment Committee by October 10th of each year. (If October 10th falls on a weekend, please submit reports on the following Monday.)
- For technical and occupational programs, please consider the role of your advisory committee in your student learning objectives.

This form must be completed by October 10 of each academic year. Complete each part of this form. Please follow highlighted instructions.

Part A: Identification and Assessment Plan

1. Name of program: *Associate of Applied Science degree in Computer Information Systems Networking Emphasis*

2. Name of individual compiling report: *Danny Martin*

3. Date of submission: *10/12/2019*

4. Is the assessment plan

☐ an initial plan for the program ☐X a revision of an old plan ☐ unaltered from previous year

5. Provide a brief description of the program and its purposes, to include a description of the jobs/careers for which students are being prepared.

The Networking option educates students to become qualified to enter the networking field as network engineers and system administrators. The networking courses at PTC provide a foundation for pursuing employer-desired certifications such as A+, Network+, Security+, Cisco Certified Network Associate (CCNA), and Microsoft Certified IT Professional (MCITP).

Part B: Student Learning Objectives, Assessment Methods, and Data Sources

In this section of the assessment plan, student learning objectives for the program will be defined. Also, assessment methods and data sources for each objective must be defined. Follow the instructions below to define and relate the program leaning objectives.

1. Complete the chart below or attach documentation of the assessment process that includes the data included below. Also attach any assessment instruments and grading rubrics used at the program level if applicable.

Program Learning Objectives	Course	Assessment Method and/or Data Source
1. ***Networking infrastructure*** *- Design, implement and maintain network infrastructures for businesses benefiting from both local and Internet technologies.* ***Install/configure Operating systems*** *- Successfully install, configure and manage the most current version of both the server and client operating systems.* ***Network monitoring and Security*** *- Utilize network technologies for use in switching, routing, analyzing, and securing data over local, wide, and wireless networks*	*CIS 1814* *CCNA 1*	*Introduction to Networks.* *Student Hands-on Skills Assessment Exam.* Percentage rates Scored by Checklist/Rating Scale 70% and higher denotes proficiency overall • Digital Communications • Develop an IPv4 Addressing scheme • Initialize and reload devices • Configure device security settings • Configure IPv6 addressing
2. ***Networking infrastructure*** *- Design, implement and maintain network infrastructures for businesses benefiting from both local and Internet technologies.* ***Install/configure Operating systems*** *- Successfully install, configure and manage the most current version of both the server and client operating systems.* ***Network monitoring and Security*** *- Utilize network technologies for use in switching, routing, analyzing, and securing data over local, wide, and wireless networks*	*CIS 1824* *CCNA 2*	*Student Hands-on Skills Assessment Exam.* *Percentage rates* *Scored by Checklist/Rating Scale* *70% and higher denotes proficiency overall.* • Device Configurations • Switch security and VLANs • Dynamic Routing • DHCP and NAT • Time and Control
3. ***Networking infrastructure*** *- Design, implement and maintain network infrastructures for businesses benefiting from both local and Internet technologies.* ***Install/configure Operating systems*** *- Successfully install, configure and manage the most current version of both the server and client operating systems.* ***Network monitoring and Security*** *- Utilize network technologies for use in switching, routing, analyzing, and securing data over local, wide, and wireless networks*	*CIS 1844* *CCNA 4*	*Student Hands-on Skills Assessment Exam.* *Percentage rates* *Scored by Checklist/Rating Scale* *70% and higher denotes proficiency overall.* • Basic configurations /Security • LAN Redundancy and Link Aggregation • EIGRP Routing protocol
4. ***Networking infrastructure*** *- Design, implement and maintain network infrastructures for businesses benefiting from both local and Internet technologies.* ***Install/configure Operating systems*** *- Successfully install, configure and manage the most current version of both the server and client operating systems.* ***Network monitoring and Security*** *- Utilize network technologies for use in switching, routing, analyzing, and securing data over local, wide, and wireless networks*	*CIS 1854* *CCNA 4*	*Student Hands-on Skills Assessment Exam.* *Percentage rates* *Scored by Checklist/Rating Scale* *70% and higher denotes proficiency overall.* • Point-to-Point Protocol (PPP) and Point-to Point over Ethernet (PPoE) • Access Control List (ACLs) • GRE Tunnel with BGP

		• Monitor the Network (including troubleshooting) • EIGRP Routing Protocol
5. ***Install/configure Operating systems*** - *Successfully install, configure and manage the most current version of both the server and client operating systems for small to mid-sized businesses.* ***Network monitoring and Security*** - *Utilize network technologies for use in analyzing, and securing data over local, wide, and wireless networks*	*CIS 1254: IT Essentials I*	*Hands-on Skills Assessment* *Students must score 70% or above* • Build, configure, upgrade, and maintain a personal computer system • Diagnose and resolve problems of a personal computer system • Install and configure various computer peripheral devices • Understand wireless networking and mobile computing devices • Use relevant workplace safety and environmental standards during computer maintenance
6. ***Install/configure Operating systems*** - *Successfully install, configure and manage the most current version of both the server and client operating systems for small to mid-sized businesses.* ***Network monitoring and Security*** - *Utilize network technologies for use in analyzing, and securing data over local, wide, and wireless networks*	*CIS 1264 IT Essentials II*	*Not assessed this cycle.*
7. ***Install/configure Operating systems*** - *Successfully install, configure and manage the most current version of both the server and client operating systems for small to mid-sized businesses.*	*CIS 2214* Microsoft Server Admin I	*Scored by Pretest/Posttest comparison and* Class Project Students will Install Server 2016 Scored by Checklist 70% and higher denotes proficiency overall • Networking infrastructure Design, implement and maintain network infrastructures for businesses benefiting from both local and Internet technologies. • Install/configure Operating systems Successfully install, configure and manage the most current version of both the server and client operating systems for small to mid-sized businesses. Not assessed this cycle (class didn't make.)
8. *Network monitoring and Security - Utilize network technologies for use in networking, analyzing, and securing data over local, wide, and wireless networks*	*CIS 1233* Fundamentals of Information Security	*Hands-on Skills Assessment* *Students must score 70% or above.* • Identify common information security attacks and defenses. • Describe common methods used to attack information systems. • List the steps in performing vulnerability analysis. • Identify standard methods of authentication. • Describe key features of cryptographic systems and employ them to secure data. • Plan for business continuity. • Establish acceptable information security policies and document them

2. For each program objective, if applicable, discuss any additional data sources that may be used to gauge success (e.g. charts, graphs, surveys, rates).

The UA-PTC Networking curriculum is focused on student preparation for and successfully passing one or more industry certifications, such as A+, CCNA, and MCITP. The courses that UA-PTC students take in Networking are mapped to the suggested curricula for the different certifications, ensuring that the student is both prepared for entering the workforce with the most up-to-date knowledge possible and is well suited to perform successfully on certification exams.

Certifications such as the A+, Network+, CCNA, and the MCITP are used by employers to ensure that potential hires possess those technical skills they most need. Passing the A+ certification exam indicates the student is proficient in installing, configuring, and maintaining both operating systems and applications software, as well as being proficient in installing, diagnosing, and repairing hardware such as hard drives, printers, modems, network cards, and CPUs.

Students passing the Network+, CCNA exam are proficient in installing, configuring, and maintaining networking software, as well as in installing, configuring, and troubleshooting network software components such as server, client, and Cisco router and switches (IOS) operating systems.
Describe the process of analyzing the assessment data for the last academic year.

3. Complete the chart below or attach documentation of the assessment findings that includes the data included below.

Program Learning Objectives	Assessment Findings/Conclusion
1. *Networking infrastructure*	*See details in the attached findings folder*
2. *Install/configure Operating systems*	*See details in the attached findings folder*
3. *Network monitoring and Security*	*See details in the attached findings folder*

4. What is the action plan for assessment for the next academic year? Explain.

The plan is to continue with the assessment practical skills exam with live equipment to ensure continued success throughout the 2019-2020 assessment cycle. Cisco announced a change to the CCNA certification resulting in a change in the CCNA program. The number of classes will be changed from four semesters to three semesters, the new curriculum is to be released in November and implemented in fall of 2020. Faculty will work on implementing the new content and course development. We plan on assessing course that were not assessed in the past year. And improved area of weaknesses in the last cycle.

5. What changes were implemented this year based on last year's findings?
This is the first assessment cycle under the college-wide assessment tracking system.

6. Please write any additional information here that you think is pertinent to the assessment process for your program that assists stakeholders (i.e. administrators and standing committees) in understanding your report.

The Networking program is a major strength of the CIS program. The two faculty members in this program both have multiple networking certifications and work hard to both instruct their students and help with job placement upon their graduation.

Graduate job placement local employers:

- *CISCO systems*
- *Windstream*
- *S-Com*
- *AXIOM*
- *C2-Networks, LLC*
- *Arkansas Children's Hospital*

The Networking program is taught using the latest hardware and software that can be provided given the current budget. The Networking faculty teach boot camps during the summer to help their students achieve those certifications most in demand by area employers (A+, various Cisco certifications).

Our most resent CIS summer boot camp ten students attempted the CCENT and CCNA certifications. Nine students passed the Cisco ICND 1 exam (CCENT) certified and of those seven passed the ICND 2 (CCNA) certification.

The program also has a very strong advisory board that consists of both previous students who have now gone on to successful careers in the field and current and previous part-time instructors, all of whom are currently working as high-level network engineers and support technicians.

7. What budgetary resources, if any, are needed for your program based on your assessment findings?

   With the change to the Cisco CCNA curriculum and labs, we will require 18 new Cisco 4221 routers.