UNIVERSITY OF ARKANSAS
PULASKI TECH

Assessment Report:
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 outcomes**
- **Procedures for assessing the achievement of student learning**
- **Procedures for analyzing and interpreting assessment results for the continuous improvement 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 10 of each year. (If October 10 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 Student Learning Outcomes

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: *11/15/2020*

4. Academic year: *2019 - 2020*

5. Is the assessment plan (*Check or highlight one*)

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

6. Provide a mission statement of the program to include a description of the jobs/careers for which students are being prepared. Also, list the learning outcomes for your program.

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).

7. Complete the curriculum map below. Please mark an X in the map below to indicate which courses correspond with learning outcomes. If applicable, you can also use I, D, or M to indicate that a learning outcome is introduced, developed to foster more sophistication, or demonstrated at a level of mastery acceptable for graduation within the program. Additional courses may be marked with an R to indicate reinforcement of a program learning outcome.

List all supporting cours	Program Learning Outcomes						
	PLO #1	**PLO #2**	**PLO #3**	**PLO #4**	**PLO #5**	**PLO #6**	**PLO #7**
CIS 1814 CCNA 1	**X**	**X**	**X**	**X**	**X**		**X**
CIS 1824 CCNA 2	**X**	**X**	**X**	**X**	**X**		**X**
CIS 1844 CCNA 3	**X**	**X**	**X**	**X**	**X**		**X**
CIS 1854 CCNA 4	**X**	**X**	**X**	**X**	**X**		**X**
CIS 1254 IT Essentials I	**X**	**X**	**X**	**X**	**X**		**X**
CIS 1264 IT Essentials II	**X**	**X**	**X**	**X**	**X**		**X**
CIS 2214 Microsoft Server Admin	**X**	**X**	**X**	**X**	**X**		**X**
CIS 1233 Fundamentals of Information Security	**X**	**X**	**X**	**X**	**X**		**X**

8. How does your assessment report connect to institutional learning outcomes?

To help with mapping your assessment data to the school's overall institutional outcomes, please check the boxes for the institutional outcomes directly associated with the assessment data presented in this report. For details on each outcome, see Appendix A.

X☐ ILO #1 – Information Literacy

X☐ ILO #2 – Technology Literacy

X☐ ILO #3 - Communication

X☐ ILO #4 – Critical Thinking

X☐ ILO #5 – Quantitative Reasoning

☐ ILO #6 – Cultural Awareness

X☐ ILO #7 – Professionalism

Part B: Assessment Methods and Data Sources

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

1. Complete the chart below or attach documentation of the assessment process that includes the data included below.

Program Learning Outcomes	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 3*	*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 OSPF 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*	*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)

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*		• GRE Tunnel with BGP
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.
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. Please check or highlight any of the statements below that apply to your program assessment. Also, for each program outcome, if applicable, attach any assessment instruments, grading rubrics, or exemplars of student performance used at the program level.

   ☐ Rubrics and/or standardized tests were pilot-tested and refined.

   ☐ Rubrics were shared with students.

   ☐ Reviewers were calibrated with high inter-rater reliability or norming workshops.

3. Also discuss any additional data sources that may be used to gauge success (e.g. charts, graphs, surveys, rates).
   The use of bar charts shows the success of students in the fall achieved higher scores than those for the spring semester. This can be attributed to the COVID pandemic that forced the closure of the college by the governor.

4. Describe the process of analyzing the assessment data, including specifically discussion of results and collaboration among faculty in the program, for the last academic year. Also, check below any of the following statements that apply to your program assessment.
   Meet every semester to check student progress and ensure compatibility across instructors teaching the same courses. All courses must meet the requirements for preparing students for professional industry certifications.

   ☐ Comparative data used when interpreting results and deciding on changes for improvements.

   X☐ National standards, collaboration with sister programs and/or research data were used to ensure the program was held to high standards.

5. Complete the chart below or attach documentation of the assessment results that includes the data included below. Results should include total number of students assessed, the distribution of scores, relevant and detailed interpretation, student strengths and weaknesses, and whether the target was met.

Program Learning Outcomes	Assessment Results/Conclusion
1. Networking Infrastructure	*Students in the Fall semester outperformed students in the Spring semester, it is believed to be caused by COVID and students not attending class virtually.*
2. Install/Configure Operating Systems	*Students in the Fall semester outperformed students in the Spring semester, it is believed to be caused by COVID and students not attending class virtually*
3. Network Monitoring and Security	*Students in the Fall semester outperformed students in the Spring semester, it is believed to be caused by COVID and students not attending class virtually*

6. Describe your use of results, including planned improvements to the program and/or any follow-up studies that confirmed that changes have improved student learning.
   Students in the Fall semester outperformed students in the Spring semester. It is believed to be attributed to COVID. Network Defense will be added to the program because CISCO changed their curriculum has been added to the program.

There will only be three CISCO classes for the CCNA as they continue to adapt their program to meet the needs of the profession. The addition of the course will increase their employability. The course has always been a preferred elective for the program it is just moving to a required course.

7. What specific changes were implemented this year based on last year's results?
   Continued using the hands-on exam to ensure students are mastering the skills and building on future semesters. We are now comparing the success of students in the different courses to see if the overlap of material is enhancing student achievements.

8. What specific budgetary resources are needed for your program based on your assessment results?
   With the change to the Cisco CCNA curriculum and labs, we will require 18 new Cisco 4221 routers

9. 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.
   With the COVID pandemic we have seen student success diminish in classes. Courses that had instructor led Zoom classes performed better than those that switched to strictly online format. Even the enhanced classes saw a significant number of students stop attending classes for unknown reason. Some of the students that were able to be reached through email or phone calls claimed the shutdown of schools and different work schedules interfered with being able to complete the courses.

Appendix A – UA-PTC's Institutional Learning Outcomes

1. Analyze information from credible sources. (Information Literacy)

This may include the ability to:

- Locate relevant information
- Evaluate the quality and usefulness of the information
- Synthesize the information.
- Communicate the information in an ethical manner consistent with the standards of the field or program of study.

2. Appropriately apply a variety of technology tools within one's discipline. (Technology Literacy)

This may include the ability to:

- Acquire information,
- Solve real-world problems,
- Communicate, and/or
- Perform tasks and processes.

3. Communicate effectively with diverse audiences in multiple contexts. (Communication)

This may include the ability to:

- Develop, organize, and present orally well-supported and ideas formally and informally with consideration of community and context.
- Develop, organize, and present in written format well-supported ideas formally and informally with consideration of community and context.
- Clearly express ideas, information, and concepts in various modes and media, including the proper use of appropriate technology.
- Select and utilize means of communication appropriate for a variety of professional, civic, and social circumstances, environments, and communities.
- Consider diverse communities in multiple contexts.

4. Apply critical thinking skills to achieve a desired goal. (Critical Thinking)

This may include the ability to:

- Apply appropriate methods to solve problems or address issues.
- Use evidence to justify conclusions.

5. Use quantitative methods to solve problems. (Quantitative Reasoning)

This may include the ability to:

- Analyze and interpret quantitative information.
- Apply quantitative concepts and skills to solve real world problems.

6. Demonstrate awareness of cultural differences. (Cultural Awareness)

This may include the ability to:

- Explain how similar actions can be understood differently depending on cultural context.
- Evaluate the impact of culture on individuals and groups.

7. Demonstrate career readiness skills. (Professionalism)

This may include the ability to:

- Demonstrate personal accountability.
- Meet commitments.
- Demonstrate ethical behavior.

- Demonstrate teamwork.