Program Review Executive Summary

Information Technology: Networking/Technical Support

Majors Reviewed:

- *Network Specialist (BNW), B.S.*
- *Network Administration and Engineering Technology (BNE), B.S.*
- *Technical Support Specialist (TU), A.A.S.*
- *Information Technology: Networking and User Support (NS), A.A.S.*

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Pennsylvania College of Technology
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As a part of the regular program review cycle, the overall, "Networking" program consists of the newly developed Network Administration & Engineering Technology (BNE) and the retiring Information Technology: Network Specialist Concentration (BNW) bachelor's degrees and the newly developed Information Technology: Network and User Support (NS) and retiring Information Technology: Technical Support Technology Specialist (TU) associate degree programs and were evaluated during the 2020/21 academic year. During the 2018-2019 academic year a complete program review of the BNW and TU programs led to the development of new BNE and NS program. The new programs were implemented in the 2020/2021 academic year. While the BNW/TU and BNE/NS programs are closely related in purpose and in content, the nature of the Information Technology has led to significant changes to the overall networking program. Many courses have not been offered yet or only offered once so far.

The BNE/BNW programs prepare students to work as networking professionals in the IT industry. The NS/TU programs teach students a broad range of IT skills in preparing them to provide technical support for an organization. These associate degrees feed naturally into the BNE/BNW degrees.

With the current focus on the new majors, Network Administration and Engineering Technology and Network and User Support, the IT department and its faculty are preparing students for a variety of careers related to network design, installation, and maintenance. Specifically, students gain proficiency in the technical aspects of a network, including monitoring, resource management, user management, and performance issues. The curriculum is in line with the college's core values as it provides a hands-on education.

This hands-on curriculum has students gain a working knowledge in common operating systems, including installation, configuration, scripting, user and resource management, troubleshooting and common system utilities. Graduates should be able to evaluate, analyze, design, manage, administer, and troubleshoot networks. Covered topics include networking basics and protocols, advanced networking protocols, wireless networks, transport and application protocols, programming languages, and operating systems. In addition, advanced platform skills in virtualization, cloud computing, unified communications, project management, and network optimization techniques and best practices are covered.

Findings:
- For the past 5 years the total student enrollment in these programs has been flat.
- External demand nationally shows faster than average job growth. O-Net evaluates every Career Pathway within the Information Technology Career Cluster as, "Bright Outlook," indicating that all IT pathways are projected to experience employment growth at over 5% and more than 100,000 openings from 2019-2029.
- Major competition comes from lower-cost proprietary and state-owned institutions, as well as more certification-based programs.
- In 2018-2019 a complete evaluation of the BNW and TU programs led to the development of the BNE and NS programs, respectively. Every course was evaluated and updated or replaced to reflect trends in the IT industry.
- Six-year graduation rates remain higher than other IT programs at Penn College.

Recommendations to maintain program excellence include:
- Pursue industry standard certification integration
- Continue alignment of program goals with courses to facilitate better assessment

- Continue to support faculty professional development in emerging areas
- Explore development of a minor
- Implement recommendations from advisory board concerning modern software and hardware systems.
- Develop means to better share student accomplishments
- Courses in the new programs need to be offered so they can be evaluated, and improvements can be made where applicable.
- Invest in increasing the visibility of the programs, such as expanding mobile marketing or search engine optimization.