

Program Review

Executive Summary

Information Technology: Information Assurance and Cyber Security

Majors Reviewed:

- *Information Assurance and Cyber Security (BCS), B.S.*

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Pennsylvania
College of Technology
A Penn State Affiliate

The Information Assurance and Cyber Security program at Pennsylvania College of Technology has been in place since 2004. Over the years the security needs of industry have increased significantly and in turn our program has risen to meet those needs. The program updates were driven by industry professionals, federal interests, curricular standards, and industry certifications. Our advisory board has continued to emphasize the strong reliance on a general information technology (IT) knowledge since security must be integrated with networking, software development, databases, and physical systems. The degree supports the college's mission of building degrees that work and are grounded in comprehensive, hands-on, experiential learning opportunities. Our degree is a practical STEM discipline requiring students to practice authentic activities to keep data secure.

The program is regularly reviewed to ensure that the needs of graduates, potential employers, and advisory committee are met. Program and course outcomes and the resulting curriculum are regularly evaluated and reviewed by the faculty. The curriculum is reviewed by the advisory board for validation and recommendations. Additionally, the advisory committee provides insight into industry trends that keeps the program relevant.

Employment in computer security is expected to have 31% growth through 2029 whereas general IT is expecting an 11% growth rate. Demand for the program is experiencing growth. The program enrollment has increased from 60 to 90 full time students since the last program review. The opportunities for graduates are numerous and diverse within the industry providing additional motivation to select and complete this program.

Our program focuses on aspects of both information assurance and cyber security. Information assurance focuses on proactive aspects of security such as policy, auditing, business continuity, and risk management, whereas cyber security focuses on technical and reactive aspect of security such as network defense, forensics, and penetration testing. As such, the information assurance focus of our program is relatively unique when compared to other schools which focus predominantly on cyber security.

Findings:

- The program continues to adapt in small steps based on industry suggestions and needs.
- No major revision will be needed for the current program.
- Student assessments indicate they are being appropriately prepared for employment.

Recommendations:

- Consider developing additional recruiting videos for the program and general IT.
- Continue curricular modifications based on recommendations found in assessment and advisory committee.
- Review ABET Cyber Security Curriculum as a potential for accreditation.
- Review requirements of becoming a Center of Academic Excellence (CAE).
- Investigate the viability of a two-year Cyber Security degree.
- Investigate the viability of a two-year completion degree for the associate Cybersecurity programs.

- Install an additional technology classroom to facilitate recording class sessions and providing synchronous online instruction for both IT and BCS classes.
- Identify and participate in security industry related training and education.