

# Program Review Executive Summary

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## Electronics & Computer Engineering Technology

Majors Reviewed:

- *Electronics & Computer Engineering Technology (BEE), B.S.*
- *Electronics & Computer Engineering Emphasis (EE), A.A.S.*
- *Robotics and Automation Emphasis (RO), A.A.S.*

April 2016



The Electronics & Computer Engineering Technologies department participated in a full review of its majors and identified several recommendations for continued success and growth within the majors. These recommendations are summarized below.

In order to meet the industry demand for graduates in the B.S. and A.A.S. - Electronics & Computer Engineering Technologies and A.A.S - Robotics & Automation Emphasis majors, the Electronics & Computer Engineering Technologies department will continue to prepare students with the hands-on, critical thinking and applied problem solving skills employers seek. The department will evaluate assessment findings and utilize the Advisory Committee's expertise to determine emerging curriculum opportunities in areas such as automation, mechatronics and related fields. The Advisory Committee has stated in their feedback that the most useful graduate is one who has strong hands-on and software skills while also being thoroughly grounded in the fundamental concepts and applications of electronics and computer engineering technologies.

Maintaining a higher than average retention (75-83%) and positive placement rate (86-93%) requires the assessment of the department's program goals, student outcomes, and accreditation possibilities. This effort will need to focus on recruiting well-prepared students who are equipped for the rigor of the department's curriculum, which boasts the highest mathematics requirement of any major at Penn College. Continued collaboration with current PCNow schools (high schools participating in the College's dual enrollment program) and an investigation of new relationships will serve as a solid foundation for recruitment efforts.

The challenge of achieving the above program standards requires making practical changes while positioning the programs for growth over the next several years. With support from the College and guidance from the school administration, the department will re-evaluate the steps needed to begin the pursuit of ABET accreditation. This accreditation can provide recruitment benefits for the department as well as opportunities for graduates, whether they seek employment or continued education at the graduate level.

To provide the best possible learning environment and maximize the existing space available in the Center for Business & Workforce Development (BWD) facility, the Electronics & Computer Engineering Technologies department recommends re-evaluation of the lab space currently being used by the Well Site and Mechatronics Trainers. These labs are underutilized and could provide the much needed space for educational activities including senior projects, expansion of robotics and automation, and project-based learning. The learning environment for electronics students could also benefit from a more organized and productive tool room, including a dedicated and qualified tool room attendant.