

Program Review

Executive Summary

Electrical Technology

Majors Reviewed:

- *Building Automation Engineering Technology (BBT), B.S.*
- *Electrical Technology (EL), A.A.S.*
- *Electrical Construction (EB), A.A.S.*
- *Mechatronics Technology (MX), A.A.S.*

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Pennsylvania
College of Technology
A Penn State Affiliate

The Electrical Department is a long-standing program at Penn College with its history dated back to the Williamsport Technical Institute. The foundation of this department has been and continues to be providing quality hands-on education, an understanding of life-long learning and close working relationship with the Electrical and Building Automation industries.

The Electrical Department continues to evaluate and develop their programs (Building Automation Engineering Technology, Electrical Technology, Electrical Construction and Mechatronics Technology) and facilitates the preparation of students to make a positive impact and succeed in their field. This preparation is supported by a strong relationship with the department's Advisory Committee members and industry.

These relationships have been instrumental in the renaming of the Building Automation program to Building Automation Engineering Technology (BMS). This change is reflective of the committee feedback and career pathways graduates are entering. Committee and industry feedback contributed to creation of the Electrical Construction (EB) associate degree. The transition of the former certificate program to this associate degree has already produced an increase in student enrollment.

The Electrical department has initiated multiple efforts to grow enrollment over the last several years. These initiatives have included curriculum changes, communication with high school and career and technical educators, marketing videos and renovated instructional space. These efforts are beginning to show dividends in some of the early enrollment numbers for the fall of 2021 (16% increase in bachelor degree and 34% in associate degree majors)

This department growth includes a major renovation to the Electrical Technologies Center (ETC) including laboratory spaces in the areas of Electrical Construction, Industrial Electronics, Motor Control, AC/DC Fundamentals, Machine Analysis, and PLCs. This renovation provides faculty the opportunity to instruct their students with state-of-the art industrial equipment and innovative classroom experiences.

With the support of Career Services and Corporate Relations all program areas in the Electrical Department continue to build industry partnerships. This is evident through the hundreds of employers who have posted positions on the Penn College Career Hub and visited campus to recruit students and tour Electrical and Building Automation facilities. These relationships confirm the need for graduates in the Electrical and Building Automation industry. Data from the Bureau of Labor and Statistics states in the next ten (10) years jobs in these areas are projected to grow at a faster than average pace.

The Electrical department strives to continue the development and success of their programs through the following recommendations:

- Monitor associate degree (EB, EL and MX) enrollment to determine ability to successfully matriculate students through program with current space and resources.
- Evaluate future capacity of certain classes to determine if curriculum changes or additional faculty are needed to deliver course and meet course outcomes:
 - **ELT237**
 - **ELT240**
 - **ELT250/252/253 (HVAC Electrical courses)**
- Investigate new industrial construction space (lift, safety, etc.), mechatronics lab space, and reconfigured tool room space.
- Grow community and internal contacts to support practical experience course (ELT240).

- Evaluate new tool kit agreement to determine success and future plans to continue or adapt process.
- Continue to develop recruitment ideas and activities to support growth of both B.S. and A.A.S. programs. Initial ideas include department posters, direct communication with CTC/CTE contact list, and invite students/teachers to campus for special events.
- Develop collaboration plan with College Relations to create industry partnerships, scholarships and appropriate donation opportunities.
- Submit Electric Power Generation Technology: Diesel Emphasis (DG) curriculum proposal to add DG as a pathway to BMS.
- Explore additional marketing ideas to promote programs, expand on new videos to support BMS pathways (in-progress) and create videos to clarify differences between associate degree programs.
- Consider future conversations and plans with fellow academic departments to create a streamlined internal pathway from A.A.S. to B.S.