

DISCONTINUANCE OF THE BACHELOR OF SCIENCE IN ELECTRIC TRANSPORTATION TECHNOLOGY (BSETT) PROGRAM

Recommendation

It is recommended that the Board of Governors approve the discontinuance of the Bachelor of Science in Electric Transportation Technology (BSETT) Program in the Division of Engineering Technology, effective fall 2022.

Background

From winter term 2013 to fall term 2021, the MS-EVE program has averaged 40 students per semester. Additionally, about total 12 students received Graduate Certificate in EVE (GC-EVE). Only 3 students received BS-ETT degree. The BS-ETT program was placed into moratorium in fall 2017 due to low enrollment. Although the integrated 2+2+2 curriculum pathway was the original target, the BS-ETT (the second 2) was not successful in attracting graduates of AAS-Automotive Technology programs. Rather, those graduates overwhelmingly tend to move into immediate employment.

The workforce in the automotive industry, particularly for vehicle electrification, can be classified into three categories: technicians with AAS degrees (installation, testing, trouble shooting, maintenance, etc.), engineers/engineering technologies with BS degrees (design, initial development, analysis, testing, etc.), and engineers with MS/higher degrees (research, development, synthesis & analysis, modeling & simulation, etc.). The tasks of research, development, and detailed modeling/simulation could be executed by engineers with MS or higher degrees. For the competences and skill sets in the BS-level engineers or technologies, the industry might still prefer employees with traditional engineering or engineering technology degrees to perform engineering functions. This workforce demand trend reflects that MS-EVE has steady and increasing enrollments while BS-ETT has struggled to attract students as evidences by this low number of applicants registered for this program over many years. There have been no active students enrolled in this program since Fall 2011. An admissions moratorium therefore was instituted in 2017.

Program Description

The BS Electric Transportation Technology (BS-ETT) program was established in 2011 as part of the American Recovery and Reinvestment Act (ARRA) with a \$5 million ARRA grant funded by the U.S. Department of Energy (DOE) that aims to provide educational programs to prepare students for advanced competence in emerging vehicle electrification, on-board energy storage, and driving autonomy. Specifically, the funded project was an integrated 2+2+2 curriculum – a pathway from Associate to Bachelor's to Master's Degree focusing on electrified vehicles and infrastructure for Associate of Applied Science (AAS) degree programs, Bachelor of Science in Engineering Technology (BS-ETT) program, Master of Science in Electric-drive Vehicle Engineering (MS-EVE) program, and the Graduate Certificate program (GC-EVE). A major objective of the curriculum development efforts was to provide a full spectrum of education and training opportunities to students seeking degrees and certificates, whether they were fresh out of high school or had already obtained a degree from a traditional engineering discipline and had been working.

Submitted by: Mark Lawrence Kornbluh, Provost and Senior Vice President for Academic Affairs

Approvals

The discontinuance of this Bachelor of Science in Electric Transportation Technology (BSETT) Program was approved by the faculty of the Division of Engineering Technology, the Dean of the College of Engineering, and the Provost.