ELECTROMECHANICAL ENGINEERING TECHNOLOGY (B.S.)

The Bachelor of Science in Electromechanical Engineering Technology (B.S.E.T.E.M.) offers an interdisciplinary education, resulting from the integration of electronics and computers in engineering systems. This major offers an individual plan of study with coursework in electronics, electrical, manufacturing, and mechanical areas, with appropriate prerequisite courses. The program is designed to extend the practical and applied base of the associate degree program with more theoretical and comprehensive engineering technology courses, and additional courses in mathematics, science, and socio-humanities.

Admission Requirements

This program is designed to admit students who satisfy the general undergraduate admission (http://bulletins.wayne.edu/undergraduate/general-information/admission/) requirements of the University and have an associate degree in electrical, electronics, industrial, manufacturing, mechanical, or related technology from a community college or equivalent college-level course-work. A minimum grade point average (g.p.a.) of 2.50 is required for admission to the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as pre-engineering technology students, and may be transferred into the engineering technology program upon successful completion of MAT 1800 and PHY 2130 with a g.p.a. of 2.50.

Required Background: Any student deficient in any courses listed under Lower Division Technical Transfer Credit will be required to remove deficiencies before completing fifteen credits in basic science/mathematics and technical core courses.

A Mathematics Placement Examination is required of entering students who have not already earned advanced credit in pre-calculus.

Program Requirements

Candidates for the B.S.E.T.E.M. degree must earn a minimum of 124 credits, as outlined in one of the following major programs and including the University General Education Requirements (http://bulletins.wayne.edu/undergraduate/general-information/general-education/). A minimum of thirty semester credits must be earned from Wayne State, at least twenty-four of which must be in Division of Engineering Technology courses. All coursework must be completed in accordance with the academic procedures of the University (http://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) and the College (http://bulletins.wayne.edu/undergraduate/college-engineering/academic-regulations/) and must conform to Division (http://bulletins.wayne.edu/undergraduate/college-engineering/engineering-technology-division/#academicregulationstext) academic standards.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total resident credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education Requirements.

The Bachelor of Science in Electromechanical Engineering Technology requires a minimum of 124 credits as outlined in the following curriculum.

Code	Title	Credits
Basic Science and Mathematics		
MAT 1800	Elementary Functions (QE)	4
ET 3430	Applied Differential and Integral Calculus	4
ET 3450	Applied Calculus and Differential Equations	4
CHM 1020	Survey of General Chemistry (NSI)	4
PHY 2130	Physics for the Life Sciences I (NSI)	4
PHY 2131	Physics for the Life Sciences Laboratory (NSI)	1
PHY 2140	Physics for the Life Sciences II	4
PHY 2141	Physics for the Life Sciences Laboratory	1
EMT Technical Core		
ET 3030	Statics	3
ET 3050	Dynamics	3
ET 3850	Reliability and Engineering Statistics	3
ET 3870	Engineering Economic Analysis	3
or ET 5870	Engineering Project Management	
EET 3150	Network Analysis	4
EET 3500	Electrical Machines and Power Systems	3
EET 3720	Micro and Programmable Controllers	3
EET 4200	Control Systems	4
MCT 3010	Instrumentation	3
MIT 2500	Machine Tool Laboratory	1
EMT Upper Division Technical Electives		9
ET 4999	Senior Design Project	3
Lower Division Technical Transfer Credit		
ET 2140	Computer Graphics	3
ET 2160	Computer Applications for Engineering Technology	2
EET 2100	Principles of Digital Design	3
EET 2000	Electrical Principles	3
EET 2720	Microprocessor Fundamentals	3
Lower Division Tech Electives		18
Communication Requirements		
(BC) Basic Composition course		3
(IC) Intermediate Composition course (ENG 3050 required)		3
(OC) Oral Communication course		3
Other General Education Requirements		
(CI) Cultural Inquiry (PHI 1120 required)		3
(SI) Social Inquiry		3
(DEI) Diversity, Equity and Inclusion		3
(GL) Global Learning		3
(CIV) Civic Literacy		3
Total Credits		**124**

Engineering Technology Honors

Engineering Technology Honors demands a higher level of performance and offers more personal supervision by faculty than the regular curriculum. It is recommended for qualified students who have an interest in research and plan to go on to graduate or professional schools. The Honors Program is open to students seeking the Bachelor of Science in Computer Technology, Electrical/Electronic Engineering Technology, Electromechanical Engineering Technology, and Mechanical Engineering Technology. A cumulative grade point average of at least 3.3 is required for consideration for admission to and continuance in the program. Students are admitted on the recommendation of the Departmental Honors Program advisor. Interested students should contact the advisor and complete the Honors Plan of Work form when declaring their engineering technology major or at the beginning of the senior year. If a student has declared a major in engineering technology prior to entering the Honors Program, a new Declaration of Major must be completed for the Bachelor of Science with Honors.

Department Honors Requirements (12 credits minimum)

- Students must meet all the ordinary requirements of the Engineering Technology major, and must have a 3.3 GPA overall
- One 42XX honors seminar (HON 4200-4280) (Cr. 3)
- Thesis-Honors Option with ET 4999 (Cr. 3)
- Two Honors Options courses within the engineering technology major, taught by full-time faculty member (Cr. 3-4 each)