Electro-Mechanical Engineering Technology (B.S. Completion Program)

The EMET program produces graduates who:

- possess the ability to apply theoretical knowledge to solve engineering technology problems associated with instrumentation and control systems.
- are knowledgeable of modern applications in process control systems.

The Electro-Mechanical Concentration is an Engineering Technology baccalaureate degree completion program for graduates of associate degree programs in electrical/electronics, mechanical, electro-mechanical or similar engineering technology programs. The objective of this program is to allow students who possess an associate degree in these areas to complete the bachelor degree in approximately the equivalent of two years of full-time work (64-70 semester hours). This program is accredited by the Engineering Technology Accreditation Commission of ABET (111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone, 410-347-7700, http://www.abet.org/).
Graduates are engineers prepared to fill industrial positions in areas directly related to industrial automation**,** scientific programming, product design, process control, testing, manufacturing, sales, and service. Typical Electro-Mechanical Engineering duties may include working in teams involved with product analysis/design, instrumentation and control, CAD/CAM product design, laboratory testing services, product sales and service, product application, and the design of systems that require a hardware/software interface.

This program requires the completion of an Associate Degree from an accredited college or university in Electrical, Mechanical, Electro-Mechanical or similar engineering technology program.

Code	Title	Credit Hours
Foundation Requirements (60 semester hours minimum)		**60**
General Education Courses from Associate Degree or as a Bridge to a Bachelor's Completion.		
ECO 201 or ECO 202	Principles of Microeconomics Principles of Macroeconomics	
ENG 111	Composition and Rhetoric	
EGS 215 or ENG 313	Workplace Writing Technical Writing	
MTH 151	Calculus I	
STC 135 or STC 136	Principles of Public Speaking Introduction to Interpersonal Communication	
Select one of the following:		
PHY 161 or PHY 191	Physics for the Life Sciences with Laboratory I General Physics with Laboratory I	
PHY 162 or PHY 192	Physics for the Life Sciences with Laboratory II General Physics with Laboratory II	
Technical Courses from Associate Degree or as a Bridge to a Bachelor's Completion.		
CSE 153 or CSE 163	Introduction to C/C++ Programming Introduction to Computer Concepts and Programming	

Code	Title	Credit Hours
ENT 135	Computer-Aided Drafting	
ENT 151	Engineering Materials	
ENT 192	Circuit Analysis I	
ENT 193	Circuit Analysis II	
ENT 196	Electronics	
ENT 271	Mechanics I: Statics	
ENT 272	Mechanics II: Strength of Materials	
ENT 293	Digital Systems	
Program Course Requirements (64 semester hours)		
General Education Requirements		
If Associate Degree is from Miami:		
Fine Arts elective		3
Biological Science elective		3
Global Perspectives elective		3
If Associate Degree is not from Miami:		
Ohio Transfer Module		
OR		
Global Miami Plan Completion (See at end of page)		
Engineering Technology Requirements [1]		
CHM 141	College Chemistry	3
CHM 144	College Chemistry Laboratory	2
ENT 301	Dynamics	3
ENT 310	Fluid Mechanics	3
ENT 311	Process Control Interface Design	3
ENT 316	Project Management	3
ENT 401	Computerized Instrumentation	3
ENT 402	Industrial Automation Lab	3
ENT 407	Modern Manufacturing Systems	3
ENT 418	Electro-Mechanical Control Systems	3
ENT 497	Senior Design Project	2
ENT 498	Senior Design Project	2
MTH 251	Calculus II	4
MTH 245	Differential Equations for Engineers	3
STA 301	Applied Statistics	3

Code	Title	Credit Hours
or STA 261	Statistics	
Additional Bridge Courses [2]		9
Intercultural Perspectives elective		3
Total Credit Hours		**124**
Course List		

[1] This electro-mechanical concentration of courses provides depth in mechanical, electrical, and software integration necessary for automation.

[2] Students with an Associate Degree in Electrical and Computer Engineering Technology, or similar program, must take ENT 151, ENT 271, and ENT 272. Students with an Associate Degree in Mechanical Engineering Technology, or similar program, must take ENT 193, ENT 196, and ENT 293.

Global Miami Plan Associate Degree Requirements

- Office of Liberal Education
- Student Resources
- Global Miami Plan | Associate Degree

Academic Foundation (12 credits)

Each Foundation course incorporates written communication and advances critical thinking as well as at least two additional competencies. The Foundation component enables students to gain a breadth of knowledge across multiple domains of learning.

For Associate Degrees, students need to fulfill 12 credit hours within the Miami Plan foundations I-V and must have completed at least one course in 4 of the 5 areas.

Foundation I - English Composition (ENGL 1101)

Foundation II - Creative Arts, Humanities, Social Science

Foundation III - Global Perspectives

Foundation IV - Natural Science

Foundation V - Mathematics, Formal Reasoning, Technology