

Department of Engineering Technology  
Bachelor of Science in Applied Science—Completion Program

**Major: Mechanical Engineering Technology**

For students entering Fall 2023 and after from

Northwest State Community College

**Catalog Year: Fall 2023**

Miami University and Northwest State Community College are parties to an agreement titled **INSTITUTIONAL ARTICULATION AGREEMENT BETWEEN MIAMI UNIVERSITY AND NORTHWEST STATE COMMUNITY COLLEGE** entered into on September 25, 2024 (the “[Agreement](#)”). This Pathway is entered into pursuant to the terms and conditions of the Agreement, and is hereby incorporated into the Agreement by this reference. Except as otherwise set forth, the Agreement is unaffected and shall continue in full force and effect in accordance with its terms.

This Bachelor of Science in Applied Science Completion Program is designed for students who have completed an associate degree in Mechanical, Electro-Mechanical or similarly titled engineering technology programs. Graduates from other Engineering Technology programs will also receive favorable credit transfer. Graduates from other Engineering Technology programs will also receive favorable credit transfer. Through this program you can complete your BS degree by completing two-years of additional credit hours beyond your associate degree. Further information is available through the [Department of Engineering Technology](#).

To graduate with the Bachelor of Science in Applied Science degree, students must first meet all Miami University admission requirements noted on this [website](#). Students must also meet Miami’s [general requirements for graduation](#), including: (1) completion of 124 credit hours; (2) completion of a minimum of 30 credit hours at Miami of which the final 12 credit hours must be taken at Miami; and (3) attainment of a minimum of a 2.00 cumulative grade point average at the time of graduation.

*Note: Neither Miami University nor Northwest State Community College shall use the name, logo, likeness, trademarks, image or other intellectual property of either of the other parties for any advertising, marketing, endorsement or any other purposes without the specific prior written consent of an authorized representative of the other party as to each such use. Northwest State Community College may refer to the affiliation with Miami University in public information materials regarding the relevant program. Miami University reserves the right to review and request modification of Northwest State Community College’s reference to Miami University as necessary. Northwest State Community College may refer to the affiliation with Miami in its brochures and other public information materials having to do with the program.*

Bachelor of Science in Applied Science—Completion Program  
**Major: Mechanical Engineering Technology**

The plan of study below illustrates: 1) how courses completed at Northwest State Community College transfer to Miami University, and (2) what courses the student needs to complete at Miami in order to earn the Bachelor of Science in Applied Science degree with a major in Mechanical Engineering Technology. Please note the matches in this document indicate specific courses you may be awarded after successfully completing those courses and transferring to Miami University.

Students completing the OT36 through their General Education credits will have completed most requirements for Miami Plan Perspectives Areas and Signature Inquiries. Students entering Miami having completed the OT36 must complete 9 credits of Signature Inquiry, however this may be met by matching equivalent Perspectives courses that have a Signature Inquiry designation. Students will also need to complete coursework in Global Citizenship (Intercultural Consciousness or Global Inquiry for 3 credits), Knowledge in Action: Experiential Learning (0 credits), and a Senior Capstone (3 credits). Students entering Miami University with an Associate of Arts or an Associate of Science degree will not need to complete the Signature Inquiry requirement.

Courses that do not have a Miami University equivalent will be recorded as “T” courses on the student’s Miami University academic record. With the assistance of an academic advisor, students can petition for some “T” courses to count toward Miami University degree requirements.

Required Course from Miami	Acceptable Northwest State Community College Transfer Credit**
<b>Foundation Requirements</b> * Included in the Ohio Transfer Module (OTM)	
ENG 111, One year of Freshman English College I Composition or ENG 109 College Composition for Second Language Writers	ENG 111* English Composition I
ECO 201 Microeconomics or ECO 202 Macroeconomics	ECO 211* Macroeconomics or ECO 212* Microeconomics
STC 135 Intro to Public Expression and Critical Inquiry or STC 136 Intro to Interpersonal Communication	ENG 113 Speech or ENG 214 Discussion and Conference Method
ENG 215 Workplace Writing or ENG 313 Technical Writing	ENG 210* Technical Communication
PHY 161 Physics for Life Sciences I with Lab OR PHY 181 General Physics I <b>and</b> PHY 183 Lab	PHY 251* Physics: Mechanics & Heat
PHY 162 Physics for Life Sciences II with Lab OR PHY 182 General Physics II <b>and</b> PHY 184 Lab	PHY 252* Physics: Electricity & Magnetism
CHM 141 College Chemistry (3) and CHM 144 College Chemistry Lab (2)	CHM 201* General Chemistry I or CHM 101* Principles of Chemistry
MTH 151 Calculus I	MTH 213* Calculus I
MTH 251 Calculus II	MTH 214* Calculus II
Approved Intercultural Perspectives <b>if admitted to Miami prior to Fall 2023</b> or Intercultural Consciousness Elective <b>if admitted to Miami on or after Fall 2023</b> (Online Options)	Take from Miami

**Complete Engineering Technology (ENT) core courses listed below. You should have taken some of these in your associate degree program. Calculus I must be completed prior to starting Miami courses.**

Required Course from Miami	Acceptable Northwest State Community College Transfer Credit**
<b>Engineering Technology Core Courses</b>	
ENT 135 Computer-Aided Drafting	CAD 112 CAD II or CAD 213 CAD III
CSE 153 Introduction to C/C++ Programming or similar course	CIT 150 C++ Programming EET 107 Python
ENT 151 Engineering Materials	MET 134 Engineering Materials
ENT 152 Computer Aided Manufacturing I	MET 121 Manufacturing Processes
ENT 192 Circuit Analysis I (3) [OET001 DC Circuits]	EET 121 DC Circuits
ENT 235 Computer Aided Design	CAD 213 CAD III
ENT 252 Computer Aided Manufacturing II	MET 223 CAM I or <b>MET 222 CNC Programming</b>
ENT 271 Mechanics I – Statics [OET007 Statics]	MET 235 Statics
ENT 272 Strength of Materials	MET 234 Strength of Materials
ENT 278 Mechanics III: Analysis of Machine Components	MET 265 Machine Design
Technical Electives Take ONE of the following technical electives from Miami: ENT313 - Introduction to Robotics ENT311 - Process Control Interface Design ENT413 - Industrial Robotics Lab ENT296 - Programmable Logic Controllers	Take from Miami
MTH 245 Differential Equations	MTH 216 Differential Equations or Take from Miami
STA 261 or STA 301 Applied Statistics ***	STA 120 Introduction to Statistics
ENT 301 Dynamics ***	Take from Miami
ENT 310 Fluid Mechanics	MET 255 Fluid Mechanics
ENT 312 Thermodynamics and Heat Power	Take from Miami
ENT 314 Mechanisms for Mechanical Design	Take from Miami
ENT 316 Project Management	Take from Miami
ENT 355 Introduction to Finite Element Analysis	Take from Miami
ENT 404 Experimentation Techniques	Take from Miami
ENT 415 Heat Transfer with Applications	Take from Miami
ENT 478 Product Development	Take from Miami
ENT 497 Senior Design I	Take from Miami
ENT 498 Senior Design II	Take from Miami

\*\*\*Distance Courses Offered Via WebEx from Miami. Calculus I must be completed prior to starting Miami courses.

**\*\*Transfer Equivalencies within ENT program ONLY**

## SPECIAL NOTES

1. When applying to Miami University Regionals, please apply early for best course availability. For Fall applicants, we suggest applying in Spring semester.
2. Application Deadlines: Fall Admission – August 1<sup>st</sup>. Spring Admission – January 1<sup>st</sup>.
3. Transfer Scholarship Deadlines: Fall Admission – June 1. Spring Admission – December 1. See the Miami Regionals scholarship page for more information: <https://www.miamioh.edu/regionals/tuition-financial-aid/scholarships/index.html>

**Link to Miami degree program**

<http://www.miamioh.edu/regionals/ent>

**Miami Contact Name and Information:**

Sarah Wooten [sarah.wooten@miamioh.edu](mailto:sarah.wooten@miamioh.edu) 513-785-1977 Distance Coordinator

Professor Rob Speckert [speckere@miamioh.edu](mailto:speckere@miamioh.edu) 513-785-1810 Chief Departmental Advisor

Engineering Technology Office 513-785-3132 or 513-727-3241

**Northwest State Community College Contact Information:**

Dave Mohring [dmohring@northweststate.edu](mailto:dmohring@northweststate.edu) 419-267-1255