Department of Engineering Technology
Bachelor of Science in Applied Science—Completion Program
**Major: Electrical and Computer Engineering Technology**
For students entering Fall 2023 and after
Sinclair Community College

**Catalog Year: Fall 2023**

Miami University and Sinclair Community College are parties to an agreement titled INSTITUTIONAL ARTICULATION AGREEMENT BETWEEN MIAMI UNIVERSITY AND SINCLAIR COMMUNITY COLLEGE entered into on January 1, 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.

The Electrical and Computer Engineering Technology bachelor completion program is designed for students who have completed an associate degree in electrical/electronic, electrical and computer engineering technology. The degree is also open to students with associate degrees in mechanical, electro-mechanical, robotics, or related fields, potentially requiring additional credit hours for the latter group. Through this program students can complete their bachelor's degree by completing two-years of additional credit hours beyond their associate degree. Additional 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.

The plan of study below illustrates: 1) how courses completed at Sinclair 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 degree in Applied Science with a major in Electrical and Computer 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).

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.

## Foundation Requirements

* Included in the Ohio Transfer Module (OTM)

| Required Course from Miami | Acceptable Sinclair Community College Transfer Credit |
|---|---|
| ENG 111, One year of Freshman English College I Composition or ENG 109 College Composition for Second Language Writers | ENG 1101* English Composition I |
| ECO 201 Microeconomics or ECO 202 Macroeconomics | ECO 2180* Microeconomics or ECO 2160* Macroeconomics |
| STC 135 Intro to Public Expression and Critical Inquiry or STC 136 Intro to Interpersonal Communication | COM 2211* Public Speaking or COM 2206 Interpersonal Communication |
| ENG 215 Workplace Writing or ENG 313 Technical Writing | ENGL 1131 Business Writing |
| PHY 161 Physics for Life Sciences I with Lab OR PHY 181 General Physics I **and** PHY 183 Lab | PHY 1141* College Physics I |
| PHY 162 Physics for Life Sciences II with Lab OR PHY 182 General Physics II **and** PHY 184 Lab | PHY 1142* College Physics II |
| CHM 141 College Chemistry (3) and CHM 144 College Chemistry Lab (2) | CHE 1211* General Chemistry I and CHE 1251* Lab for General Chemistry I |
| MTH 151 Calculus I | MAT 2270* Calculus I |
| MTH 251 Calculus II | MAT 2280 Calculus II |
| Approved Intercultural Perspectives **if admitted to Miami prior to Fall 2023** or Intercultural Consciousness Elective **if admitted to Miami on or after Fall 2023** (Online Options) | PSY 1160 Black Psychology Or 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.***

## Engineering Technology Core Courses

| Required Course from Miami | Acceptable Sinclair Community College Transfer Credit |
|---|---|
| CSE 153/163 Introduction to C/C++ Programming or similar course | CIS 1111 C++ Programming or similar course<br>or take<br>CIS 1202 Visual Basic (requires Sinclair prerequisite of CIS111) or take<br>EGR 2261 Engineering Problem Solving Using C++ |
| ENT 192 Circuit Analysis I (3) [OET001 DC Circuits] | EET 1150 D.C. Circuits or EET 1120 |
| ENT 193 Circuit Analysis II (3) [OET003 AC Circuits] | EET 1155 A.C. Circuits or EET 1120 |
| ENT 196 Electronics (3) [OET005 Electronics] | EET 2201 Electronic Devices and Circuits |
| ENT 271 Mechanics I – Statics [OET007 Statics] | MET 2201 Statics |
| ENT 293 Digital Systems [OET002 Digital] | EET 1131 Digital Electronics |
| ENT 294 Local area Networks | Take from Miami |
| ENT 295 Microprocessor Technology I [OET004 Microprocessors] | EET 2261 Microprocessors |
| MTH 245 Differential Equations | MAT 2310 Elementary Differential Equations |
| Technical Electives<br>Take ONE of the following technical electives from Miami:<br>ENT313 - Introduction to Robotics<br>ENT413 - Industrial Robotics Lab | Take from Miami |

| Required Course from Miami | Acceptable Sinclair Community College Transfer Credit |
|---|---|
| STA 261 or STA 301 Applied Statistics *** | MAT 1450 Introductory Statistics or Take from Miami |
| ENT 301 Dynamics *** | MET 2351 Dynamics or Take from Miami |
| ENT 302 Fundamentals of Signals & Systems *** | Take from Miami |
| ENT 303 Digital Signal Processing for Tech. *** | Take from Miami |
| ENT 311 Process Control Interface Design | Take from Miami |
| ENT 316 Project Management | Take from Miami |
| ENT 387 Embedded Microcontrollers | Take from Miami |
| ENT 401 Computerized instrumentation | Take from Miami |
| ENT 402 Industrial Automation Lab | Take from Miami |
| ENT 403 Wireless Communication & Networks | Take from Miami |
| ENT 418 Electromechanical Control Systems | 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 1st. Spring Admission – January 1st.
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:**
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