

**Pathway for Associate of Science at Sinclair Community College
to
Bachelor of Science in Engineering (Electrical Engineering) at Miami University**

Catalog Year: 2026-27

Description

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 August 7, 2026 (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 Associate of Science degree (with a major in Engineering and Engineering Technology University Transfer) at Sinclair Community College partners well with the Bachelor of Science in Engineering degree (Electrical Engineering major) at Miami University.

To graduate with the Bachelor of Science in Engineering degree with a major in Electrical Engineering 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 a student can complete an Associate of Science degree at Sinclair Community College and how those courses transfer to Miami University, and (2) what courses the student needs to complete at Miami to earn the Bachelor of Science in Engineering degree with a major in Electrical Engineering. 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, meaning that students who enter Miami with the OT36 completed will have also met the 9 credit Signature Inquiry requirement. Students will 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.

Year 1: Sinclair Community College

Sinclair Community College				Transfer Equivalent			
SUBJECT CODE	COURSE NUMBER	COURSE TITLE	CREDIT HOURS	SUBJECT CODE	COURSE NUMBER	COURSE TITLE	CREDIT HOURS
FALL SEMESTER							
ENG	1101	English Composition I	3	ENG	111	Composition & Rhetoric	
MAT	2270	Calculus I	5	MTH	151	Calculus I	
CHE	1211	Chemistry I with lab (OT36 Natural Science)	5	CHM	141/144	Chemistry I with lab	
TBD	TBD	OT36 Arts/Humanities	3				
Total Hours:			16				
SPRING SEMESTER							
COM	2211	Public Speaking	3	STC	135	Principles of Public Speaking	
PHY	2201/2207	General Physics I with Lab (OT36 Natural Science Elective)	5	PHY	181/183	General Physics I/Lab	
MAT	2280	Calculus II	5	MTH	251	Calculus II	
ECO	2180	Principles of Microeconomics (OT36 Social/Behavioral Science)	3	ECO	201	Principles of Microeconomics	
Total Hours:			16				

Year 2: Sinclair Community College

Sinclair Community College				Transfer Equivalent			
SUBJECT CODE	COURSE NUMBER	COURSE TITLE	CREDIT HOURS	SUBJECT CODE	COURSE NUMBER	COURSE TITLE	CREDIT HOURS
FALL SEMESTER							
PHY	2202/2208	General Physics II (OT36 Natural Science)	5	PHY	182/184	General Physics II/Lab	
MAT	2290	Calculus III	5	MTH	252	Calculus III	
CSC	1111	Introduction to Problem Solving & Computer Programming	3				
MAT	2310	Elementary Differential Equations	4	MTH	245	Differential Equations for Engineers	
Total Hours:			17				
SPRING SEMESTER							
MAT	2320	Linear Algebra	3	MTH	222	Introduction to Linear Algebra	
CSC	2212	Java Software Development I (Any course in catalog elective)	3	CSE	174	Fundamentals of Programming & Problem Solving	
EGR	2201	Circuit Analysis	4	ECE	205	Electric Circuit Analysis I	
TBD	TBD	OT36 Social/Behavioral Science	3				
TBD	TBD	OT36 Arts/Humanities	3				
Total Hours:			16				
COURSES OUTSIDE OF DEGREE							
EGR	2131	Engineering Digital Design	4	ECE	287	Digital System Design	
Total Hours:			4				

Sinclair Community College Degree Awarded – 65 credit hours.

Sinclair courses outside of degree – 4 credit hours

The following is a suggested academic plan for requirements at Miami University; students should meet with advisors to plan courses to meet their needs.

Year 3: Miami University

FALL SEMESTER			
ENG	313	Technical Writing*	3
ECE	304	Electronics	3
ECE	306	Signals and Systems	3
ECE	345	Intro Prob, Stats, Random Proc	3
CEC	111	Imagination, Ingenuity and Impact I	2
CEC	190	Career Foundations	0
ECE	325	Applied Electromagnetics	3
Total Hours:			17
*Students who complete ECE 348 do not need to take ENG 313 Technical Writing, since ECE 348 fulfills the Advanced Writing requirement			
SPRING SEMESTER			
CEC	112	Imagination, Ingenuity and Impact II	2
CEC	190	Career Foundations	0
ECE	301	Adv Circuits and Renewable Energy	3
ECE	314	Elements of Robotics	3
TBD	TBD	Technical Elective	3
TBD	TBD	Approved Global/Intercultural Course	3
Total Hours:			14

Year 4: Miami University

SUBJECT CODE	COURSE NUMBER	COURSE TITLE	CREDIT HOURS
FALL SEMESTER			
CEC	190	Career Foundations	0
ECE	436	Control of Dynamic Systems	3
ECE	448	Senior Design Project	2
TBD	TBD	Technical Elective	3
TBD	TBD	Technical Elective	3
TBD	TBD	Professional Elective	3
TBD	TBD	Professional Elective	3
Total Hours:			17
SPRING SEMESTER			
CEC	190	Career Foundations	0
ECE	425	Digital Signal Processing	3
ECE	484	Embedded Systems Design	3
ECE	449	Senior Design Project	2
TBD	TBD	Technical Elective	3
TBD	TBD	Professional Elective	3
TBD	TBD	Professional Elective	3
Total Hours:			17

Miami University Degree Awarded – 124 credit hours minimum