

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

Catalog Year: 2023-2024

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 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 Associate of Science degree at Sinclair Community College partners well with the Bachelor of Science in Engineering degree (Mechanical Engineering major) at Miami University.

To graduate with the Bachelor of Science in Engineering degree with a major in Mechanical 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 Mechanical 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. 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							
SCC	1101	First Year Experience Elective	1	EDL	110	The University & the Student	
ENG	1101	English Composition I	3	ENG	111	Composition & Rhetoric	
MAT	2270	Calculus I	5	MTH	151	Calculus I	
PHY	2201	General Physics I with Lab (OT36 Natural Science Elective)	5	PHY	191	General Physics I/Lab	
TBD	TBD	OT36 Arts/Humanities	3				
Total Hours:			17				
SPRING SEMESTER							
COM	2211	Public Speaking	3	STC	135	Principles of Public Speaking	
PHY	2202	General Physics II (OT36 Natural Science Elective)	5	PHY	192	General Physics II	
MAT	2280	Calculus II (Any course in catalog elective)	5	MTH	251	Calculus II	
ECO	2180	Principles of Microeconomics (OT36 Social Science Elective)	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							
CHE	1211	Chemistry I with lab (OT36 Natural Science Elective)	5	CHM	141/144	Chemistry I with lab	
MAT	2290	Calculus III (Any course in catalog elective)	5	MAT	252	Calculus III	
ECO	2160	Principles of Macroeconomics (Any course in catalog elective)	3	ECO	202	Principles of Macroeconomics	
TBD	TBD	OT36 Arts/Humanities	3				
Total Hours:			16				
SPRING SEMESTER							
MAT	1450	Statistics (Any course in catalog elective)	4	STA	261	Statistics	
MEE	2101	Statics for Engineers (Any course in catalog elective)	3	MME	211	Static Modeling of Mechanical Systems	
MEE	2401	Dynamics for Engineers (Any course in catalog elective)	3	MME	311	Dynamic Modeling of Mechanical Systems	
TBD	TBD	Multicultural Elective	3				
TBD	TBD	OT36 Social Science	3				
Total Hours:			16				

Sinclair Community College Degree Awarded – 65 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

SUBJECT CODE	COURSE NUMBER	COURSE TITLE	CREDIT HOURS
FALL SEMESTER			
ENG	313	Technical Writing	3
ECE	205	Electric Circuit Analysis I	4
MME	223	Engineering Materials	3
CEC	111	Imagination, Ingenuity and Impact I	2
MTH	246	Linear Algebra and Differential Equations for Engineers	4
Total Hours:			16
WINTER TERM			
MME	201	Modeling and Design in Engineering	2
Total Hours:			2
SPRING SEMESTER			
CEC	112	Imagination, Ingenuity and Impact II	2
MME	231	Manufacturing Processes	3
MME	202	Numerical Methods in Engineering	3
MME	305	Measurements and Instrumentation	3
MME/CPB	341	Engineering Economics	3
TBD	TBD	Approved Global/Intercultural Course	3
Total Hours:			17

Year 4: Miami University

SUBJECT CODE	COURSE NUMBER	COURSE TITLE	CREDIT HOURS
FALL SEMESTER			
MME/CPB	313	Fluid Mechanics	3
MME/CPB	314	Engineering Thermodynamics	3
MME	321	System Modeling, Analysis, & Control	3
MME	448	Senior Design Project	2
MME	312	Mechanics of Materials	3
TBD	TBD	Choice of Track Course 1	3
Total Hours:			17
SPRING SEMESTER			
MME/CPB	403	Heat Transfer	3
MME	415	Thermal-Fluid Studio	2
MME	411	Machine and Tool Design	4
MME	449	Senior Design Project	2
TBD	TBD	Choice of Track Course 2	3
Total Hours:			14

Miami University Degree Awarded – 124 credit hours minimum