



Transfer Pathway Planning Guide
Catalog Year 2024-25

Community College **Macomb Community College**
 WSU College/School **College of Engineering**
 Major **Mechanical Engineering**
 Degree/Credits **Bachelor of Science (BS) Mechanical Engineering / 123 credits**

Achieving your goal of obtaining a four-year degree is attainable through the collaborative effort of Macomb and Wayne State. Begin your journey by earning an associate degree at Macomb, followed by a seamless transition to Wayne State for the completion of your bachelor's degree. Throughout this academic pursuit, you have the opportunity to embrace the diverse experiences and communities offered by both campuses.

Macomb Community College

<i>Program/Major (Degree)</i>	<i>Credits (min.)</i>	<i>Recommend Transfer Credits</i>
Associate of Science (AS)	60	60
Pre-engineering (AS)	62	60

Michigan Transfer Agreement (MTA) -Satisfies WSU University General Education requirements.

<i>Discipline</i>	<i>Course (specific course required, if listed)</i>	<i>Credits</i>	<i>WSU Equivalent</i>
English Composition	ENGL 1180 Communications 1	4	ENG 1020
	BCOM 2050 Business Communication	4	ENG 3050
Humanities/Fine Arts	PHIL 2120 Professional Ethics	3	PHI 1120
	See MTA; approved humanities/fine arts	3	<i>See advisor</i>
Mathematics	MATH 1760 Analytical Geometry & Calc	4	MAT 2010
Sciences	CHEM 1170 General Chemistry 1	4	CHM 1100
	<i>Must be from different disciplines</i> PHY 1180 College Physics	4	PHY 1180
Social Sciences	ECON 1160 Principles of Economics	3	ECO 2020
	<i>Must be from different disciplines</i> See MTA; approved social science	3	<i>See advisor</i>

TOTAL CREDITS 32 (30 minimum)

Note: Starting Fall 2024 ENGL 1181 Communications 1 is acceptable for ENGL 1180.

Note: BCOM 2050 course substitution/waiver is required (see Macomb advisor)

Required courses

<i>Course</i>	<i>Credits</i>	<i>WSU Equivalent</i>
ENGR 1000 Intro to Engineering	3	BE 1200
MATH 2000 Introduction to Linear Algebra (w/MATH 2770)	3	MAT 2250
MATH 1770 Analytic Geometry & Calculus	4	MAT 2020
MATH 2760 Analytic Geometry & Calculus	4	MAT 2030
MATH 2770 Differential Equations	4	MAT 2350
PHYS 2220 Analytical Physics 1	5	PHY 2175
PHYS 2230 Analytical Physics 2	5	PHY 2185
CHEM 1180 General Chemistry 2	4	CHM 1140

TOTAL CREDITS 32



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Transfer credit summary

	Credits
	Mechanical Engineering Pathway
Michigan Transfer Agreement (MTA)	32
Required courses	32
TOTAL TRANSFER CREDITS	64

Wayne State University

Bachelor of Science (BS) in Mechanical Engineering

Course	Credit	Note
BE 1300 Basic Engineering II: Materials Science	3	
BE 1310 Materials Science Engineering Lab	1	
BE 1500 Intro Programming and Computation	3	
BE 2100 Basic Engineering III: Prob and Stats	3	
ECE 3300 Intro to Electrical Circuits	4	
ME 2200 Thermodynamics	3	
ME 2410 Statics	3	
ME 2420 Elementary Mechanics of Materials	3	
ME 2500 Numerical Methods (MATLAB)	2	
ME 3300 Fluid Mechanics: Theory and Lab	4	
ME 3400 Dynamics	3	
ME 3450 Manufacturing Processes I	3	
ME 4150 Design of Machine Elements	4	
ME 4210 Heat Transfer: Theory and Lab	4	
ME 4300 Thermal Fluid Sys Design (or ME 5330)	4	
ME 4410 Vibrations: Theory and Lab	4	
ME 4420 Dynamic Modeling/Control	4	
ME 4500 Mech Engineering Design II (or ME 5500)	4	
ME 5990 Directed Studies	1	
ME Technical Elective (ME 5XXX)	8	
ENG 3060 Tech Comm II: Presentations	3	
TOTAL CREDITS	71	

Wayne State credit summary –minimum 123 credits required for BS degree

	Credits
	Mechanical Engineering Pathway
Major	71
<ul style="list-style-type: none"> • Undergraduate research • Co-ops and internships • Accelerated Graduate Enrollment (AGRADE) 	
TOTAL WAYNE STATE CREDITS	71

TOTAL WAYNE STATE and TRANSFER CREDITS **135** (123 min.)



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Wayne State electives and degree enhancements

Consider electives as additional opportunities for you to gain marketable skills like critical thinking, leadership, and communication. These skills build a strong foundation for long-term career success.

Defined broadly, career learning includes, but is not limited to, the following:

- Interdisciplinary project-based learning and field work
- Internships, micro-externships, and co-ops
- Global experiences/education abroad
- Community service learning
- Team-based solutions, oriented experiences
- Research in the field and in lab settings
- Alumni and professional mentoring, job shadowing and other developmental experiences
- Entrepreneurship and other business development opportunities

Notes

- You can review how all courses transfer using the [course equivalency tool](#). For a self-service, customized WSU degree audit, please visit <https://wayne.edu/transfer/tess>
- Wayne State requires a minimum of 30 credits in residency.
- The pathway allows multiple associate degree options with the flexibility to customize your degree path. The minimum eligibility to participate in the Wayne State Transfer Pathways is a cumulative GPA of 2.5 or above, Michigan Transfer Agreement (MTA), and an associate degree (earned or Reverse Transfer). See [transfer credit guidelines](#).
- All college-level (non-developmental), non-duplicated courses with a 2.0 (C) grade point average (GPA) or above will be considered for transfer credit. Earned credit will transfer as 1) direct course equivalency, 2) major/department credit, or 3) elective credit. Credits not earned at Macomb will need to be taken at WSU.
- These pathways do not replace the importance of Macomb and Wayne State academic advising. The pathway provides a general roadmap to degree completion.