

MECHANICAL ENGINEERING ARTICULATION AGREEMENT GUIDE

Monroe County Community College – **AS with Mechanical Design Technology Certificate**
 Eastern Michigan University – **BS in Mechanical Engineering**

Monroe County Community College Courses:**Transfer to Eastern Michigan University as:****Michigan Transfer Agreement (MTA) Requirements (31 credits)**

Students with the MTA endorsement on their community college transcript have satisfied EMU's General Education Core Requirements and will be required to complete only the EMU General Education Application Requirements of one Perspectives on a Diverse World course, one Learning Beyond the Classroom experience, and one Writing Intensive course in the major. Courses listed below for the MTA also satisfy program requirements at EMU and/or MCCC. If the MACRAO or MTA endorsement has not been completed, students must complete EMU's general education program. Courses approved for MCCC's MTA can be found on MCCC's website.

1. A course in English Composition

ENGL 151 English Composition I 3 WRTG 120 General Transfer Credit 3

2. A Second course in English Composition or Communication

* ENGL 152 English Composition II 3 WRTG 121 Composition II (pre-req for SET 350W) 3

3. A course in Mathematics

¹* MATH 171 Calculus I 4 MATH 120 Calculus I 5

4. Two courses in Natural Sciences from different disciplines (one lab required)

*CHEM 151 General College Chemistry I 4 CHEM 121/122 General Chemistry I 4

* PHY 251 Engineering Physics 5 PHY 223 Mechanics and Sound 5

5. Two courses in Humanities and Fine Arts from different disciplines

Choose from the approved MTA list 6 General Transfer Credit 6

Recommend choosing course that also fulfills C5

6. Two courses in Social Sciences from different discipline

Choose two from the approved MTA list 6 General Transfer Credit 6

Recommend choosing course that also fulfills C6

If needed, complete an additional course in the above categories to meet the 30 credit minimum for the MTA.

EMU's Perspectives on a Diverse World requirement: Complete one course from the following list:

These courses also satisfy an MTA area: **Natural Science:** BIOL 156; **Humanities:** ENGL 240, 255, 266; HUMAN 257; **Social Sciences:** ANTHR 152; GEOG 152; GWST 151; HIST 159, 173; POLSC 211, 252; SOC 253.

These courses apply, but do not satisfy the MTA: BMGT 220; IAS 105

MCCC Associate of Science with Mechanical Design Technology Certificate Requirements (30 credits)

¹ *MATH 172	Calculus II 4	MATH 121	Calculus II 4
* METC 100	Introduction to Engineering & Technology 3	ET 100	<u>sub for ME 100</u> 3
MDTC 152	Descriptive Geometry 4	MET 223	General Transfer Credit (2)+2 4
MDTC 160	Mechanical Drafting and CAD I (C4) 4	PDET 122	General Transfer Credit (3)+1 4
MDTC 161	Mechanical Drafting and CAD II 4	PDET 224	General Transfer Credit (3)+1 4
MDTC 228	Introduction to SOLIDWORKS-CSWA 3	PDET 000	General Transfer Credit 3
MECH 102	Manufacturing Processes 4	PDET 123	General Transfer Credit 4
MECH 103	Machining Basics and CNC 4	MFG 215	General Transfer Credit 4

EMU Requirements and Electives that may be taken at MCCC or EMU (15 credits)

* MATH 251	Introduction to Linear Algebra 3	MATH 122	Elementary Linear Algebra 3
* MATH 271	Calculus III 4	MATH 223	Multivariable Calculus 4
* MATH 273	Differential Equations 3	MATH 325	Differential Equations 3
* PHY 252	Engineering Physics II 5	PHY 224	Electricity and Light 5

Credits at MCCC: 76 Credits that transfer to EMU's program 76

* Required for the Mechanical Engineering program at EMU. Must be taken at EMU if not completed prior to transferring.

¹ Admission requirement for the Mechanical Engineering program at EMU. See page 3 of guide for all admission requirements.

Sign up to use this articulation agreement. If you let us know you are using this articulation agreement we can stay in touch with you and provide information and advising to you while you are still at your community college.

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Eastern Michigan University – **BS in Mechanical Engineering**

Completion of the BS in Mechanical Engineering Program at EMU

Major Requirements (50 - 52 credits)

Foundational Requirements (9 credits)

CEET 151	Introduction to Computing in Engineering Tech....	3
EECE 212	Engineering Circuit Analysis (or ELEC 212).....	3
¹ SET 350W	Engineering Communication	3

Technical Requirements (41-43 credits)

ME 211	Statics.....	3
ME 312	Dynamics (or PHY 230).....	3-4
ME 313	Mechanics of Materials.....	3
ME 316	Thermodynamics (or PHY 360).....	3-4
ME 317	Fluid Mechanics (or PHY 485).....	3
ME 325	Mechanics of Composite Materials.....	2
ME 326	Composite Design and Processes	1
ME 330	Machine Design.....	3
ME 418	Heat Transfer.....	3
ME 420	Thermo/Fluids Lab.....	2
ME 431	Mechanical Design and Analysis.....	3
ME 432	Machine Dynamics	3
ME 435	Computational Solid Mechanics	3
ME 492	Senior Capstone I.....	3
ME 493	Senior Capstone II.....	3

LBC Requirement

Students must complete one Learning Beyond the Classroom course or noncredit experience offered by EMU. Consult your advisor for options.

Credits at EMU:	50-52
Transfer Credits:	76
Total Credits:	124

¹ Satisfies EMU's Writing Intensive in the major requirement.

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Additional Information:

1. Each institution will determine the satisfaction of their individual program and degree requirements. Both institutions agree to accept transferrable courses from each other and from other regionally accredited institutions. MCCC courses indicated with an * are required for EMU’s Mechanical Engineering program. Substitutions for these courses must be approved by the EMU program coordinator.
2. Students with the MTA endorsement on their community college transcript have satisfied EMU’s General Education Core Requirements and will be required to complete only the General Education Application Requirements of one “Perspectives on a Diverse World” course, one “Learning Beyond the Classroom” experience, and a “Writing Intensive” course in the major. The Perspectives on a Diverse World requirement may be transferred to EMU.
To use the Michigan Transfer Agreement (MTA), students must have an official community college transcript, with the “MTA Satisfied” endorsement sent to EMU’s Admissions Office. Students who do not have “MTA Satisfied” on their community college transcript, will be required to satisfy EMU’s general education requirements as applied to transfer students. The MTA may be completed after admission to EMU, however, students should inform their advisors or they may be advised to complete additional courses for the general education program.
3. Only courses with a grade of “C” or better (2.0 on a 4.0 scale) will be accepted for transfer to either institution.
4. Under this agreement, EMU will waive the 60-hour rule and require that a minimum of 30 credit hours must be completed in EMU courses, with at least 15 hours in the program at the 300-level or above. Of the last 30 hours completed before graduating, a minimum of 10 credit hours must be in courses offered by EMU. A minimum of 124 credit hours, completed in-residence or accepted in transfer, is required for graduation.
5. Students must satisfy all admission requirements at the time of application for admission to EMU, including submitting transcripts from all previously attended colleges. MCCC students will receive equal consideration with other students for course registration and financial aid.
6. Admission requirements for the BS in Mechanical Engineering:
 - A minimum EMU cumulative GPA of 2.7. (If a student has not yet established an EMU GPA, a combined GPA of 2.7 from all transfer institutions will 7pted).
 - Completion of PHY 223 with a grade of C or higher (or equivalent transfer credit)
 - Completion of MATH 120 and MATH 121, with a grade of C or higher (or equivalent transfer credit)
7. Students are encouraged to contact the GameAbove College of Engineering and Technology Student Services before applying to EMU. To facilitate advising and the evaluation of transcripts, [sign up for this articulation agreement](#) and bring a copy of this articulation guide to all advising sessions.

Effective Date: September 1, 2021 through August 31, 2024.

This agreement is consistent with the 2021-2022 catalog. Students have until summer 2029 to graduate from Eastern Michigan University following this agreement. In the event that a student does not complete the program within seven years, they may be required to have their credits reevaluated using the requirements of the current articulation guide.

Contacts:**Monroe County Community College****Eastern Michigan University**

GameAbove College of Engineering & Technology

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