

MECHANICAL ENGINEERING ARTICULATION AGREEMENT GUIDE

Monroe County Community College – AAS in Mechanical Engineering Technology

Eastern Michigan University – BS in Mechanical Engineering Technology

Monroe County Community College Courses:**Eastern Michigan University Courses:****Michigan Transfer Agreement (MTA) Requirements (30 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 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. Courses listed below for the MTA also satisfy program requirements at EMU and/or MCCC. For MCCC approved MTA courses go to [Monroe's website](#). Students who do not have an MTA endorsement (or MACRAO) will be required to complete EMU's general education program.

1. A course in English Composition

ENGL 151 English Composition I (C3).....3 University Elective3

2. A course in English Composition or Communication

*ENGL 152 English Composition II3 WRTG 121 Composition II (pre-req for SET 350W)3

3. A course in Mathematics

MATH 164 Precalculus (C2)4 MATH 105 and MATH 1074

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

*PHY 151 General Physics I (C1).....4 PHY 221 Mechanics, Sound and Heat.....4

*CHEM 151 General College Chemistry I.....4 CHEM 121 and 122 General Chemistry I.....4

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

Choose two from the approved MTA list6 University Elective.....6

*Recommend choosing one course that also meets C5***6. Two courses in Social Sciences from different disciplines**

Choose two from the approved MTA list6 University Elective.....6

*Recommend choosing one course that also meets C6***If needed, complete additional credits in any of 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 256, 257; **Social Sciences:** ANTHR 152; GEOG 152; HIST 159, 173; POLSC 211, 252; SOC 253.

These courses apply, but do not satisfy the MTA: BMGT 220; IAS 105**MCCC AAS in Mechanical Engineering Technology Requirements (47 credits)**

*MDTC 160 Mechanical Drafting and CAD I (C4).....4 PDET 122 Engineering Graphics (3)+1.....4

*MECH 102 Manufacturing Processes4 PDET 123 Manufacturing Processes4

MECH 103 Machining Basics and CNC4 MFG 215 University Elective4

*METC 100 Introduction to Engineering and Technology3 ET 100 Introduction to Engineering Technology3

*ELEC 125 Introduction to Electricity.....3 ELEC 200 Circuit Analysis I3

METC 170 Introduction to Parametric CAD/CATIA.....3 PDET 432 University Elective3

METC 160 Math Applications in Engineering Technology. 2 MATH 000 University Elective2

METC 234 Thermodynamics and Fluid Sciences4 MET 000 University Elective4

MECH 111 Introduction to Fluid Power3 MFG 318 University Elective3

*MDTC 226 Geometric Dimensioning & Tolerancing (Elec). 3 PDET 220 Geometric Dimensioning & Tolerancing3

*MATL 101 Industrial Materials.....3 PDET 111 Materials3

METC 220 Statics & Strength of Materials.....4 PDET 325 University Elective4

*PHY 152 General Physics II.....4 PHY 222 Electricity and Light.....4

*MDTC 228 Introduction to SolidWorks.....3 PDET 000 sub for PDET 224 Solid Modeling.....3

EMU Requirements and Electives that May be Taken at MCCC or EMU (8 credits)

*MATH 171 Calculus I4 MATH 120 Calculus I4

MATH 172 Calculus II.....4 MATH 121 Calculus II.....4

Credits at MCCC:85 Credits that transfer to EMU..... 79**Required for EMU's BS in Mechanical Engineering Technology program. If not transferred, must be completed at EMU.****Sign up with us:*** *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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Completion of the BS in Mechanical Engineering Technology Program at EMU

Major Requirements (42 credits)

CET 151	Intro to Computing in Engineering Technology	3
MET 211	Statics	3
MET 312	Applied Dynamics Principles	3
MET 313	Applied Mechanics of Materials	3
MET 314	Applied Thermodynamics and Heat Transfer	3
MET 319	Applied Fluid Mechanics	3
¹ MET 387L4	Co-op Ed in Mechanical Engineering Tech	3
MET 411	Mechanical/Machine Design	3
MET 430	Computer Aided Engineering	3
MET 437	Kinematics of Machines	3
MET 470	Mechanical Vibrations	3
¹ MET 492L6	Senior Design Projects I	3
MET 493	Senior Design Projects II	3
² SET 350W	Engineering Communication	3

University Elective (3 credits)

Students must complete a minimum of 45 credits at EMU under this agreement unless otherwise approved through the department.

Credits at EMU:	45
Transfer Credits	79
Minimum Credits to Graduate:	124

Sample sequence for completing program.

Students must be admitted to the MET major before registering for courses with an MET prefix. Courses may not be offered every semester. Students must meet with the CET advisor each semester to create a program of study and keep it up to date.

Semester 1 (12 credits)

CET 151	FW	3
MET 211	FW pre-req: PHY 221 and MATH 120 or 140	3
University Elective		3
SET 350W	FWS pre-req: WRTG 121	3

Semester 2 (12 credits)

MET 312	FW pre-req: MET 211 & PHY 221	3
MET 313	W pre-req: MET 211 & PHY 221	3
MET 319	FW pre-req: MET 211 and PHY 221	3
MET 387L4	FWS	3

Semester 3 (12 credits)

MET 314	FW pre-req: (MATH 120 or 140) & PHY 221	3
MET 470	F pre-req: MET 312, (MATH 121 or 141), CET 151	3
MET 437	F (pre-req: MET 312 & MET 313)	3
MET 492L6	F pre-req: SET 350W, concur MET 437	3

Semester 4 (9 credits)

MET 430	FW pre-req: PDD 224 & MET 313	3
MET 411	W pre-req: PDD 123, MET 312, & MET 313	3
MET 493	W pre-req: MET 492L6	3

¹ Satisfies EMU's Learning Beyond the Classroom requirement.

² Satisfies EMU's Writing Intensive requirement.

MECHANICAL ENGINEERING ARTICULATION AGREEMENT GUIDEMonroe County Community College – **AAS in Mechanical Engineering Technology**Eastern Michigan University – **BS in Mechanical Engineering Technology****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 BS in Mechanical Engineering Technology. 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. If already on the transcript, the MACRAO designation will be accepted at EMU after August 2019.
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. Program admission requirements:
 - A minimum EMU cumulative GPA of a 2.3 or a combined GPA of 2.3 from all transfer institutions
 - Completion of PHY 221 (MCCC PHY 151) or PHY 223 with a minimum grade of a C
 - Completion of MATH 120 (MCCC MATH 171) or MATH 140 with a minimum grade of a C
7. Students are encouraged to contact EMU's BS in Mechanical Engineering Technology program coordinator 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, 2019 until August 31, 2022.

This agreement is consistent with the 2019-2020 catalog. Students have until Summer 2027 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:

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