

ARCHIVED MECHANICAL ENGINEERING ARTICULATION GUIDE

North Central State College – AAS in Mechanical Engineering Technology

Eastern Michigan University – BS in Mechanical Engineering

North Central State College Courses:**Transfer to Eastern Michigan University as:****Ohio Transfer Module + EMU Diversity Requirement (32 credits)****1. Effective Communication**

ENGL 1010 English Composition I.....	3	University Elective	3
ENGL 1030 English Composition II.....	3	University Elective (WRTG 121).....	3

2. Quantitative Reasoning

¹ * MATH 1150 Calculus I (in place of MATH 1050).....	5	MATH 120 Calculus I (5)-1	5
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3. Arts/Humanities: Two courses from different disciplines

HIST 1010, 1030; HUMA 1010; PHIL 1010, 1110	6	University Elective	6
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4. Natural and Physical Sciences: Two courses from different disciplines (one lab required)

¹ * PHYS 2010 College Physics I (in place of PHYS 1110)	4	sub for PHY 223 Mechanics and Sound (5)-1.....	4
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*CHEM 1210 Chemistry I (in place of CHEM 1030).....	5	CHEM 121/122 General Chemistry I (4)+1	5
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5. Social Sciences: Two courses from different disciplines

ECON 1010; PSYC 1010,1070 (Rec), 2010, 2050; SOCY 1010, SOCY 2010 (Rec); POLT 1010;.....	6	University Electives	6
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6. Perspectives on a Diverse World Requirement

* PSYC 1070 or SOCY 2010 (Recommended as part of the OTM)3		Global Awareness or US Diversity	3
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NCSC Mechanical Engineering Technology Program (45 credits)

ELET 1710 Introduction to Robotics.....	2	University Elective	2
ELET 2240 Programmable Logic Controllers	3	University Elective	3

*** ENGR 1010 Introduction to Engineering (2) and***** MECT 1150 Fundamentals of Engineering Design (2) and**

* ENRD 2150 Computer Aided Design I (3)	7	ME 100 Intro to Engr Design & Manufacturing	
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(3)+4	7		
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ENGR 1910 Engineering Programming.....	3	University Elective	3
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ENGR 2850 Engineering Economics and Organization	3	University Elective	3
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¹ *MATH 1151 Calculus II (in place of MATH 1051).....	5	MATH 121 Calculus II (4)+1	5
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MECT 1150 Fundamentals of Engineering Design	2	University Elective	2
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MECT 1750 Hydraulics and Pneumatics	3	University Elective	3
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MECT 2230 Engineering Materials.....	3	University Elective	3
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MECT 2330 Statics.....	3	University Elective	3
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MECT 2440 Strength of Materials	3	University Elective	3
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MECT 2910 Mechanical Design Project.....	1	University Elective	1
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MFGT 1110 Manufacturing Processes	3	University Elective	3
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*PHYS 2030 College Physics II (in place of PHYS 1130).....	4	sub for PHY 224 Electricity and Light (5)-1	4
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Credits at NCSC:.....	77	Credits that transfer to EMU	77
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*Required for EMU's Mechanical Engineering program. If not transferred, must be completed at EMU.

¹ EMU Mechanical Engineering program admission requirements. Must have a "C" or higher.

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 Mechanical Engineering Program at EMU*Suggested sequence for completing the program at EMU.***Major Requirements (60 credits)****Math and Science Requirements (10 credits)**

MATH 122	Elementary Linear Algebra.....	3
MATH 223	Multivariable Calculus	4
MATH 325	Differential Equations.....	3

Additional Requirements (9 credits)

CET 151	Intro to Computing in Engineering Tech...	3
ELEC 212	Engineering Circuit Analysis	3
SET 350W	Engineering Communication.....	3

Technical Requirements (41 credits)

ME 211	Statics	3
ME 312	Dynamics (or PHY 230)	3
ME 313	Mechanics of Materials	3
ME 316	Thermodynamics (or PHY 360).....	3
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 (0-3 credits)

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

Credits at EMU: 60**Transfer Credits: 77****Total Credits:..... 137****Fall Semester (10 credits)**

CET 151	Intro to Computing in Engineering Tech...	3
MATH 122	Elementary Linear Algebra.....	3
MATH 223	Multivariable Calculus	4

Winter Semester (12 credits)

MATH 325	Differential Equations.....	3
ELEC 212	Engineering Circuit Analysis	3
SET 350W	Engineering Communication.....	3
ME 211	Statics	3

Fall Semester (9 credits)

ME 312	Dynamics (or PHY 230)	3
ME 313	Mechanics of Materials	3
ME 316	Thermodynamics (or PHY 360).....	3

Winter Semester (9 credits)

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

Fall Semester (14 credits)

ME 418	Heat Transfer	3
ME 420	Thermo/Fluids Lab	2
ME 431	Mechanical Design and Analysis	3
ME 432	Machine Dynamics.....	3
ME 492	Senior Capstone I	3

Winter Semester (6 credits)

ME 435	Computational Solid Mechanics.....	3
ME 493	Senior Capstone II	3

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Additional Information:

1. Each institution will determine the satisfaction of their individual program and degree requirements. Both North Central State College and EMU agree to accept transferable courses from each other and from other regionally accredited institutions. North Central State College courses indicated with an * are required for EMU's BS in Mechanical Engineering. Substitutions for these courses must be approved by the EMU program coordinator.
2. Students with the Ohio Transfer Module 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.
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 require that a minimum of 60 credit hours be completed at the four-year college level, of which 30 hours must be in courses offered by EMU, with 15 hours in program requirements, at the 300-level or above. Of the last 30 hours completed before graduating, at least 10 hours must be in courses offered by EMU. A minimum of 120 credit hours, completed in-residence or accepted in transfer, is required for graduation.
5. To be admitted to the Mechanical Engineering program, students must have:
 - A minimum EMU cumulative GPA of a 2.7 or a combined 2.7 transfer GPA from all transfer institutions
 - Completion of PHY 223 (NCSC PHYS 2010) with a grade of "C" or higher
 - Completion of MATH 120 (NCSC MATH 1150) and MATH 121 (NCSC MATH 1151) with a grade of "C" or higher

Students who wish to be admitted must submit an application online by October 1, February 1, or July 1 and attend a mandatory meeting with a Mechanical Engineering faculty member of COT Staff Advisor.
6. Students are encouraged to contact the College of Technology Student Service Office before applying to EMU. To facilitate advising and the evaluation of transcripts, sign up for this articulation agreement, and bring a copy of the articulation guide to all advising sessions.

Effective dates: September 1, 2018 until August 31, 2021.

This agreement is consistent with the 2018-2019 catalog. Students have until summer 2026 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:**North Central State College**

Business, Industry, Technology, Education, Professional
 and Public Service Division
 419.755.4740

Eastern Michigan University

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