

**MECHANICAL ENGINEERING ARCHIVED ARTICULATION GUIDE**

North Central State College – AAS in Mechanical Engineering Technology

Eastern Michigan University – BS in Mechanical Engineering Technology

**North Central State College Courses:****Transfer to Eastern Michigan University as:****Ohio Transfer Module + EMU Diversity Requirement (41 credits)**

Students with the OTM 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. Specific courses listed below for the OTM will also satisfy major requirements at NCSC and/or EMU.

**1. English Composition: Two courses required**

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

**2. Mathematics: Two courses required**

* MATH 1150 Calculus I (in place of MATH 1050).....	5	MATH 120 Calculus I (4) +1.....	5
* MATH 1151 Calculus II (in place of MATH 1051).....	5	MATH 121 Calculus II (4) +1.....	5

**3. Arts/Humanities: Two courses from different disciplines**

PHIL 1110 Ethics (NCSC requirement).....	3	University Elective .....	3
Choose from the NCSC Transfer Module .....	3	University Elective .....	3

**4. Social Sciences: Two courses from different disciplines**

<sup>2</sup> SOCY 2010 Cultural Diversity & Racism (NCSC reqmt) .....	3	Perspectives on a Diverse World Requirement.....	3
Choose from the NCSC Transfer Module .....	3	University Elective.....	3

**5. Natural and Physical Sciences: Three courses from two disciplines (one lab required)**

* PHYS 1110 General Physics I.....	4	PHY 221 Mechanics, Sound & Heat .....	4
* PHYS 1130 General Physics II.....	4	PHY 222 Electricity and Light.....	4
* CHEM 1210 Chemistry I (in place of CHEM 1030).....	5	CHEM 121 & 122 General Chemistry I & Lab (4) +1.....	5

**NCSC Mechanical Engineering Technology Program (34 credits)**

* ELET 1510 DC Electricity.....	3	ELEC 200 Circuit Analysis I.....	3
ENGR 1010 Introduction to Engineering.....	2	University Elective .....	2
ENGR 2010 Engineering Programming, Robotics & PLC....	3	University Elective .....	3
ENGR 2850 Engineering Economics and Organization.....	3	University Elective .....	3
* ENRD 2150 Computer Aided Design I (3).....	3	PDD 122 Engineering Graphics.....	3
* MFGT 1110 Manufacturing Processes .....	3	PDD 123 Manufacturing Processes .....	3
MECT 1150 Fundamentals of Engineering Design.....	2	University Elective .....	2
MECT 1750 Hydraulics and Pneumatics .....	3	University Elective .....	3
MECT 1910 Introduction to Design Project.....	1	University Elective .....	1
MECT 2230 Engineering Materials.....	3	University Elective .....	3
MECT 2330 Statics.....	3	University Elective .....	3
MECT 2440 Strength of Materials.....	3	University Elective .....	3
MECT 2905 Design Project I .....	1	University Elective .....	1
MECT 2910 Mechanical Design Project .....	1	University Elective .....	1

**EMU Requirements that May be Taken at NCSC or EMU (3 credits)**

* ENRD 2260 Solid Modeling .....	3	PDD 224 Solid Modeling.....	3
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**Credits at NCSC: ..... 78      Credits that apply to EMU's program ..... 73**


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\* Required for EMU's MET program. If not transferred, must be completed at EMU. A grade of "C" or higher is required for courses to transfer.

<sup>1</sup> EMU Mechanical Engineering Technology program admission requirement. Must have a minimum grade of "C" for admission. See additional admission and retention requirements on page 3.

<sup>2</sup> Satisfies the EMU Perspectives on a Diverse World Requirement. If not transferred, must take a course from the approved list of "Perspectives" courses at EMU.

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**Completion of the Mechanical Engineering  
 Technology Program at EMU**

**Major Requirements (51 credits)**

**Core Courses (48 credits)**

ET 100	Intro to Engineering Technology .....	3
CET 151	Intro to Computing in Engineering Tech.....	3
PDD 111	Materials.....	3
MET 211	Statics .....	3
MET 312	Applied Dynamics .....	3
MET 313	Applied Mechanics of Materials.....	3
MET 314	Applied Thermodynamics and Heat .....	3
MET 319	Applied Fluid Mechanics .....	3
<sup>1</sup> MET 387L4	Cooperative Education in MET.....	3
MET 411	Mechanical/Machine Design .....	3
MET 430	Computer Aided Engineering .....	3
MET 437	Kinematics of Machines .....	3
MET 470	Mechanical Vibrations .....	3
MET 492L6	Senior Design Projects I.....	3
MET 493	Senior Design Projects II.....	3
<sup>2</sup> SET 350W	Engineering Communication .....	3

**Restricted Elective (3 credits)**

One course from the following: .....	3
ELEC 218 - Motors and Controls (3)	
MATH 122 - Elementary Linear Algebra (3)	
PDD 220 - Geometric Dimensioning & Tolerancing (3)	
QUAL 320 - Industrial Quality Control (3)	

<b>Credits at EMU:</b> .....	<b>51</b>
<b>Transfer Credits:</b> .....	<b>73</b>
<b>Total Credits:</b> .....	<b>124</b>

<sup>1</sup> Satisfies the Learning beyond the Classroom (LBC) requirement

<sup>2</sup> Satisfies the Writing Intensive Requirement

**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 COT advisor each semester to create a program of study and keep it up to date.*

**Semester 1 Fall (12 credits)**

CET 151	FW .....	3
ET 100	FW .....	3
PDD 111	FW prereq: MATH 104.....	3
MET 211	FW prereq: (MATH 120 or 140) & PHY 221 .....	3

**Semester 2 Winter (15 credits)**

MET 312	FW prereq: MET 211 & PHY 221.....	3
MET 313	W prereq: MET 211 & PHY 221.....	3
MET 314	FW prereq: (MATH 120 or 140) & PHY 221.....	3
SET 350W	FWS prereq: WRTG 121.....	3
Restricted Elective.....		3

**Semester 3 Fall (12 credits)**

MET 387L4	FWS .....	3
MET 470	F prereq: MET 312, (MATH 121 or 141), CET 151 .....	3
MET 437	F (prereq: MET 312 & MET 313 .....	3
MET 492L6	F prereq: SET 350W, concur MET 437.....	3

**Semester 4 Winter (12 credits)**

MET 319	FW prereq: MET 211 and PHY 221 .....	3
MET 430	FW prereq: PDD 224 & MET 313 .....	3
MET 411	W prereq: PDD 123, MET 312, & MET 313.....	3
MET 493	W prereq: MET 492L6 .....	3

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**Additional Information:**

1. Each institution will determine the satisfaction of their individual program and degree requirements. Both NCSC 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 Technology. 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. Students who have not satisfied the OTM must complete EMU's General Education program as applied to transfer students.
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 the 51 credits hours listed on the second page of the articulation guide be taken at EMU, unless additional equivalent or substitute courses are approved by the program coordinator. A minimum of 45 credit hours must be completed at the four-year college level, of which 30 hours must be in courses taken at 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 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 to EMU, including submitting transcripts from all previously attended colleges. NCSC students will receive equal consideration with other students for course registration and financial aid. Ohio undergraduate students will receive EMU's in-state tuition rate.
6. To be admitted to the Mechanical Engineering Technology program, students must:
  - Have a minimum EMU cumulative GPA of a 2.3 or a combined 2.3 transfer GPA from all transfer institutions
  - Have completed PHY221 or 223 (PHYS 2010 at NCSC) with a grade of "C" or higher
  - Have completed MATH 120 (MATH 1150 at NCSC) or MATH 140 with a grade of "C" or higher
  - Submit an on-line application by the dates published in the online catalog
  - Attend a mandatory meeting with a MET faculty member or COT staff advisor. (Student will be contacted to schedule an appointment after receipt of application.)
7. After admission, program majors will be required to:
  - Complete each program core course (e.g., all courses having a MET prefix);
  - \*Maintain a cumulative GPA of at least 2.3 on a 4.0 scale
  - Must see an advisor for academic advising before enrolling in each semester.

\*A student whose cumulative GPA or cumulative major GPA falls below 2.3 will be placed on program probation for the next succeeding term or two semesters if the student is a part-time student (defined as taking 11 credits or less). If the student fails to raise their GPA to 2.3 or higher during the probationary term(s), the student will be dismissed from the program. Students may reapply for admission once their GPA is raised to 2.3 or higher.
8. Students are encouraged to contact the EMU Undergraduate Admissions 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, 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 a more recent articulation guide.

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