

Mechanical Engineering Technology (2021-22)

OPERATIONAL PLAN

MICHIGAN TECHNOLOGICAL UNIVERSITY

and

NORTHWESTERN MICHIGAN COLLEGE

This Operational Plan is to provide degree mapping for the implementation of the Master Agreement between Northwestern Michigan College and Michigan Technological University (Michigan Tech) relating to a Bachelor of Science degree in MECHANICAL ENGINEERING TECHNOLOGY and in all respects is subject to the Master Agreement.

1st Semester

NMC

MTU

Number	Course Name	Cr	Number	Course Name	Cr
ENG 111	English Composition	4	UN 1015 HU 1XXX	Composition HASS Elective	3 1
EGR 101	Intro to Engineering	1	ENG 1XXE	ENG Elective	1
MTH 141	Calculus I	5	MA 1160 MA 1XXX	Calculus I STEM Math Elective	4 1
CHM 150, 151, 150R,	General Chemistry I	5	CH 1150/51/53	University Chemistry I	5
15			15		

2nd Semester

NMC

MTU

Number	Course Name	Cr	Number	Course Name	Cr
MFG 113	Machining I	3	MET 2153 TRU XXXX	Machine Tool Funds. & App Unassigned Transfer	2 1
EGR 221	Material Science	3	MSE 2100	Material Science & Engr	3
MTH 142	Calculus II	5	MA 2160 MA 1XXX	Calculus II STEM Math Elective	4 1
CIT 110	Programming Logic and Design	3	ENG 1101	Engr Anal & Prob Solving	3
* GEO 109	World Reg. Geo.	3	UN 1025	Global Issues	3
17			17		

3rd Semester (Summer) NMC

MTU

Number	Course Name	Cr	Number	Course Name	Cr
* PSY 101	Intro to Psychology	3	PSY 2000	Intro to Psychology	3
* PHL 101	Intro to Philosophy	3	HU 2700	Intro to Philosophy	3
* HST 101 /111/112	History	4	SS 2502/00/01 SS1XXX	History HASS Elective	3 1
10			10		

Mechanical Engineering Technology

4th Semester

NMC

MTU

Number	Course Name	Cr	Number	Course Name	Cr
MTH 131	Intro to Prob & Stats	3	MA 2710	Intro to Statistical Analy	3
PHY 221, 221R	P&P Physics I	5	PH 2100/1100 TRU XXXX	University Physics I Unassigned Transfer	4 1
EGR 201	Statics	3	MET 2110	Applied Statics	3
ENG 112	English Composition	4	HU 1XX5	1XX5 - HASS Communication/Comp	4
EGR 232	Introductory Thermo	3	MET 3700	Applied Thermo	3

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5th Semester

NMC

MTU

Number	Course Name	Cr	Number	Course Name	Cr
EGR 202	Mechanics of Mat.	3	MET 2150	Applied Strength of Material	3
PHY 222, 222R, 222L	P&P Physics II	5	PH 2200/1200 TRU XXXX	University Physics II Unassigned Transfer	4 1
EGR 203	Dynamics	4	MET 2130	Dynamics	4
EGR 211	Electrical Circuits I	3	EET 1121 (sub for 1411)	Basic Electronics	3

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* Gen. Ed. required courses – some selected NMC courses may satisfy MTU requirements and Michigan Transfer Agreement. See advisor for Gen. Ed. courses and applicable MTA requirements.

NMC 75 credits transfer to MTU 63 program + 12 credits electives.

The 3rd semester is a summer session. Up to 3 additional credits of Physical Education may transfer.

Courses at MTU

Junior year

7th Semester

8th Semester

MET 3500	Manuf. Process	4	MET 2400	Pract. App. in Para.	3	
MET 3242	Machine Design I	3	EET 3131	Instrumentation	3	
MET 3400	App. Fluid Mech.	3	MET 3451	Machine Design II	3	
EET 2233	Electrical Machinery	4	MET 4460	Prod. Desg. and Dev.	2	
					Technical Elective	3

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Mechanical Engineering Technology

Senior Year

9th Semester

EC 3400	Economic Decs. Analy	3
MET 4210	App. Quality Techn.	3
MET 4575	Senior Project I	2
MET 4300	App. Heat Transfer	3
HU 3120	Tech. and Prof. Comm.	3

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10th Semester

MET 4999	Prof. Pract. Seminar	1
MET 4675	Senior Project II	2
MET 4360	Thermal-Fluids Lab	1
	Technical Elective	4
	HASS Gen. Ed. (3000+)	3
	HASS Gen. Ed. (3000+)	3

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MTU 56 credits - Program Total: 131 Credits

[Does not include 3 Credits of Physical Education required for Graduation.]

Once all MTA requirements are met, the student will receive an Associate Degree from Northwestern Michigan College. Any course not completed at NMC will require completion at MTU, including all prerequisite courses. All program specific courses require a 2.0 (C) grade for transfer.

Students may require additional courses necessary to meet the minimum Mathematical and English Composition prerequisites. NMC and MTU course offerings and / or delivery methods are subject to change. Students are required to meet with an academic advisor during each semester to maintain continuity with program requirements.

This Operational Plan is reviewed and renewed annually unless a review is requested by administrative staff of either institution in the interim.

MICHIGAN TECHNOLOGICAL
UNIVERSITY


NORTHWESTERN MICHIGAN
COLLEGE



2/21/22

Janet Callahan, MTU
Date
Dean, College of Engineering

Debra A. Pharo, NMC
Date
Academic Chair



2-15-2022



14 February 2022

John Irwin, MTU
Date
Chair, Manufacturing and Mechanical
Engineering Technology

Gerald O. Dobek, NMC
Date
Sciences Department Head