Chemical Engineering

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,R,L	General Chemistry I	5	CH 1150/51/53	University Chemistry I	5
* GEO 109	World Reg. Geo.	3	UN 1025	Global Issues	3
		18			18

2nd Semester **NMC** **MTU**

Number	Course Name	Cr	Number	Course Name	Cr
CIT 110	Programming Design	3	ENG 1101	Engrg Analysis & Prob	3
CHM 151,R,L	General Chemistry II	5	CH 1160/61/63	University Chemistry II	5
MTH 142	Calculus II	5	MA 2160 MA 1XXX	Calculus II STEM Math Elective	4 1
EGR 113	Engineering Graphics I	3	ENG 1102	Engrg Modeling & Design	3
		16			16

3rd Semester **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

4th Semester **NMC** **MTU**

Number	Course Name	Cr	Number	Course Name	Cr
MTH 241	Calculus III	5	MA 3160 MA 1XXX	Calculus III STEM Math Elective	4 1
PHY 221, 221R, 221L	P&P Physics I	5	PH 2100/1100 TRU XXXX	University Physics I Unassigned Transfer	4 1
CHM 250,L	Organic Chemistry I	5	CH 2410/11 CH 2XXX	Organic Chemistry I	4 1
		15			15

5th Semester **NMC** **MTU**

Number	Course Name	Cr	Number	Course Name	Cr
MTH 251	Diff. Eq.	4	MA 2320/3520	Diff. Eq. / Linear Alg.	4
PHY 222, 222R, 222L	P&P Physics II	5	PH 2200/1200 TRU XXXX	University Physics II Unassigned Transfer	4 1
CHM 251,L	Organic Chemistry II	5	CH 2420/21	Organic Chemistry II	5
		14			14

Chemical Engineering

* 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 73 credits transfer to MTU 65 program + 8 credits electives.

3rd and 6th semester are summer sessions.

Up to 3 additional credits of Physical Education may transfer.

Courses at MTU

6th Semester - Summer

CM 2110	**Fund of ChE I**	**3**
CM 2120	**Fund of ChE II**	**3**
		6

Junior year

7th Semester

CH 3510/11	**Phy Chem I**	**5**
CM 3110/15	**Transport I**	**6**
EC 3400	**Econ. Desc. Analysis**	**3**
		14

8th Semester

CM 3120	**Transport II**	**3**
CM 3230	**Thermo**	**4**
CM 3310	**Process Control**	**3**
CM 3510	**Chem Reac Eng**	**3**
	Tech. Elective	**3**
		16

Senior Year

9th Semester

CM 4110	**UO Lab**	**3**
CM 4310	**Pro Safety / Envir**	**3**
CM 4855	**ChE Design I**	**3**
	Tech. Elective	**3**
	HASS Gen. Ed. (3000+)	**3**
		15

10th Semester

CM 4120	**Chem Plant Lab**	**3**
CM 4860	**ChE Design II**	**2**
CM 4861	**ChE Design II Lab**	**1**
	Core Eng'g. Elective	**5**
	HASS Gen. Ed. (3000+)	**3**
		14

Chemical Engineering

MTU 65 credits

Program Total: 131 Credits

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

One additional Composition Course (NMC ENG 112) required for MTA completion. 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 pre-requisites.

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.