Bachelor of Science in Chemical Engineering

Michigan Tech

For students starting in the 2024-25 academic year.

Updated 9/18/2024

First Year

Fall

- CH 1150 (3) Univ Chem I F, Sp, Su — MA 1031 (c) or higher
- CH 1151 (1) U Chem Lab I F, Sp, Su — coreq
- CH 1153 (1) U Chem Rec I F, Sp, Su — CH 1150 coreq
- ENG 1101 (3) Engg Analysis F, Sp, Su — pass spat vis test or ENG 1002 (c), MA 1031 (c) or higher
- MA 1160 (4) Calc I F, Sp, Su
- PH 1100 (1) Phys by Inq I F, Sp, Su — MA 1160 (c)
- Co-curricular (1)
- CM 1000 (1) Intro to ChE F

Spring

- CH 1160 (3) Univ Chem II F, Sp, Su — coreq
- CH 1161 (1) U Chem Lab II F, Sp, Su
- ENG 1102 (3) Engg Modeling F, Sp, Su — pass spat vis test or ENG 1002, MA 1031 or higher
- MA 2160 (4) Calc II F, Sp, Su — MA 1160
- PH 2100 (3) Univ Physics I F, Sp, Su — MA 1160, PH 1100 (c)

Second Year

Fall

- CH 2410 (3) Org Chem I F, Su
- CH 2411 (1) O Chem Lab I F, Su — CH 24210 (c)
- CM 2110 (3) Mat'l & Energy F, Su — CH 1150, CH 1151, MA 1160
- MA 3160 (4) Multivar Calc F, Sp, Su
- PH 1200 (1) Phys by Inq II F, Sp, Su — MA 2160, PH 1200 (c), PH 2100

Spring

- CM 3230 (4) Thermo F, Sp — CM 2110, MA 2160, PH 2100
- MA 2321 (2) Linear Algebra F, Sp, Su — MA 1160
- MA 3521 (2) Diff Eqns F, Sp, Su — MA 2321 coreq, MA 2160
- PH 2200 (3) Univ Physics II F, Sp, Su — MA 2160, PH 1200 (c), PH 2100
- Co-curricular (1)

Linear Algebra/Diff Eqns can be taken as accelerated courses during the same semester (MA 2321 & MA 3521) or as full semester courses during separate semesters (MA 2320 & MA 3520).

Third Year

Fall

- CH 3510 (3) Phys Chem I F, Sp, Su — CH 1160, CH 1161, MA 2160, PH 2200 (c)
- CM 3110 (3) Transp & UO I F, Sp — CM 2110, MA 3160, MA 3521, PH 2100
- CM 3215 (3) ChE Fund Lab F, Sp — CM 3110 (c), UN 1015
- CM 3240 (3) Separations F, Sp — CM 3230, MA 2160
- Technical Elective (3)

Spring

- CM 3120 (3) Transp & UO II Sp — CM 3110, CM 3230
- CM 3310 (4) Process Contrl F, Sp — CM 2110, MA 3521, PH 2200
- CM 3510 (3) Chem Rx Engg Sp — CM 2110, CM 3110, CM 3230, MA 3521
- CM 3980 (1) Sustainbl ChE F, Sp — CM 2110, MA 3521
- Technical Elective (3)

Fourth Year

Fall

- CM 4110 (3) UO Lab I F — CM 3120, CM 3215, CM 3240, CM 3310, CM 3510
- CM 4320 (2) Process Safety F — CM 4320 (c); CM 3120, CM 3230, CM 3510
- CM 4855 (3) Proc Design I F — CM 2410, CM 3120, CM 3215, CM 3980 (c), CM 3240, CM 3510
- Technical Elective (3)
- Technical Elective (1)

Spring

- CM 4120 (3) UO Lab II Sp
- CM 4860 (2) Proc Design II Sp — CM 4855, CM 3980
- CM 4861 (1) Capstone Proj Sp — CM 4860 (c)
- Technical Elective (3)
- Free Elective (3)

Suggested Technical Electives: CM 3450, MA 3710

Refer to the advising page for complete list.

Language Option
A 3000-level or higher modern language course may be taken in place of UN 1025 Global Issues.

HASS Requirements
3 cr from each of the following lists:
* Communication
* Humanities/Fine Arts
* Social & Behavioral Sci
* Any list above or Restricted HASS

Suggested HASS
EC 3400 Economic Decision Analysis, prior or during fall senior classes because it helps with Process Design. It counts as a 3000-level Social & Behavioral Sci HASS course.

General Education: Core

- UN 1015 (3) Composition F, Sp, Su — Fresh Stdg
- UN 1025 (3) Global Issues F, Sp, Su — Fresh Stdg
- Critical & Creative Thinking (3)
- Social Resp & Ethical Reasoning (3)

General Education: Humanities, Arts, and Social Sciences (HASS)

- HASS any level (3)
- HASS any level (3)
- HASS 3000+ level (3) — UN 1015, UN 1025
- HASS 3000+ level (3) — UN 1015, UN 1025

Key

XX #### = prereq
XX #### (c) = prereq that can be taken concurrently

XX #### (cr) Name Sem Offered

A shaded box indicates an elective course

F = fall semester
Sp = spring semester
Su = summer semester

18 credits	17 credits	16 credits	18 credits	18 credits	17 credits	15 credits	15 credits

This is not an official list of degree requirements. For an official list go to the Registrar's Office, Degree Services webpage and view the degree audit.
For the most current and complete list of course prerequisites and restrictions go to the Registrar's Office, Registration webpage and view the course descriptions. Advisor email: cmadvise@mtu.edu