

**Michigan Technological University**  
**Bachelor of Science Degree Audit**  
**Major Program: Chemical Engineering**  
 Program Code: ECM, Academic Year 2020-21  
 Total credits required for the degree: 131

**Required Engineering Courses: 46 credits**

Course	Credits
CM 2110	3
CM 2120	3
CM 3110	3
CM 3120	3
CM 3230	4
CM 3215	3
CM 3310	3
CM 3510	3
CM 4110	3
CM 4120	3
CM 4310	3
CM 4855	3
CM 4860	2
CM 4861 or CM 4910	1/ (1-3)
ENG 1101 or (ENG 1001 and ENG 1100)	3/4
ENG 1102	3

**Required Math and Science Courses – 42 credits**

Course	Credits
CH 1150	3
CH 1151	1
CH 1153	1
CH 1160	3
CH 1161	1
CH 2410	3
CH 2411	1
CH 3510	3
CH 3511	2
MA 1160 or MA 1161	4/5
MA 2160	4
MA 2320 or MA 2321 or MA 2330	2/3
MA 3160	4
MA3520 or MA3521 or MA3530 or MA3560	2/3
PH 1100	1
PH 1200	1
PH 2100	3
PH 2200	3

**Technical Elective Courses\*\*: 16 credits**

Organic Chemistry II or substitute: 3 to 4 credits

Course	Credits
CH 2420 or BL 2100 or BL 3020 or CM 4740	3/4

Core Engineering Electives: at least 5 credits

CM 1000, 2200, 3450, 3825, 3830, 3979, 4125, 4505, 4510, 4650, 4655, 4710, 4740, 4770, 4780, 5100, 5200, 5300, 5400, EE 3010, ENG 2120, ENT 3979, GE4610, MEEM 2110, MSE 4740. No more than six credits from the following: CM 4000, 4020, 4040, 4060, 4080

Course	Credits

Additional Technical Electives: 0 or more credits

BE 2110, 2400, 4300, BL 1100 & BL 1110 or BL 1200 & BL 1210 or BL 1400 & BL 1410, BL 2010, 2011, 2020, 2021, 2100, 2200, 2210, 3020, 3210, 3310, 3640, 4020, 4030, 4380, 4820, 4840, CEE 3502, 3503, 4501, CH 2212, 2420, 2421, 3520, 3521, 4110, 4120, 4140, 4212, 4222, 4310, 4311, 4320, 4412, 4430, 4610, 4620, 4631, 4710, 4720, CM 1000, 2200, 3450, 3825, 3830, 3979, 3XXE, 4125, 4505, 4510, 4610, 4620, 4631, 4650, 4655, 4710, 4740, 4780, 4XXE, 5100, 5200, 5300, 5400, CS 1111, 1121, 1131, EE 2174, 3010, 3120, 3140, EET 3373, ENG 2120, 4510, 5520, ENT 2950, 2960, 3950, 3960, 3979, 3980, 4950, 4960, 4961, FW 1035, 3098, GE 2020, 2300, 2310, 2640, 3400, 4360, 4610, MA 2600, 2710, 2720, 3210, 3310, 3450, 3710, 3740, 3924, 4330, 4515, 4525, 4620, 4760, 4770, 4908, MEEM 2110, 2150, 2700, 4170, 4200, 4220, 4240, 4260, 4405, 4635, 4650, 5170, 5240, MSE 2100, 2110, 3100, 3120, 4110, 4310, 4320, 4325, 4430, 4740, OSM 4650, PH 2230, 2300, 2400, UN 2600, 3002, 3003, 3004, 3005. No more than three credits from the following: ENT 3953, 3954, 3958, 3959, 3961, 3963, 3964, 3966, 3967, 3971, 3982, 3983, 4951, 4954.

Course	Credits

\*\*Note: Technical elective courses must total to at least 16 credits. Students choosing CM 4910, MA 2330, MA 3530 or MA 3560 may use additional credits as technical electives.

### General Education Core and HASS

Courses used to complete Core and HASS requirements may not be used to complete other degree requirements. Students must complete 12 credits of Core coursework and 12 credits of Humanities, Fine Arts, and Social Science (HASS) coursework. Repeatable courses may not be repeated for general education credit. Core and HASS courses can be found on the [General Education](#) page.

#### Core: 12 credits

Course	Credits
UN 1015	3
UN 1025 or an upper level modern language	3
Critical and Creative Thinking	3
Social Responsibility and Ethical Reasoning	3

#### HASS: 12 credits

Six of the 12 HASS credits must be at the 3000 or 4000 level (an upper division language course in place of UN1025 does not meet this requirement). No more than three credits may come from the HASS Restricted course list.

Course	Credits
Communication/ Composition	Minimum 3
Humanities and Fine Arts	Minimum 3
Social and Behavioral Sciences	Minimum 3
Course from any list above or from the Restricted HASS course list	0 to 3

#### Co-curricular Activities: 3 credits

Required for graduation, but not included in the GPA calculation or in the overall credits required for the degree. Only courses on the co-curricular course list are eligible. Half credit (0.5) courses may be repeated to a maximum of one time for co-curricular credit. Find eligible courses on the [General Education](#) page.

Course	Credits

#### Free Electives: 0 to 3 credits

Any coursework is allowable, excluding co-curricular and coursework below the 1000-level.

Course	Credits