

**Michigan Technological University****Bachelor of Science Degree Audit****Major Program: Chemical Engineering, Concentration: Engineering Enterprise**

Program Code ECME, Academic Year 2021-22

Total credits required for the degree: 131

**Engineering Courses: 45 credits**

Course	Credits
CM 2110	3
CM 3110	3
CM 3120	3
CM 3215	3
CM 3230	4
CM 3240	3
CM 3310	3
CM 3510	3
CM 3980	1
CM 4110	3
CM 4120	3
CM 4320	2
CM 4855	3
CM 4860	2
ENG 1101 or ENG 1001 and ENG 1100	3/4
ENG 1102	3

**Required Math and Science Courses: 40 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
MA 1121 or MA 1160 or MA 1161	4/5
MA 2160	4
MA 3520 or MA 3521 or MA 3530 or MA 3560	2/3
PH 1100	1
PH 1200	1
PH 2100	3
PH 2200	3

**Approved Technical Elective: 10 credits**

Choose technical electives from the following list:

BE 2110, 2400, 4300, BL 1100 or 1200 or 1400, 1110 or 1210 or 1410, 2010, 2011, 2020, 2021, 2200, 2210, 3020 or 2100, 3210, 3310, 3490, 3640, 3820, 4020, 4030, 4380, 4840, CEE 3502, 3503, 4501, 4502, 4503, 4504, 4505, CH 2212, 2420, 2421, 3511, 3520, 3521, 4110, 4120, 4140, 4212, 4222, 4310, 4311, 4320, 4412, 4430, 4610, 4620, 4710, 4720, CM 1000, 2200, 3025, 3450, 3825, 3830, 3979, 3XXE, 4505, 4510, 4610, 4620, 4650, 4710, 4740, 4780, 4XXE, 5100, 5200, 5300, 5400, CS 1111, 1121, 1131, EE 2174, 2230, 2231, 3010, 3120, 3140, EET 3373, ENG 2120, 4300, 4515, 4525, ENT 2950, 2960, 3950, 3953, 3954, 3958, 3959, 3960, 3961, 3963, 3964, 3966, 3967, 3971, 3979, 3980, 3982, 3983, 4950 or 4900, 4951, 4954, 4960 or 4910, 4961, FW 1035, 3098, GE 2020, 2300, 2310, 2640, 3400, 4360, 4610, MA 2600, 3210, 3310, 3450, 3710 or 2710 or 2720 or 3715, 3740, 3924, 4330, 4515, 4525, 4620, 4760, 4770, 4908, MEEM 2110, 2150, 2700, 4170, 4200, 4220, 4240, 4260, 4405, 4635, 4650, 5170, 5240, MIS 2100, MSE 2100, 2110, 3100, 3120, 4110, 4310, 4320, 4325, 4430, 4740, OSM 4300, 4650, PH 2230, 2300, 2400, UN 2600, 3002, 3003, 3004, 3005. No more than six credits from the following: CM 4000, 4020, 4040, 4060, 4080.

Course	Credits

**Concentration Requirements: 9 credits**

Enterprise Project Work: 6 credits

Course	Credits
ENT 3950	1
ENT 3960	1
ENT 4950	2
ENT 4960	2

Enterprise Teaming and Communications: 2 credits

Course	Credits
ENT 2961	2

Enterprise Instructional Modules: Select 1 credit

ENT 3953, 3954, 3958, 3959, 3961, 3963, 3964, 3966, 3967, 3971, 3979, 3982, 3983

Course	Credits

**Free Electives: 0 to 3 credits**

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

Course	Credits

**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