

BS / Accelerated Thesis MS in Chemical Engineering
 Five-year Academic Plan (155 cr; special rules apply; see advisor)



Michigan Technological University
 Department of Chemical Engineering

Freshman Year - BS

Fall Semester

Course	Title	Cr
CH 1150	University Chemistry I	3
CH 1151	University Chemistry Lab I	1
CH 1153	University Chemistry Recitation I	1
ENG 1101	Eng analysis and Problem Solving	3
MA 1160	Calculus with Technology I	4
PH 1100	Physics by Inquiry I	1
UN 1015	Compositions	3
CM1000	Intro to ChE	1
	Co-Curricular (1 unit)	
	Total	17

Spring Semester

Course	Title	Cr
CH 1160	University Chemistry II	3
CH 1161	University Chemistry Lab II	1
ENG 1102	Eng Modeling and Design	3
MA 2160	Calculus with Technology II	4
PH 2100	University Physics I	3
UN 1025	Global Issues	3
	Total	17

Sophomore Year - BS

Fall Semester

Course	Title	Cr
CH 2410	Organic Chemistry I	3
CH 2411	Organic Chemistry Lab I	1
CM 2110	Fundamentals of Chem Engg I	3
MA 3160	Multivariable Calc with Tech	4
PH 1200	Physics by Inquiry II	1
	Crit & Creat Think Course	3
	Co-Curricular (1 unit)	
	Total	15

Spring Semester

Course	Title	Cr
CH 2410	Organic Chemistry II	3
CM 2120	Fundamentals of ChE II	3
MA 2321	Elementary Linear Algebra	2
MA 3521	Elem Differential Equations	2
PH 2200	University Physics II	3
	Social Resp& Eth Reas Course	3
	Co-Curricular (1 unit)	
	Total	16

Junior Year

Fall Semester

Course	Title	Cr
CH 3510	Physical Chemistry I	3
CH 3511	Physical Chemistry Lab I	2
CM 3110	Transport/Unit Operations	3
CM 3215	Transport Laboratory	2
CM 3410	Tech Comm for Chem Engg	3
	HASS Course	3
	Total	16

Spring Semester

Course	Title	Cr
CM 3120	Transport/Unit Operations II	3
CM 3230	Thermodynamics for Chem Engg	4
CM 3310	Process Control	3
CM 3510	Chemical Reaction Engineering	3
	HASS	3
	Total	16

Senior Year- BS plus 6 credits towards MS

Fall Semester

Course	Title	Cr
CM 4110	Unit Operations Lab	3
CM 4310	Process Safety/Environment	3
CM 4855	CM Process Analysis & Design I	3
	4000-level Technical Elective	3
	Free Elective	3
	HASS Course	3
	Total	18

Spring Semester

Course	Title	Cr
CM 4120	Chem Plant Operations Lab	3
CM 4860	CM Process Analysis & Design II	2
CM 4861	CM Design Lab II	1
	4000-level Technical Elective	3
	Technical Elective	4
	HASS Course	3
	Total	16

Final Year- MS- Assumes 6 credits from BS Senior Year through Accelerated MS Program

Fall Semester

Course	Title	Cr
CM 5100	Applied Math For Chem Eng	3
CM 5200	Advanced CM Thermodynamics	3
CM 5310	Laboratory Safety	1
CM 5500	Theory /Methods of Research	2
CM 5990	Master's Thesis	3
	Total	12

Spring Semester

Course	Title	Cr
CM 5300	Advanced Transport Phenomena	3
CM 5400	Adv. Reactive Systems Analysis	3
	Master Technical Elective [#]	3
CM 5990	Master's Thesis	3
	Total	12

Masters Technical Electives must be approved by the Graduate Program Director/ Advisor