

Cleveland State University
Fenn College of Engineering
Bachelor of Chemical Engineering

First Year

Fall Semester				Spring Semester			
	Credits	Major	Gen Ed		Credits	Major	Gen Ed
ENG 101 College Writing	3		W/C	ENG 102 or ESC 102 Technical Writing	3		W/C
MTH 181 Calculus I	4	X	M/QL	MTH 182 Calculus	4	X	M/QL
CHM 261 General Chemistry I	4	X	NS	PHY 241 University Physics I	5	X	NS
CHM 266 General Chemistry I Lab	1	X	NS	CHM 262 General Chemistry II	4	X	
ESC 100 New Student Orientation	1	X	INTRO	CHM 267 General Chemistry II Lab	1	X	
ESC 120 Intro to Engineering Design	2	X					
<i>Semester Total</i>	15			<i>Semester Total</i>	17		

Second Year

Fall Semester				Spring Semester			
	Credits	Major	Gen Ed		Credits	Major	Gen Ed
PHY 242 University Physics II	5	X		CHE 300 Chemical Engineering Principles	4	X	
ESC 151 or ESC 152 Programming	3	X		ESC 282 Engineering Economy	3	X	SS
ESC 250 Differential Equations for Engineers	3	X		ESC 301 Fluid Mechanics	3	X	
ESC 270 Materials Science	3	X		ESC 350 Linear Algebra Numerical Methods	3	X	
ESC 321 Thermodynamics I	3	X		MTH 283 or MTH 281 Multivariate Calculus	2	X	
				Eng Science Elective (ESC 201 or ESC 315)	3	X	
<i>Semester Total</i>	17			<i>Semester Total</i>	18		

Third Year

Fall Semester				Spring Semester			
	Credits	Major	Gen Ed		Credits	Major	Gen Ed
CHE 302 Chemical Engr Thermodynamics	4	X		CHE 404 Chemical Reactor Design	4	X	WAC
CHE 306 Transport Phenomena	4	X		CHE 408 Separation Process	4	X	
CHE 307 Chemical Engineering Methods	3	X	WAC	CHM 322 Physical Chemistry II	4	X	
CHM 331 Organic Chemistry I	4	X		PHL 215 Engineering Ethics	3	X	A&H WAC
CHM 336 Organic Chemistry I Lab	2	X		General Education Elective	3		DIV
<i>Semester Total</i>	17			<i>Semester Total</i>	18		

Fourth Year

Fall Semester				Spring Semester			
	Credits	Major	Gen Ed		Credits	Major	Gen Ed
CHE 430 Process Control	4	X		CHE 420 Chemical Engineering Capstone Lab	4	X	CAP
CHE 440 Process Design I	3	X	WAC	CHE 441 Process Design II	3	X	WAC
CBE Senior Elective	3	X		CBE Senior Elective	3	X	
Advanced Science Elective	4	X		General Education Elective	3		A&H
General Education Elective	3		SS	General Education Elective	3		DIV
Apply for Spring graduation prior to Sep 9th							
<i>Semester Total</i>	17			<i>Semester Total</i>	16		

Degree Total: 135 hours

Assumptions: college-level readiness in MTH & ENG; no Foreign Language Deficiency

College/ Program Notes:

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Gen Ed courses, although the M/QL and W/C requirements should be completed during the first year of study.

*General Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a **minimum of 128 total credit hours**, of which a **minimum of 42 credit hours** must be upper division (300 or 400-level courses). Depending upon other elective choices made, students may not need as many general electives as indicated above, or may need additional electives.

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University Notes:

Gen Ed Key:

INTRO = Introduction to University Life Requirement (one course)

W/C = Writing/Composition Requirement (two courses; C or better required)

M/QL = Mathematics/Quantitative Literacy Requirement (two courses)

NS = Natural Sciences (two courses, one of which must have a lab)

SS = Social Sciences Requirement (2 courses, one of which must be focused outside the US**)

A&H = Arts & Humanities Requirement (2 courses, one must be focused outside the US**)

DIV = Social Diversity Requirement (2 courses; one US Diversity and one African American Exp.)

WAC/SPAC = Writing/Speaking Across the Curriculum Requirement (3 courses, one in the major)

CAP = Capstone Requirement

** of the SS and A&H courses focused outside the US, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME)

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