

Cleveland State University
Degree Map
Bachelor of Chemical Engineering

SEMESTER 1		CREDITS	SEMESTER 2		CREDITS
ENG 100 or ENG 101 English I		3	ESC 102 Technical Writing, or		
MTH 181 Calculus I		4	ENG 102 English II		3
CHM 261 General Chemistry I		3	MTH 182 Calculus II		4
CHM 266 General Chemistry Laboratory I		1	PHY 241 University Physics I		5
ESC 120 Intr. to Engineering Design		2	CHM 262 General Chemistry II		3
ESC 100 New Student Orientation		1	CHM 267 General Chemistry Laboratory II		1
Total Hours		14	Total Hours		16
SEMESTER 3		CREDITS	SEMESTER 4		CREDITS
PHY 242 University Physics II		5	CHE 300 Chemical Engineering Principles		4
ESC 152 Programming with MATLAB		3	General Education Elective (SS)		3
			ESC 301 Fluid Mechanics		3
MTH 283 Multivariable Calculus for Eng, or			ESC 350 Linear Algebra for Engineers		3
MTH 281 Multivariable Calculus		2 or 4	ESC 270 Materials Science		3
ESC 250 Differential Equations for Engrs.		3			
ESC 321 Thermodynamics 1		3	ESC 310 Engineering Statistics and Probability		3
Total Hours		16	Total Hours		19
SEMESTER 5		CREDITS	SEMESTER 6		CREDITS
CHE 302 Chemical Engr Thermodynamics		4	CHE 404 Chemical Reactor Design (Writing)		4
CHE 306 Transport Phenomena		4	CHE 408 Separation Processes		4
CHE 307 Chemical Engineering			CHM 322 Physical Chemistry II		3
Methods (Writing)		3	PHL 215 Engineering Ethics (Writing, A&H)		3
CHM 331 Organic Chemistry I		3	ESC 282 Engineering Economy (SS)		3
CHM 336 Organic Chemistry Lab I		1			
Total Hours		15	Total Hours		17
SEMESTER 7		CREDITS	SEMESTER 8		CREDITS
CHE 430 Process Control		4	CHE 420 Chemical Engineering Capstone		
CHE 440 Process Design I (Writing)		3	Laboratory (Writing)		4
ChBME Senior Elective		3	CHE 441 Process Design II (Writing)		3
Advanced Science Elective		3	ChBME Senior Elective		3
[See Department/Program List]			General Education Elective (A&H) **		3
General Education Elective (AAE)		3	General Education Elective (USD)		3
Total Hours		16	Total Hours		16

Minimum Total Hours Required for the Degree **128-129**

Residency Requirements **42**