

Chemical Engineering Curriculum
Catalog Years 2023+

First-Year Fall Semester	Credits	First-Year Spring Semester	Credits
CHEM 1127Q: General Chemistry I	4	CHEM 1128Q: General Chemistry II	4
MATH 1131Q: Calculus I	4	MATH 1132Q: Calculus II	4
ENGR 1000: Orientation to Engineering	1	ENGR 1166: Foundations of Engineering	1
CSE 1010: Intro to Computer Programming	3	Elective/GenEd Requirement	3
ENGL 1007: First-Year Writing	4	Elective/GenEd Requirement	4
	16		16
Sophomore Year Fall Semester	Credits	Sophomore Year Spring Semester	Credits
MATH 2110Q: Multivariable Calculus	4	CHEM 2444: Organic Chemistry II	3
PHYS 1501Q: Engineering Physics I	4	CHEM 2446: Organic Chemistry Lab ¹	1
CHEM 2443: Organic Chemistry I	3	PHYS 1502Q: Engineering Physics II	4
CHEG 2103: Intro to Chemical Engineering	3	MATH 2410Q: Differential Equations	3
Elective/GenEd Requirement	3	CHEG 2111: Thermodynamics I	3
	17	CHEG 2201: CBE Professional Skills I	1
		Elective/GenEd Requirement	3
			18
Junior Year Fall Semester	Credits	Junior Year Spring Semester	Credits
CHEG 3112: Thermodynamics II	3	CHEG 3240: Junior Design and Process Safety	3
CHEG 3120: Transport Phenomena I	4	CHEG 3220: Transport Phenomena II	4
ENGR 2000+: Engineering Elective	3	CHEG 3151: Process Kinetics	3
Elective/GenEd Requirement	3	CHEG 3201: CBE Professional Skills II	1
Elective/GenEd Requirement	3	Elective/GenEd Requirement	3
	16	Elective/GenEd Requirement	3
			17
Senior Year Fall Semester	Credits	Senior Year Spring Semester	Credits
CHEG 4139 or CHEG 4144: Experimental or In Silico Senior Lab ²	2	CHEG 4139 or CHEG 4144: Experimental or In Silico Senior Lab ²	2
CHEG Elective ³	3	CHEG Elective ³	3
CHEG 4140: Capstone Design I	3	CHEG 4143W: Capstone Design II	3
CHEG 4145: Chemical Engineering Analysis ⁴	3	Elective/GenEd Requirement	3
CHEG 4101: CBE Professional Skills III	1	CHEG 4147: Process Dynamics and Control	3
Elective/GenEd Requirement	3		14
	15		

Elective/GenEd Requirements: One of these must be MATH 2210Q: Applied Linear Algebra (has a prerequisite of C- or better in MATH 1132Q), a **prerequisite** for CHEG 4145, taken before the Fall semester of senior year. It is offered during the Fall, Spring, and Summer semesters.

Second Language Requirement: _____

Environmental Literacy Requirement: _____ (E)

Writing Requirement outside of CHEG: _____ (W)

¹**Organic Chemistry Lab** is only offered in the Spring for CHEG students.

²**Senior Lab:** Students must take two semesters – CHEG 4139 and CHEG 4144.

³**Six Credits of CHEG Electives** are satisfied by any 2000+ CHEG course. Research with CHEG faculty (CHEG 4989) is commonly used to satisfy these, but **only 6 credits of CHEG 4989** may be applied toward degree requirements.

⁴**CHEG 4145** will remain listed as CHEG 3145 and count as CHEG 4145 on preliminary plans of study until 2025, per the Office of the Registrar.