CHEMICAL ENGINEERING - MINOR

The chemical engineering minor provides students with a foundational set of tools to tackle the world's energy and climate change challenges from a new perspective. From materials and microelectronics to alternative energy, chemical engineers have the technical background to provide sustainable solutions.

Upon taking select core chemical engineering classes including separations and heat & mass transfer, students can pick from more advanced chemical engineering electives based on their interests.

A minor in chemical engineering can be earned in conjunction with any CU Boulder engineering major.

Requirements

Course Requirements

The chemical engineering minor requires a minimum of 18 credit hours, distributed as follows:

Code	Title	Credit Hours
Required Courses		
CHEN 2120	Chemical Engineering Material and Energy Balances	3
CHEN 3210	Chemical Engineering Heat and Mass Transfer	4
CHEN 3320	Chemical Engineering Thermodynamics 1	3
CHEN 3220	Chemical Engineering Separations	3
Electives		
Choose five credits from any of the following:		5
CHEN 1300	Introduction to Chemical and Biological Engineering	
CHEN 3660	Energy Fundamentals	
CHEN 4130	Chemical Engineering Laboratory	
CHEN 4440	Chemical Engineering Materials	
CHEN 4450	Polymer Chemistry	
CHEN 4460	Polymer Engineering	
CHEN 4480	Solar Cells and Optical Devices for Sustainable Buildings	
CHEN 4490	Electrochemical Engineering	
CHEN 4520	Chemical Process Design	
CHEN 4530	Chemical Engineering Design Project	
CHEN 4570	Process Dynamics and Control	
CHEN 4630	Intellectual Property Law and Engineering	
CHEN 4650	Particle Technology	
CHEN 4836	Nanomaterials	
CHEN 4838	Special Topics in Chemical Engineering	
Total Credit Hours		**18**

Additional guidelines regarding the requirements:

- Relevant independent study coursework can be petitioned.
- 5000-level CHEN courses are allowed where undergraduate students are eligible to enroll.
- Prior coursework may be transferred from other institutions with approval.
- At least 9 credit hours need to be taken on the CU Boulder campus, at least 6 credits of which must be at the upper-division level.

Grade Requirements

A grade point average (GPA) of 2.000 or better is required in the courses that are used to satisfy the requirements for this minor. Each individual course that is counted towards these requirements must be passed with a C- or better.

Plan(s) of Study

Year Two		
Fall Semester		**Credit Hours**
CHEN 2120	Chemical Engineering Material and Energy Balances	3
	Credit Hours	**3**
Year Three		
Fall Semester		
CHEN 3210	Chemical Engineering Heat and Mass Transfer	4
CHEN 3320	Chemical Engineering Thermodynamics 1	3
	Credit Hours	**7**
Spring Semester		
CHEN 3220	Chemical Engineering Separations	3
	Credit Hours	**3**
Year Four		
Fall Semester		
Elective [1]		3
	Credit Hours	**3**
Spring Semester		
Elective [1]		2
	Credit Hours	**2**
	Total Credit Hours	**18**

[1] This is a sample distribution of electives. A total of at least 5 credit hours of approved electives must be completed for the minor and the actual distribution may look different depending on actual courses chosen.