

# CHEMICAL ENGINEERING MAJOR: ENVIRONMENTAL ENGINEERING OPTION (B.S.)

<https://ceps.unh.edu/chemical-engineering/environmental-engineering-option>

## Description

The chemical engineering program, with its substantial requirements in chemistry, fluid dynamics, heat transfer, mass transfer, unit operations, and reaction kinetics, provides students with a unique preparation to deal with many aspects of environmental pollution problems. The option gives students a special focus on the application of chemical engineering principles and processes to the solution of problems relating to air pollution, water pollution, and the disposal of solid and hazardous waste. Three required courses must be selected, plus two electives from the electives list. Each course must carry a minimum of three credits. Students interested in the environmental engineering option should declare their intention to the department faculty during the sophomore year. They may consult with Russell Carr, (603) 862-1429.

## Requirements

Code	Title	Credits
<b>Required Courses</b>		
CHE 400	Chemical Engineering Lectures	1
CHE 501	Introduction to Chemical Engineering I	3
CHE 502	Introduction to Chemical Engineering II	3
CHE 601	Fluid Mechanics and Unit Operations	3
CHE 602	Heat Transfer and Unit Operations	3
CHE 603	Applied Mathematics for Chemical Engineers	4
CHE 604	Chemical Engineering Thermodynamics	3
CHE 612	Chemical Engineering Laboratory I	3
CHE 614	Separation Processes	3
CHE 703	Mass Transfer and Stagewise Operations	3
CHE 707	Chemical Engineering Kinetics	3
CHE 708	Chemical Engineering Design	4
CHE 713	Chemical Engineering Laboratory II	3
CHE 752	Process Dynamics and Control	4
CHEM 405	Chemical Principles for Engineers	4
CHEM 683	Physical Chemistry I	3
CHEM 684	Physical Chemistry II	3
CHEM 685	Physical Chemistry Laboratory	2
CHEM 686	Physical Chemistry Laboratory	2
CHEM 651	Organic Chemistry I	3
CHEM 653	Organic Chemistry Laboratory	2
CHEM 652A	Organic Chemistry II	3
MATH 425	Calculus I	4
MATH 426	Calculus II	4
MATH 527	Differential Equations with Linear Algebra	4
MATH 644	Statistics for Engineers and Scientists	4

PHYS 407	General Physics I	4
PHYS 408	General Physics II	4
CHE 709	Fundamentals of Air Pollution and Its Control	4
CEE 720	Solid and Hazardous Waste Engineering	3
ESCI 654	Fate and Transport in the Environment	4

### Elective Courses

Select one of the following:		3-4
CHE 695	Chemical Engineering Project	
CHE 696	Independent Study	
CHE 744	Corrosion	
CEE 724	Environmental Engineering Microbiology	
CEE 723	Environmental Water Chemistry	

Total Credits	103-104
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