Chemical Engineering, Minor

The chemical engineering minor opens opportunities for students across the university who are interested in gaining knowledge in core chemical engineering concepts and developing deeper understanding of the different fields within chemical engineering.

A total of 20 semester hours are required to complete this minor. Interested students must contact the chemical engineering academic advisor in order to declare the minor. Students completing the chemical engineering major or a chemical engineering combined major are not eligible for this minor.

Minor Requirements

Complete 20 semester hours from the courses listed below unless otherwise indicated. Also complete any corequisite labs, recitations, clinicals, or tools courses where specified.

A minimum of 8 semester hours of coursework for this minor must be CHME coursework.

Students enrolled in the chemical engineering major or a chemical engineering combined major are not eligible to declare this minor.

Chemical Engineering Core Requirement

Code	Title	Hours
Complete one of the following:		4
CHME 2308	Conservation Principles in Chemical Engineering	
CHME 5101	Fundamentals of Chemical Engineering: Fluid, Heat, and Mass Transfer	
CHME 5102	Fundamentals of Chemical Engineering: Thermodynamics and Kinetics	

Thermodynamics Requirement

Code	Title	Hours
Complete one of the following:		4
BIOE 3380	Biomolecular Dynamics and Control	
BIOL 3611	Biochemistry	
CHEM 1151	General Chemistry for Engineers	
CHEM 1161	General Chemistry for Science Majors	
CHEM 1214	General Chemistry 2	
CHEM 2161	Concepts in Chemistry	
CHEM 2315	Organic Chemistry 1 for Chemistry Majors	
CHEM 3401	Chemical Thermodynamics and Kinetics	
CHEM 3431	Physical Chemistry	
CHME 2320	Engineering Thermodynamics	
CHME 3322	Chemical Thermodynamics	
CIVE 2335	Environmental Engineering Chemistry	
ME 2380	Thermodynamics	
PHYS 2303	Modern Physics	
PHYS 4305	Thermodynamics and Statistical Mechanics	
PHYS 4621	Biological Physics 1	

Transport Requirement

Code	Title	Hours
Complete one of the following:		4
BIOE 3310	Transport and Fluids for Bioengineers	
CHEM 3410	Environmental Geochemistry	
CHME 2310	Transport Processes 1	
CHME 3312	Transport Processes 2	
CHME 5179	Complex Fluids and Everyday Materials	
CHME 5621	Electrochemical Engineering	
CIVE 2221	Statics and Solid Mechanics	
CIVE 2320	Structural Analysis	
CIVE 2331	Fluid Mechanics and Hydraulics	

CIVE 3435	Environmental Pollution: Fate and Transport
EECE 2150	Circuits and Signals: Biomedical Applications
EECE 2210	Electrical Engineering
EECE 2412	Fundamentals of Electronics
EECE 2530	Fundamentals of Electromagnetics
ENVR 3435	Environmental Pollution: Fate and Transport
ME 3475	Fluid Mechanics
ME 3480	International Applications of Fluid Mechanics
ME 4565	Introduction to Computational Fluid Dynamics
ME 4570	Thermal Systems Analysis and Design
PHYS 1145	Physics for Life Sciences 1
PHYS 1147	Physics for Life Sciences 2
PHYS 1161	Physics 1
PHYS 1165	Physics 2
PHYS 1171	Physics 1 for Bioscience and Bioengineering
PHYS 1175	Physics 2 for Bioscience and Bioengineering
PHYS 2371	Electronics
PHYS 3602	Electricity and Magnetism 1
PHYS 3603	Electricity and Magnetism 2

Reaction Engineering and Kinetics Requirement

Code	Title	Hours
Complete one of the following:		4
CHEM 2321	Analytical Chemistry	
CHEM 3331	Bioanalytical Chemistry	
CHME 4510	Chemical Engineering Kinetics	
CHME 4701	Separations and Process Analysis	
CHME 5630	Biochemical Engineering	
CHME 5683	Introduction to Polymer Science	
CIVE 3335	Environmental Engineering Chemistry and Chemical Technologies	
CIVE 4534	Water Treatment Systems Design	
ME 3470	Aeronautical Propulsion	
ME 4670	Internal Combustion Engine	
PHSC 3430	Pharmacokinetics and Biopharmaceutics	

Chemical Engineering Elective

Code	Title	Hours
Complete 4 additional semester hours of coursework from the following range:		4
CHME 2000 to CHME 5999		

GPA Requirement

2.000 GPA required in the minor