Chemical Engineering, Honors (BSChE)

Total Hours Required: 129

Plan of Study

The Plan of Study is a suggested four-year course sequence to support academic planning and serves as a helpful guide. Currently enrolled students should meet with their academic advisor to tailor their course selections and timelines to their individual goals and circumstances.

Course	Title	Hours
Year 1		
Semester 1		
CH 302	Principles of Chemistry II	3
CHE 210	Introduction to Computing	2
M 408C	Differential and Integral Calculus	4
RHE 306	Rhetoric and Writing	3
Social and Behavioral Sciences (080)		3
	Hours	**15**
Semester 2		
CH 204	Introduction to Chemical Practice	2
M 408D	Sequences, Series, and Multivariable Calculus	4
PHY 303K	Engineering Physics I	3
PHY 105M	Laboratory For Physics 302K, 303K, and 317K	1
American and Texas Government (070)		3
First-Year Signature Course (090)		3
	Hours	**16**
Year 2		
Semester 1		
CH 328M	Organic Chemistry I	3
CH 128K	Organic Chemistry Laboratory	1
CHE 317	Introduction to Chemical Engineering Analysis	3
M 427J	Differential Equations with Linear Algebra	4
PHY 303L	Engineering Physics II	3
PHY 105N	Laboratory For Physics 302L, 303L, and 317L	1
	Hours	**15**
Semester 2		
CH 328N	Organic Chemistry II	3
CH 128L	Organic Chemistry Laboratory	1
CH 353	Physical Chemistry I	3
CHE 319	Transport Phenomena	3
M 427L	Advanced Calculus for Applications II	4
Humanities (040)		3
	Hours	**17**
Year 3		
Semester 1		
CH 153K	Physical Chemistry Laboratory	1
CHE 322	Thermodynamics	3
E S 333T	Engineering Communication	3
CHE 253K	Applied Statistics	2
CHE 354	Transport Processes	3
Chemistry Elective		4
	Hours	**16**
Semester 2		
CHE 253M	Measurement, Control, and Data Analysis Laboratory	2
CHE 363	Separation Processes and Mass Transfer	3
CHE 348	Numerical Methods in Chemical Engineering and Problem Solving	3
CHE 338	Biochemical Engineering	3
Visual and Performing Arts (050)		3
U.S. History (060)		3
	Hours	**17**
Year 4		
Semester 1		
CHE 350	Chemical Engineering Materials	3
CHE 264	Chemical Engineering Process and Projects Laboratory	2
CHE 372	Chemical Reactor Analysis and Design	3
Hours chosen from:		3
CHE 679H	Undergraduate Honors Thesis	
Approved Technical Area Course		3
American and Texas Government (070)		3
	Hours	**17**
Semester 2		
CHE 360	Process Control	3
CHE 473K	Process Design and Operations	4
Hours chosen from:		3
CHE 679H	Undergraduate Honors Thesis	
Approved Technical Area Course		3
U.S. History (060)		3
	Hours	**16**
	Total Hours	**129**

Requirements

All requirements are listed below, starting with the most specialized moving to the most general. Additional requirements may follow the table, so be sure to read the entire page. Some required courses listed below may also satisfy General Education requirements, including Core Curriculum.

Code	Title	Hours
Concentration		
CHE 679H	Undergraduate Honors Thesis	6
Hours chosen from: one of the following:		6
Approved technical focus area electives in engineering (see Course Lists tab)		
Approved technical focus area electives (see Course Lists tab)		
Subtotal		*12*
Degree (see details below)		**93**
Subtotal		*93*
General Education		
Remaining Core Curriculum (42 hours total)		24
Foreign Language other than English, Beginning Proficiency		
Subtotal		*24*
College Requirements - Engineering		
General University Requirements		
Total Hours		**129**

Additional Requirements and Policies

Chemical engineering students who are in the Engineering Honors Program and maintain a grade point average of at least 3.50 may take the honors research course, CHE 679H. In this course the student performs research over two consecutive semesters under the supervision of a faculty member, makes two oral presentations, and writes a thesis. CHE 679H may be used to fulfill either the approved area electives requirement or the approved area electives in chemical engineering requirement.

Degree-Chemical Engineering (BSChE)

Code	Title	Hours
Degree		
CHE 210	Introduction to Computing	2
CHE 253K	Applied Statistics	2
CHE 253M	Measurement, Control, and Data Analysis Laboratory	2
CHE 264	Chemical Engineering Process and Projects Laboratory	2
CHE 317	Introduction to Chemical Engineering Analysis	3
CHE 319	Transport Phenomena	3
CHE 322	Thermodynamics	3
CHE 338	Biochemical Engineering	3
CHE 348	Numerical Methods in Chemical Engineering and Problem Solving	3
CHE 350	Chemical Engineering Materials	3
CHE 354	Transport Processes	3
CHE 360	Process Control	3
CHE 363	Separation Processes and Mass Transfer	3
CHE 372	Chemical Reactor Analysis and Design	3
CHE 473K	Process Design and Operations	4
CH 302	Principles of Chemistry II	3
CH 204	Introduction to Chemical Practice	2
CH 128K	Organic Chemistry Laboratory	1
CH 328M	Organic Chemistry I	3
CH 128L	Organic Chemistry Laboratory	1
CH 328N	Organic Chemistry II	3
CH 153K	Physical Chemistry Laboratory	1
CH 353	Physical Chemistry I	3
M 408C	Differential and Integral Calculus	4
M 408D	Sequences, Series, and Multivariable Calculus	4
M 427J	Differential Equations with Linear Algebra	4
M 427L	Advanced Calculus for Applications II	4
PHY 105M	Laboratory For Physics 302K, 303K, and 317K	1
PHY 105N	Laboratory For Physics 302L, 303L, and 317L	1
PHY 303K	Engineering Physics I	3
PHY 303L	Engineering Physics II	3
RHE 306	Rhetoric and Writing	3
E S 333T	Engineering Communication	3
Hours chosen from:		4
CH 431	Inorganic Chemistry	
CH X54 & CH X54K	Quantum Chemistry and Spectroscopy and Physical Chemistry Laboratory	
CH X54L & CH X54K	Physical Chemistry II and Physical Chemistry Laboratory	
CH 455	Fundamentals of Analytical Chemistry	
BCH X69 & CHE X77K	Fundamentals of Biochemistry and Undergraduate Research Project	
BCH X69 & CHE X77L	Fundamentals of Biochemistry and Undergraduate Research Project	
CH X54 & CHE X77K	Quantum Chemistry and Spectroscopy and Undergraduate Research Project	
CH X54 & CHE X77L	Quantum Chemistry and Spectroscopy and Undergraduate Research Project	
Total Hours		**93**