Chemical and Biochemical Engineering, PhD

Academic Plans

Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, visit MyUI.

Chemical and Biochemical Engineering, PhD

Course	Title	Hours
Academic Career		
Any Semester		
72 s.h. must be graduate level coursework; graduate transfer credits allowed upon approval. More information is included in the General Catalog and on department website. [a, b]		
	Hours	**0**
First Year		
Fall		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:5120	Data Science in Chemical and Engineering Systems [d]	3
ENGR:7270	Engineering Ethics [e]	1
Elective course [f]		3
Elective course [f]		3
	Hours	**11**
Spring		
CBE:3205 or CBE:5315 or CBE:5425	Introduction to Biochemical Engineering [d, g] or Polymer Chemistry or Atmospheric Chemistry and Physics	3
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:5110	Intermediate Thermodynamics [d]	3
Elective course [f]		3
Elective course [f]		3
	Hours	**13**
Second Year		
Any Semester		
Professional Development Experience [h]		
	Hours	**0**
Fall		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:5105	Introduction to Literature Review and Proposal Writing [d]	3
CBE:7999	Research: Chemical and Biochemical Engineering PhD Dissertation	3
Elective course [f]		3
	Hours	**10**
Spring		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:5115	Transport Phenomena I [d]	3
CBE:7999	Research: Chemical and Biochemical Engineering PhD Dissertation	3
Elective course (or additional s.h. of CBE:7999 Research Chem/Biochem Engr PhD Diss) [f]		3
	Hours	**10**
Third Year		
Any Semester		
Exam: Doctoral Comprehensive Exam [i]		
	Hours	**0**
Fall		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:7999	Research: Chemical and Biochemical Engineering PhD Dissertation	5
Elective course (or additional s.h. of CBE:7999 Research Chem/Biochem Engr PhD Diss) [f]		3
	Hours	**9**
Spring		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:7999	Research: Chemical and Biochemical Engineering PhD Dissertation	5
Elective course (or additional s.h. of CBE:7999 Research Chem/Biochem Engr PhD Diss) [f]		3
	Hours	**9**
Fourth Year		
Fall		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:7999	Research: Chemical and Biochemical Engineering PhD Dissertation	2
	Hours	**3**
Spring		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:7999	Research: Chemical and Biochemical Engineering PhD Dissertation	2
	Hours	**3**
Fifth Year		
Fall		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:7999	Research: Chemical and Biochemical Engineering PhD Dissertation	1
	Hours	**2**

Spring		
CBE:5000	Seminar in Chemical and Biochemical Engineering [c]	1
CBE:7999	Research: Chemical and Biochemical Engineering PhD Dissertation	1
Exam: Doctoral Final Exam [j]		
	Hours	**2**
	Total Hours	**72**

a All students are required to serve as a teaching assistant at least once during the duration of their graduate studies.

b Students must complete specific requirements in the University of Iowa Graduate College after program admission. Refer to the Graduate College website and the Manual of Rules and Regulations for more information.

c Students must take CBE:5000 each semester in residence.

d Students must complete the five course courses with a minimum GPA of 3.45. All core courses must be taken on an A-F graded basis.

e Students are required to take ENGR:7270 during their first semester.

f Elective courses must bring the total credit for the degree to 72 s.h. At least 15 s.h. of these electives must be taken on an A-F graded basis; this 15 s.h. cannot include CBE:7999. Work with faculty advisor to determine appropriate elective graduate coursework and sequence.

g CBE:5315 is typically offered only during fall semesters.

h Examples of professional development experiences include an industrial internship, a second teaching assistant experience, teacher training, organizing a session at a national conference, and organizing a local conference. A student's professional development experience must be developed in consultation with their research mentor and approved by the director of graduate studies.

i Students are required to pass a comprehensive examination before they can become degree candidates. The comprehensive examination is the presentation and defense of the candidate's research proposal. These examinations are arranged by members of the examining committee. An unsatisfactory examination may be repeated once at the committee's discretion.

j A final examination, which is a defense of the thesis, completes the doctoral program.