

# FOUR-YEAR PROGRAM IN CHEMICAL ENGINEERING

## University of Utah, Catalog Year 08-09

### FIRST YEAR

#### FALL SEMESTER

MATH 1210 or 1270 Calculus I<sup>1</sup> (4)  
CHEM 1210 General Chemistry I (4)  
CHEM 1215 General Chemistry Lab I (1)  
WRTG 2010 Intermediate Writing (3)  
CH EN 1703 Intro to Eng Computing (2)  
General Education (3)

TOTAL HOURS: 17

#### SPRING SEMESTER

MATH 1220 or 1280 Calculus II<sup>1</sup> (4)  
CHEM 1220 General Chemistry II<sup>2</sup> (4)  
CHEM 1225 General Chemistry Lab II (1)  
PHYS 2210 Physics (4)  
CH EN 4755 Undergraduate Seminar (0.5)  
General Education (3)

TOTAL HOURS: 16.5

### SECOND YEAR

#### FALL SEMESTER

MATH 2250 ODEs and Linear Algebra (4)  
ME EN 1300 Statics and Strength of Matls (4)  
PHYS 2220 Physics (4)  
PHYS 1809 General Physics Laboratory (1)  
CH EN 2300 Thermodynamics I (2)  
General Education (3)

TOTAL HOURS: 18

#### SPRING SEMESTER

MATH Technical Elective<sup>3</sup> (Math) (2 to 4)  
CH EN 2703 Numerical Methods (2)  
CH EN 2800 Fund. of Process Engineering (3)  
CHEM 2310 Organic Chemistry I<sup>4</sup> (4)  
CHEM 2315 Organic Chemistry lab I<sup>4</sup> (1)  
CH EN 4755 Undergraduate Seminar (0.5)  
General Education (3)

TOTAL HOURS: 17.5

### THIRD YEAR

#### FALL SEMESTER

CHEM 3060 Physical Chemistry I (4)  
CH EN 3353 Fluid Mechanics (3)  
CH EN 3453 Heat Transfer (3)  
CH EN 3853 Chemical Eng Thermo (3)  
CH EN 4753 Undergraduate Seminar (0.5)  
Technical Elective<sup>3</sup> (3)

TOTAL HOURS: 16.5

#### SPRING SEMESTER

CH EN 3603 Mass Transfer & Separations (3)  
CH EN 3553 Chemical Reaction Eng (3)  
CH EN 5103 Biochemical Engineering (3)  
Technical Electives<sup>3</sup> (4)  
General Education/Bachelor Degree Requir. (3)

TOTAL HOURS: 16

### FOURTH YEAR

#### FALL SEMESTER

CH EN 4903 Projects Laboratory I (4)  
CH EN 4253 Process Design I (3)  
CH EN 4203 Process Control (3)  
CH EN 4753 Undergraduate Seminar (0.5)  
Technical Elective<sup>3</sup> (3)  
General Education (3)

TOTAL HOURS: 16.5

#### SPRING SEMESTER

CH EN 4905 Projects Laboratory II<sup>5</sup> (3)  
CH EN 5253 Process Design II (3)  
Technical Elective<sup>3</sup> (3)  
General Education (3)

TOTAL HOURS: 12

GRAND TOTAL HOURS: 130

1. Students with adequate math preparation are encouraged to take the MATH 1270 and 1280, Accelerated Engineering Calculus series, in place of MATH 1210 and 1220. Students who take 1210/1220 are encouraged to take MATH 2210 as a technical elective.

2. Students who qualify should take CHEM 1221, Honors General Chemistry II and CHEM 1241, Honors General Chemistry Lab II, instead of CHEM 1220, General Chemistry II, and CHEM 1225, General Chemistry Lab II.

3. A total of 17 credit hours of technical elective courses are required.

4. Students who qualify should take CHEM 2311, Honors Organic Chemistry I, instead of CHEM 2310.

5. CH EN 4905 fulfills the Upper-division Writing/Communication requirement.