

FOUR YEAR PLAN TO COMPLETE THE BS in CHEMICAL ENGINEERING (CHE\_BS01)

131 Units required

Department of Chemical Engineering

Semester 1 (Fall)

Course	Units
Composition or Oral Communication	3
G.E. Class	3
Chem 111A Gen. Chem. (GE B.1.b)	5
Math 122 Calculus I (GE B.2)	4
ENGR 101****	1
<b>TOTAL UNITS</b>	<b>16</b>

Semester 2 (Spring)

Course	Units
UNIV 100	1
Oral Communication or Composition	3
CHEM 111B Gen. Chemistry	5
MATH 123 Calculus II	4
PHYS 151 Mechanics & Heat (GE B.3.)	4
<b>TOTAL UNITS</b>	<b>17</b>

Semester 3 (Fall)

Course	Units
<b>CH E 200 Chem. Eng. Fundamental</b>	3
<b>CH E 210 Computer Methods</b>	3
PHYS 152 or EE210 & 210L Elect. & Mag.	4
MATH 224 Calculus III	4
Critical Thinking	3
<b>TOTAL UNITS</b>	<b>17</b>

Semester 4 (Spring)

Course	Units
CE 205 Statics	3
EE 211 Electrical Circuit	3
<b>CH E 220 Chem. Eng. Thermo. I</b>	3
CHEM 251 (not GE) or BIOL 211A (GE B1a) or MICR 200 (GE B1a)	4 or 5
GE class	3
<b>TOTAL UNITS</b>	<b>16 or 17</b>

Semester 5 (Fall)

Course	Units
CHEM 320A**	3
<b>CH E 330 Separation Processes</b>	4
MATH 370A Applied Math	3
GE class	3
GE class	3
<b>TOTAL UNITS</b>	<b>16</b>

Semester 6 (Spring)

Course	Units
CHEM 320B**	5
CHEM 377B	3
<b>CH E 320 Fluids</b>	3
CH E xxx Chem. Engr. Elective	3
GE Capstone class	3
<b>TOTAL UNITS</b>	<b>17</b>

Semester 7 (Fall)

Course	Units
<b>CH E 410 Chem. Eng. Thermo II</b>	3
<b>CH E 420 Heat &amp; Mass Transfer</b>	3
<b>CH E 430 Chem. Reactor Kinetics</b>	3
<b>CH E 440 Chem. Eng. Lab I</b>	2
<b>CH E xxx Chem. Eng. Elective</b>	3
GE Capstone class	3
<b>TOTAL UNITS</b>	<b>17</b>

Semester 8 (Spring)

Course	Units
<b>CH E 450 Chem. Eng. Lab II</b>	2
<b>CH E 460 Chem. Process Control</b>	3
<b>CH E 470 Chem. Process Design</b>	4
ECON class (GE D.2) or CE 406*	3
GE Capstone class	3
<b>TOTAL UNITS</b>	<b>15</b>

CH E core courses (bold face) are offered only once a year. It is essential to take them in the semester shown.

Engineering majors may waive 6 units of General Education (Categories D.2 and B.1.a or C.3 or E)

The degree can be completed in 131 units only if the student uses BIOL 211A or MICR 200 in Semester 4 and an ECON GE class in Semester 8. Otherwise two additional GE courses are required.

\* The degree requirement of "a course in economics" can be satisfied by any ECON course (can meet a GE requirement) or by CE 406 (Engineering Economics).(meets a major **Engineering Elective** requirement.)

A list of Approved Engineering Electives is available in the department office.

Engineering elective can be waived if student passes FE Exam.

\*\*CHEM 327(3 units) plus approved laboratory science class (min. 4 units) may be substituted for CHEM 320A&B (8 units).

\*\*\*\* waived for upper-division transfers. After factoring in waivers and double-counting the minimum number of units is 130.