

### 3-YEAR DEGREE PLAN

COLLEGE: Engineering                      DEPARTMENT: Chemical and Biomedical Engineering  
PROGRAM: BS of Chemical Engineering      CREDITS: 130

**OVERVIEW:** Qualified students can complete this bachelor's program in three years. The 3-year schedule outlined below provides one pathway to completion as an example, based on the assumptions of specific student preparation. Other pathways to completion may also be available.

**ASSUMPTIONS:** *Students admitted to CSU who place at the level of General Chemistry I, English I, and Calculus I or higher.  
Students will carry a full-time load during summer terms*

<b>YEAR 1</b>					
Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
ENG 100 or ENG 101 English I	3	ESC 102 Technical Writing, or		CHE 300 Chemical Engineering Principles	4
MTH 181 Calculus I	4	ENG 102 English II	3	ESC 250 Differential Equations for Engrs.	3
CHM 261 General Chemistry I	3	MTH 182 Calculus II	4	ESC 321 Thermodynamics 1	3
CHM 266 General Chemistry Laboratory I	1	ESC 152 Programming with MATLAB	3	ESC 350 Linear Algebra for Engineers	3
ESC 120 Intr. to Engineering Design	2	CHM 262 General Chemistry II	3	ESC 301 Fluid Mechanics	3
ESC 100 New Student Orientation	1	CHM 267 General Chemistry Laboratory II	1		
		PHY 241 University Physics I	5		
<b>TOTAL</b>	<b>14</b>		<b>19</b>		<b>16</b>

<b>YEAR 2</b>					
Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
CHE 302 Chemical Engr Thermodynamics	4	CHE 404 Chemical Reactor Design (Writing)	4	CHM 331 Organic Chemistry I	3
CHE 306 Transport Phenomena	4	CHE 408 Separation Processes	4	CHM 336 Organic Chemistry Lab I	2
CHE 307 Chemical Engineering		CHM 322 Physical Chemistry II	3	ESC 270 Materials Science	3
Methods (Writing)	3	PHL 215 Engineering Ethics (Writing, A&H)	3	ESC 282 Engineering Economy (SS)	3
PHY 242 University Physics II	5	MTH 283 Multivariable Calculus for Eng, or		Engineering Science Elective	3
		MTH 281 Multivariable Calculus	2 or 4	ESC 201, ESC 310, or ESC 315	
<b>TOTAL</b>	<b>16</b>		<b>16</b>		<b>14</b>

<b>YEAR 3</b>					
Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
CHE 430 Process Control	4	CHE 420 Chemical Engineering Capstone		General Education Elective (AAE)	3
CHE 440 Process Design I (Writing)	3	Laboratory	4	General Education Elective (USD)	3
CBE Senior Elective	3	CHE 441 Process Design II (Writing)	3		
Advanced Science Elective	3	CBE Senior Elective	3		
[See Department/Program List]		General Education Elective (A&H, non-US) **	3		
General Education Elective (SS, non-US) **	3				
<b>TOTAL</b>	<b>16</b>		<b>13</b>		<b>6</b>

**3-YEAR TOTAL (include any additional credits or pre-program assumptions):**

**130**