

**Example Program: Chemical and Biomolecular Engineering Degree
Interfaces and Nanotechnology Concentration**

Students entering Fall 2008 or later with no advanced placement credits

Freshman Year/Fall

030.101	Intro to Chemistry I	3
030.105	Intro to Chemistry I Lab	1
110.108	Calculus I	4
171.101	General Physics I	4
173.111	General Physics Lab I	1
540.101	Chemical and Biomol. Eng. in Workplace	1
<u>H/S Elective</u>		<u>3</u>
Total		17

Freshman Year/Spring

030.102	Intro to Chemistry II	3
030.106	Intro to Chemistry II Laboratory	1
110.109	Calculus II	4
171.102	General Physics II	4
<u>H/S Elective</u>		<u>3</u>
Total		15

Sophomore Year/Fall

540.202	Intro. Chemical & Biological Process Analysis	4
540.490	Chemical and Biomolecular Lab Safety and Ethics*	1
110.202	Calculus III	4
020.305	Biochemistry	4
030.205	Organic Chemistry I	4
<u>Total</u>		<u>17</u>

Sophomore Year/Spring

540.203	Engineering Thermo	3
540.303	Transport I	3
110.302	Differential Equations with Applications	4
020.306	Cell Biology	4
<u>Undesignated Electives</u>		<u>3</u>
Total		17

*This course must be taken no later than the junior year. This course must be passed in order to be allowed to be involved in research in our department.

Junior Year/Fall

540.204	Applied Physical Chem.	3
540.304	Transport II Ph Chem or Biochem Laboratory **	4
540.305	Modeling and Stat Analysis for ChemBE.	3 or 2
<u>H/S Elective</u>		<u>3</u>
Total		15-16

Junior Year/Spring

540.301	Kinetic Processes	3
540.306	Chemical & Biological Separations	3
661.315	Culture of the Engineering Profession	3
Undesignated Elective		3
<u>H/S Elective</u>		<u>3</u>
Total		15

Senior Year/Fall

540.311	Chemical Engineering Lab	6
540.409	Modeling Dynamics & Control for Chemical and Biological Systems	4
030.452	Mat.and Surf. Charact.	3
<u>I/N Engineering Elective</u>		<u>3</u>
Total		16

Senior Year/Spring

540.314	Chemical and Biomolecular Process Design	4
I/N Engineering Elective		3
H/S Elective		3
<u>Undesignated Electives</u>		<u>5 or 6</u>
Total		15-16

**Students with I/N concentration have to choose one of the following labs: 030.307 Physical Chemistry Instrumentation Lab III or 020.315 Biochemistry Lab

