### **B.S.** Chemical Engineering

Student Information		
Name:	OSU ID:	OSU Admit Term:
Phone:	Email (name.number@osu.edu):	

### **Suggested Curriculum**

This should be used as a **guide** only. Semester offerings are subject to change.

Year	Autumn	Spring
	CHEM 1210 (Gen Chem I) 5 hr	CHEM 1220 (Gen Chem II) 5 hr
	MATH 1151 (Calculus I) 5 hr	MATH 1172 (Engineering Math A) 5 hr
1	ENGR 1181.xx (Fundamentals of ENGR I) 2 hr	ENGR 1182.xx (Fundamentals of ENGR II) 2 hr
1	ENGR 1100.15 (Engineering Survey ) 1 hr	Engr 1221 or CSE 1222( <i>Programming</i> ) 2-3 hr
	General Education 3 hr	General Education 3 hr
	CHEM 2510 (Organic Chemistry I) 4 hr	CHEM 2520 (Organic Chemistry II) 4 hr
	CBE 2200 (Process Fundamentals) 4 hr	CBE 2420 (Transport Phenomena 1) 4 hr
2	MATH 2177 (Mathematical Topics for Engineers) 4 hr	CBE 2523 (Separation Processes) 3 hr
	PHYSICS 1250 (Mechanics, Thermal, Waves) 5 hr	PHYSICS 1251 (E&M, Optics, Modern Phys) 5 hr
	CHEM 4300 (Physical Chemistry I) 3 hr	CHEM 2540 (Organic Chemistry Lab I) 2 hr
	CBE 3508 (Thermodynamics) 4 hr	CBE 3610 (Kinetics and Reactor Design) 4 hr
3	CBE 3521 (Transport Phenomena II) 4 hr	CBE 3631 (Unit Operations Lab I) 2 hr
3	Math or Stats Technical Elective 3 hr	Technical Elective 3 hr
	General Education 3 hr	General Education 3 hr
		General Education3 hr
	CBE 3632(Unit Operations Lab II) 2 hr	CBE 4624 (Process Dynamics and Control) 3 hr
	CBE 4760 (Process Design, Econ, & Strategy) 4 hr	Technical Elective 3 hr
4	CBE 4764 (Process Sim & Product Eng) 4 hr	Technical Elective 3 hr
	BIOLOGY 1113 (Energy Transfer & Develop)4 hr	General Education 3 hr
	General Education 3 hr	General Education 3 hr

**Total Hours to complete the degree program = 132-133** 

# **Program Options**

Students wishing to complete the biomolecular focus will substitute Biochemistry 4511 in place of Chemistry 2520.

## **Acceptance Criteria**

Acceptance into this program is based on a holistic review of the student's record including an essay. Admission to major is considered only after a student has taken at least 12 credit hours of letter grade in their undergraduate career at OSU and have completed the following courses: MATH 1151, 1172; ENGR 1181, 1182; Chem 1220, (or their equivalents). Applications are accepted Autumn and Spring semester ONLY. Students must complete the online CBE Major Application the semester in which the student is completing their pre-major requirements (i.e. the semester before the student wants to enter the major).

### **Technical and Other Electives**

Students have the option to complete a biomolecular, environmental, or polymer focus for their technical elective plan. Each focus will require the completion of two approved courses in CBE plus one additional course in CBE or in another department. All students will also be required to complete one math or statistics technical elective.

_Total Hours (minimum of 1	2 are required)
 _Additional Course XXXX	(2-4 hr)
_Math/Stat XXXX	(2-4 hr)
 _CBE XXXX	(3 hr)
 _CBE XXXX	(3 hr)

## **General Education Requirement**

Writing and Communication	
English 1110.xx	3 hr
Second Writing Course	3 hr
Social Science	
Only one course per Social Science group may count.	
	3 hr
	3 hr
Literature	
	3 hr
Visual and Performing Arts	
	3 hr
Historical Study	
	3 hr
<b>Second Historical Study or Cultures and Ideas</b>	
	3 hr
<b>Social Diversity in the United States</b>	
Some courses may overlap with another GE category, See con	urse list.
0	/ 3 hr
Ethics	

Some courses may overlap with another GE category, See course list.

0/3 hr

### **Foreign Language**

Pre-approved substitutions

- A. Credit (including EM) for a foreign language sequence through 1103, or credit for a foreign language course with a prerequisite of 1103, can be substituted for one Gen Ed course requirement as a Cultures & Ideas.
- B. Completion of a foreign language minor can be substituted for two Gen Ed courses: one course as a Social Science, (Individuals & Groups or Organizations & Polities subgroups only) and one course as either a Literature or a Cultures & Ideas.

Parameters: <u>Students must choose either Substitution A OR Substitution B. Both substitutions cannot be applied simultaneously.</u>

#### **University Capstone (Cross-Disciplinary Seminar)**

Pre-approved substitutions

Completion of a Social Science 3597 or 4597 can be substituted for a Social Science general education course in any group. Completion of an Arts & Humanities 3597 or 4597 can be substituted for a Visual/Performing Arts general education course.

See the list of approved general education courses for additional details: <a href="www.advising.engineering.osu.edu">www.advising.engineering.osu.edu</a>.