

# CHEMICAL ENGINEERING CURRICULUM (192 credits) - Revised 2/16/2017

Cr.	First Year = 47 credits			Second Year = 49 credits			Third Year = 48 credits			Fourth Year = 48 credits																					
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring																			
1	Chemistry CH 231 (4FW)	Chemistry CH 232 (4WS)	Chemistry CH 233 (4S)	O Chem CH 331 (4FW)	O Chem CH 332 (4WS)	Tec Rpts WR 327 (3FWS)	P Chem CH 440 (3F)	P Chem CH 441 (3W)	P Chem CH 442 (3S)	CHE Lab CBEE 414 (3F)	CHE Lab CHE 415 (3W)	CHE Lab CBEE 416 or ENGR Topics 4 (3S) <sup>e</sup>																			
2						CH Lab 261 (1)							CH Lab 262 (1)	CH Lab 263 (1)	Diff Eqs MTH 256 (4FWS)	Mtrx & Pwr MTH 306 (4FWS)	ENGR Topics 1 (3)	Proc Dyn CHE 361 (3W)	Proc Ctrl CHE 461 (3S)	Rxn Engr CHE 443 (4F)	Design CHE 431 (3W)	Design CHE 432 (3S)									
3																							Diff MTH 251 (4FWS)	Integral MTH 252 (4FWS)	Vector Calc MTH 254 (4FWS)	HHS 231 (2FWS) Life Fit	Transport I Fluids CHE 331 (4F)	Transport II Heat CHE 332 (3W)	Transport III Mass CHE 333 (3S)	Persp 5 (3)	Synth 1 (3)
4																															
5	Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)																			
6													Persp 3 (3)	Adv Chem 1 (3)	Persp 4 (3)	Persp 1 (3)	Persp 1 (3)	Persp 1 (3)	Persp 1 (3)	Persp 1 (3)	Persp 1 (3)	Persp 1 (3)	Persp 1 (3)								
7	Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)																			
8													Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)							
9	Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)																			
10													Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)							
11	Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)																			
12													Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)							
13	Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)																			
14													Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)							
15	Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)																			
16													Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)							
17	Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)																			
18													Eng Comp WR 121 (3FWS)	BioSLab <sup>c</sup> (4)	COMM 111/114 (3FWS)	HHS 24* (1)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Adv Chem 2 with lab (4)	ENGR Topics 3 (3)	Free Electives (3)							

**Notes:**

- a. Only Persp, Syn, HHS 231, HHS 24\* or PAC, and FREE can be taken with S/U grading (# of S/U credits are limited to 3X # of terms at OSU, up to 36 max).
- b. "Gray shaded" courses required for admission to professional program and contribute to "core" GPA used for admission (also 80 credits minimum completed).
- c. Must satisfy the OSU-BACC "Biological Science (with lab)" requirement - see list of acceptable courses in current Schedule of Classes.
- d. CHE 320 satisfies the CBEE Ethics Requirement.
- e. Engineering topics credits must total 12 and can be satisfied by 4, 3 credit classes or 3, 4 credit classes.

*Our Mission is to graduate students immediately prepared for professional practice.*

**Technical Electives**



**Univ & College Core**



# CHEMICAL ENGINEERING CURRICULUM with Biochem Processes Emphasis 192 cr. required(193 in plan) -2/16/2017

Cr.	First Year = 47 credits			Second Year = 49 credits			Third Year = 49 credits			Fourth Year = 48 credits		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
1	Chemistry CH 231 (4FW)	Chemistry CH 232 (4WS)	Chemistry CH 233 (4S)	O Chem CH 331 (4FW)	O Chem CH 332 (4WS)	Tec Rpts WR 327 (3FWS)	P Chem CH 440 (3F)	P Chem CH 441 (3W)	P Chem CH 442 (3S)	CHE Lab CBEE 414 (3F)	CHE Lab CHE 415 (3W)	CHE Lab CBEE 416 or Biochem Proc Elective 4(3S) <sup>e</sup>
2												
3												
4												
5	CH Lab 261 (1)	CH Lab 262 (1)	CH Lab 263 (1)	Diff Eqs MTH 256 (4FWS)	Mtrx & Pwr MTH 306 (4FWS)	EE Fund ENGR 201 (3FWS)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Proc Dyn CHE 361 (3W)	Proc Ctrl CHE 461 (3S)	Rxn Engr CHE 443 (4F)	Design CHE 431 (3W)	Design CHE 432 (3S)
6												
7												
8												
9	Diff MTH 251 (4FWS)	Integral MTH 252 (4FWS)	Vector Calc MTH 254 (4FWS)	Physics PH 212 (4FWS)	Physics PH 213 (4WS)	Life Fit HHS 231 (2FWS)	Transport I Fluids CHE 331 (4F)	Transport II Heat CHE 332 (3W)	Transport III Mass CHE 333 (3S)	Unit Ops CHE 411 (4F)	Persp 4 (3)	Biochem Proc Elective 3 (3FWS)
10												
11												
12												
13	Orient CBEE 101 (3F)	Prob Solv CBEE 102 (3W)	Physics PH 211 (4FWS)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	HHS 24* (1)	Thermo CHE 311 (3F)	PRxnEquil CHE 312 (3W)	Transport Lab CHE 334 (2S)	Biochem Proc Elective 2 Bio Reactors BIOE 457 (3F)	Persp 5 (3)	CHE 417 (4S) or CH 337 (4 FS) or CH 324 (FWS)
14												
15												
16												
17	Eng Comp WR 121 (3FWS)	COMM 111/114 (3FWS)	Micro Bio MB 230 <sup>c</sup> (4)	Process Data Analysis CBEE 213 (4S)	Persp 1 (3)	Biochem I BB 450 (4FW)	Biochem II BB 451 (3WS)	Biochem Proc Elective 1 (3FWS)	Persp 2 (3)	Biochem Proc Elective 1 Bio Reactors BIOE 457 (3F)	Synth 1 (3)	Synth 2 (3)
18												

- Only Persp, Syn, HHS 231, HHS 24\* or PAC, and FREE can be taken on S/U grading (# of S/U credits are limited to 3X # of terms at OSU, up to 36 max).
- "Gray shaded" courses=required for admission to professional program and contribute to "core" GPA used for admission (also 80 credits minimum completed).
- Satisfies the OSU-BACC "Biological Science (with lab)\* requirement
- CHE 320 satisfies the CBEE Ethics Requirement.
- Engineering topics credits must total 12 and can be satisfied by 4, 3 credit classes or 3, 4 credit classes.

## Option Courses



## Univ. & College Core



# CHEMICAL ENGINEERING CURRICULUM with $\mu$ Electronics and Mat Sci Emphasis (192 credits)

-Revised 2/16/2017

Cr.	Freshman = 47 credits			Sophomore = 49 credits			Junior = 48 credits			Senior = 48 credits		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
1	Chemistry CH 231 (4FW)	Chemistry CH 232 (4WS)	Chemistry CH 233 (5S)	O Chem CH 331 (4FW)	O Chem CH 332 (4WS)	Tec Rpts WR 327 (3FWS)	P Chem CH 440 (3F)	P Chem CH 441 (3W)	P Chem CH 442 (3S)	CHE Lab CBEE 414 (3F)	CHE Lab CHE 415 (3W)	CHE Lab <sup>d</sup> CBEE 416 or ENGR Elective 4 (3S) <sup>e</sup>
2												
3												
4												
5	CH Lab 261 (1)	CH Lab 262 (1)	CH Lab 263 (1)	Diff Eqs MTH 256 (4FWS)	Mtrx & Pwr MTH 306 (4FWS)	EE Fund ENGR 201 (3FWS)	$\mu$ Elec Elective 1 (3)	Proc Dyn CHE 361 (3W)	Proc Ctrl CHE 461 (3S)	Rxn Engr CHE 443 (4F)	Design CHE 431 (3W)	Design CHE 432 (3S)
6												
7												
8												
9	Diff MTH 251 (4FWS)	Integral MTH 252 (4FWS)	Vector Calc MTH 254 (4FWS)	Physics PH 212 (4FWS)	Physics PH 213 (4WS)	Life Fit HHS 231 (2FWS)	Transport I Fluids CHE 331 (4F)	Transport II Heat CHE 332 (3W)	Transport III Mass CHE 333 (3S)	Unit Ops CHE 411 (4F)	Synth 1 (3)	Synth 2 (3)
10												
11												
12												
13	Orient CBEE 101 (3F)	Prob Solv CBEE 102 (3W)	Physics PH 211 (4FWS)	Physics PH 212 (4FWS)	Physics PH 213 (4WS)	Statics ENGR 211 (3FWS)	Thermo CHE 311 (3F)	PRxnEquil CHE 312 (3W)	Transport Lab CHE 334 (2S)	Adv Chem 1 (3F)	$\mu$ Elec Elective 3 Thin Films CHE 444 (4W)	Adv Chem 2 with lab CH 324(4), CH 337 (4FS) or CHE 417(4S)
14												
15												
16												
17	Eng Comp WR 121 (3FWS)	COMM 111/114 (3FWS)	BioSLab (4) <sup>c</sup>	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	Engr Ethics CHE 320 <sup>d</sup> (3F)	Persp 2 (3)	Persp 3 (3)	Adv Chem 1 (3F)	Persp 4 (3)	Persp 5 (3)
18												
19												
20												
21	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)	Free Electives (2)
22												
23												
24												

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- Must satisfy the OSU-BACC "Biological Science (with lab)" requirement - see list of acceptable courses in current Schedule of Classes.
- CHE 320 satisfies the department Ethics Requirement.
- Engineering topics credits must total 12 and can be satisfied by 4, 3 credit classes or 3, 4 credit classes.

## OPTION Courses



## Univ & College Core



# CHEMICAL ENGINEERING CURRICULUM with Environmental Processes Emphasis (192 credits) -Revised 2/16/2017

Cr.	First Year = 47 credits			Second Year = 49 credits			Third Year = 49 credits			Fourth Year = 47 credits		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
1	Chemistry CH 231 (4FW)	Chemistry CH 232 (4WS)	Chemistry CH 233 (4S)	O Chem CH 331 (4FW)	O Chem CH 332 (4WS)	Tec Rpts WR 327 (3FWS)	P Chem CH 440 (3F)	P Chem CH 441 (3W)	P Chem CH 442 (3S)	CHE Lab CBEE 414 (3F)	CHE Lab CHE 415 (3W)	CHE Lab CBEE 416 or ENVE Elective 4 (3S) <sup>e</sup>
2												
3												
4												
5	CH Lab 261 (1)	CH Lab 262 (1)	CH Lab 263 (1)	Diff Eqs MTH 256 (4FWS)	Mtrx & Pwr MTH 306 (4FWS)	EE Fund ENGR 201 (3FWS)	Engr Ethics <sup>d</sup> CHE 320 (3FW)	Proc Dyn CHE 361 (3W)	Proc Ctrl CHE 461 (3S)	Rxn Engr CHE 443 (4F)	DESIGN CHE 431 (3W)	DESIGN CHE 432 (3S)
6												
7												
8												
9	Diff MTH 251 (4FWS)	Integral MTH 252 (4FWS)	Vector Calc MTH 254 (4FWS)	Physics PH 212 (4FWS)	Physics PH 213 (4WS)	Life Fit HHS 231 (2FWS)	Transport I Fluids CHE 331 (4F)	Transport II Heat CHE 332 (3W)	Transport III Mass CHE 333 (3S)	Unit Ops CHE 411 (4F)	Persp 4 (3)	Synth 1 (3)
10												
11												
12												
13	Orient CBEE 101 (3F)	Prob Solv CBEE 102 (3W)	Physics PH 211 (4FWS)	Physics PH 212 (4FWS)	Physics PH 213 (4WS)	Statics ENGR 211 (3FWS)	Thermo CHE 311 (3F)	PRxn Equil CHE 312 (3W)	Persp 2 (3)	ENVE Elective 3 (4FWS)	Adv Chem 1 (3FWS)	Adv Chem 2 CH 324 (4FWS) or CH 337 (FS) or CHE 417 (4S)
14												
15												
16												
17	Eng Comp WR 121 (3FWS)	COMM 111/114 (3FWS)	Micro Bio MB 230 <sup>c</sup> (4)	Mat Bal CBEE 211 (3F)	Energy Bal CBEE 212 (3W)	Process Data Analysis CBEE 213 (4S)	ENVE Elective 1 (3FWS)	ENVE Elective 2 ENVE 322 (4W)	Persp 3 (3)	ENVE Elective 3 (4FWS)	Adv Chem 1 (3FWS)	Adv Chem 2 CH 324 (4FWS) or CH 337 (FS) or CHE 417 (4S)
18												
19												
20												

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### Option Courses



### Univ & College Core

