

Chemical Engineering with MECOP (192 Credits)

Revised 3/20/19

Credits	First Year = 47 credits			Second Year = 49 credits			Third Year			Fourth Year			Fifth Year		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
1				Organic Chemistry CH 331 (4FW)	Organic Chemistry CH 332 (4WS)	EE Fund. ENGR 201 (3FWS)	Thermo I CHE 311 (3F)	Thermo II CHE 312 (3W)		P Chem CH 440 (3F)	P Chem CH 441 (3W)	P Chem CH 442 (3S)		Design CHE 431 (3W)	Design CHE 432 (3S)
2	Chemistry CH 231 (4FW)	Chemistry CH 232 (4WS)	Chemistry CH 233 (4FS)												
3															
4															
5	CH 261 (1)	CH 262 (1)	CH 263 (1)				Transport I CHE 331 (4F)	Transport II CHE 332 (3W)							
6				Differential Equations MTH 256 (4FWS)	Matrices MTH 264 (2)	Statics ENGR 211 (3FWS)				Reaction Engineering CHE 443 (4F)	Process Dynamics CHE 361 (3W)	Process Control CHE 461 (3S)		Engineering Elective (3-4FWS)	Engineering Elective (3-4FWS)
7	Differential Calculus MTH 251 (4FWS)	Integral Calculus MTH 252 (4FWS)	Vector Calculus MTH 254 (4FWS)		Series MTH 265 (2)	Technical Writing WR 327 (3FWS)		Transport III CHE 333 (3WS)							
8							Engr. Ethics CHE 320 (3F)			Process Laboratory CBEE 414 (3F)	CHE Laboratory CHE 415 (3W)	Transport Lab CHE 334 (3S)			
9															
10	Orientation CBEE 101 (3F)	Engr. Comp. CBEE 102 (3W)	Physics w/ Calculus PH 211 (4FWS)	Physics w/ Calculus PH 212 (4FWS)	Physics w/ Calculus PH 213 (4FWS)	Process Analysis CBEE 213 (4S)									
11							ENGR 407 (1)	BioSci w/ Lab (4FWS)			DPD (3FWS)	Advanced Chemistry Elective (3-4FWS)			
12										Mass Transfer Operations CHE 411 (4F)					
13	English Composition WR 121 (3FWS)	COMM 111/114 (3FWS)	HHS 231 (2FWS)	Material Balances CBEE 211 (3F)	Energy Balances CBEE 212 (3W)	Perspective (3FWS)	Engineering Elective (3-4FWS)				Perspective (3FWS)			Perspective (3FWS)	Synthesis (3FWS)
14															
15			PAC (1FWS)												
16					Perspective (3FWS)							Free Elective (4FWS)			
17															
18															

	Pre-requisites for upper division coursework
	Engineering Electives
	Baccalaureate Core course not covered by major requirements (S/U grading allowed)

This advising guide is intended for scheduling only.
Course offerings and requirements are subject to change. Please reference the OSU Online catalog for a complete list of degree requirements.

Chemical Engineering Coursework for MECOP

School of Chemical, Biological, and Environmental Engineering

Oregon State University

Revised 3/20/19

Classes Required for 1st MECOP Internship

Course #	Credit Hours	Description
CBEE 102	3	Engineering Problem Solving and Computation
CBEE 211	3	Material Balances and Stoichiometry
CBEE 212	3	Energy Balances
CH 231/261	5	General Chemistry + Lab
CH 232/262	5	General Chemistry + Lab
CH 233/263	5	General Chemistry + Lab
CHE 311	3	Thermodynamics
CHE 312	3	Chemical Engineering Thermodynamics
CHE 320	3	Safety, Engineering Ethics, and Professionalism
CHE 331	4	Transport Phenomena I: Fluids
CHE 332	3	Transport Phenomena II: Heat
CHE 333	3	Transport Phenomena III: Mass
COMM 111 or 114	3	Public Speaking (COMM 111) or Argument and Critical Discourse COMM (114)
ENGR 201	3	Electrical Engineering Fundamentals
ENGR 211	3	Statics
ENGR 407	1	MECOP Seminar
MTH 251	4	Differential Calculus
MTH 252	4	Integral Calculus
MTH 254	4	Vector Calculus I
MTH 256	4	Differential Equations
MTH 264	2	Introduction to Matrix Algebra
MTH 265	2	Introduction to Series
PH 211	4	General Physics with Calculus
PH 212	4	General Physics with Calculus
PH 213	4	General Physics with Calculus
WR 121	3	English Composition
WR 327	3	Technical Writing

Classes Required for 2nd MECOP Internship

Course #	Credit Hours	Description
CBEE 213	4	Process Data Analysis
CBEE 414	3	Process Engineering Laboratory
CHE 334	3	Transport Phenomena Laboratory
CHE 361	3	Chemical Process Dynamics & Simulation
CHE 411	4	Mass Transfer Operations
CHE 415	3	Chemical Engineering Laboratory
CHE 443	4	Chemical Reaction Engineering
CHE 461	3	Process Control

Additional Courses Required for Graduation

Course #	Credit Hours	Description
CH 331	4	Organic Chemistry (Series CH334/5/6 can substitute)
CH 332	4	Organic Chemistry (Series CH334/5/6 can substitute)
CH 440	3	Physical Chemistry
CH 441	3	Physical Chemistry
CH 442	3	Physical Chemistry
CHE 431	3	Chemical Plant Design I
CHE 432	3	Chemical Plant Design II