Marlan and Rosemary Bourns College of Engineering

Suggested Course Plan for a UC Riverside Major in

CHEMICAL ENGINEERING

Chemical Engineering Option

Catalog Year: 2021

Fall Quarter	Units	Winter Quarter	Units	Spring Quarter	Units
FIRST YEAR					
CEE 010	1	CHEM 001B & CHEM 01LB	5	CHEM 001C & CHEM 01LC	5
Intro to Chem. & Envir. Engineering		*General Chemistry & Lab*		*General Chemistry & Lab*	
CHEM 001A & CHEM 01LA	5	ENGL 001B	4	ENGL 001C or Alternate*	4
General Chemistry & Lab		*Intermediate Composition*		*Applied Intermediate Composition*	
ENGL 001A	4	MATH 009B	4	MATH 009C	4
Beginning Composition		*First Year Calculus*		*First Year Calculus*	
MATH 009A	4	PHYS 040A	5	PHYS 040B	5
First Year Calculus		*Physics (Mechanics)*		*Physics (Heat/Waves/Sound)*	
SECOND YEAR					
CHE 110A	3	CHE 110B	3	MATH 010B	4
Chemical Process Analysis		*Chemical Process Analysis*		*Multivariable Calculus*	
CHEM 008A & CHEM 08LA	4	CHEM 008B & CHEM 08LB	4	CHEM 008C & CHEM 08LC	4
Organic Chemistry		*Organic Chemistry*		*Organic Chemistry*	
MATH 046	4	MATH 010A	4	CS 009P	4
Differential Equations		*Multivariable Calculus*		*Intro to Programming*	
PHYS 040C	5	CHE 100	4	Breadth _____	4
Physics (Electricity/Magnetism)		*Engineering Thermodynamics*		*Humanities/Social Sciences*	
THIRD YEAR					
BIOL 005A & BIOL 05LA	5	CHE 120	4	CHE 116	4
Cell & Molecular Biology & Lab		*Mass Transfer*		*Heat Transfer*	
CHE 114	4	Technical Elective**	4	CHE/ENVE 130	4
Applied Fluid Mechanics		_____		*Advanced Engr. Thermodynamics*	
ENGR 118	5	Breadth _____	4	CHE/ENVE 160A	3
Engineering Modeling & Analysis		*Humanities/Social Sciences*		*Chem. & Envir. Engineering Lab*	
Breadth _____	4	Breadth _____	4	CHE 122	4
Humanities/Social Sciences		*Humanities/Social Sciences*		*Chemical Engineering Kinetics*	
FOURTH YEAR					
CHE 117	4	CHE 118	4	CHE 175B	4
Separation Processes		*Process Dynamics and Control*		*Chemical Process Design*	
CHE 160B	3	CHE 160C	3	Technical Elective**	4
Chemical Engineering Lab		*Chemical Engineering Lab*		_____	
Technical Elective**	4	CHE 175A	4	Breadth _____	4
_____		*Chemical Process Design*		*Humanities/Social Sciences*	
CEE 158	3	Technical Elective**	4	Breadth _____	4
Professional Development for Engr		_____		*Humanities/Social Sciences*	

Total Units: 191

Maximum units: 229

To earn a B.S., you must complete all College and University requirements. For a full list of requirements, go to catalog.ucr.edu.

ENGLISH COMPOSITION*

A C or better is required in all English Composition courses to satisfy the graduation requirement. Please consult with your Academic Advisor for ENGL 1C alternatives.

BREADTH REQUIREMENTS

For an approved list of Breadth courses, go to http://student.engr.ucr.edu/policies/requirements/breadth.html.

Humanities: (3 courses)

A. World History: _____

B. Fine Arts/Lit/Phil/Rlst: _____

C. Human Persp. on Sci: _____

Social Sciences: (3 courses)

A. Econ. or Posc.: _____

B. Anth., Psyc, or Soc.: _____

C. General Social Science: _____

Ethnicity: (1 course)

1. _____

Upper Division: (2 courses)

1. _____

2. _____

TECHNICAL ELECTIVES **

Please note that Technical Electives may be offered throughout the Academic Year. Consult with your Faculty Mentor about potential offerings. See approved technical electives on back.

Course Plan is subject to change.

Chemical Engineering-Chemical Engineering Option Technical Electives

You must complete 16 units of Technical Elective coursework. Select from the list below:

You may choose 3 to 4 courses from Category 1 but only one course from Category 2.

Category 1

CEE 132	Green Engineering (4)
CHE 102	Catalytic Reaction Engineering (4)
CHE 131	Electrochemical Engineering (4)
CHE 136	Advanced Topics in Heat Transfer (4)
CHE 171	Pollution Control for Chemical Engineers (4)
ENVE 120*	Unit Operations and Processes in Environmental Engineering (4)
ENVE 133	Fundamentals of Air Pollution Engineering (4)
ENVE 134*	Technology of Air Pollution Control (4)
ENVE 138*	Combustion Engineering (4)

Category 2

CEE 125	Analytical Methods for Chemical and Environmental Engineers (4)
CEE 135	Chemistry of Materials (4)

*Course requires prerequisites not accounted for in curriculum. Please check with the undergraduate faculty advisor about the ability to take this course.