

# CHEMICAL ENGINEERING

UNIVERSITY OF PITTSBURGH

LA ROCHE UNIVERSITY



**CHEMICAL ENGINEERS SOLVE** some of the most intriguing problems of today's manufacturing industry. They use the principles of chemistry, biology, physics and math to design safe procedures and sustainable equipment, test products and solve onsite problems in labs, offices and industrial settings.

At La Roche University you'll develop the strong math and science background that chemical engineers use in their daily work. Through our joint program with the University of Pittsburgh, you'll earn a dual degree and graduate with a competitive advantage.



## CURRICULUM

### ENGINEERING FOUNDATION COURSES

46 credits

### SCIENCE AND MATHEMATICS COMPONENT

28 credits

Analytical Geometry & Calculus I  
Analytical Geometry & Calculus II  
General Chemistry I with Lab  
General Chemistry II with Lab  
Physics I with Lab  
Physics II with Lab  
Programming I with Lab

### HUMANITIES AND SOCIAL SCIENCE COMPONENT

18 credits

Select courses from three different areas, not including science. One must be writing-intensive. Two non-introductory courses from the same department or theme. Suggestion: Modern Language in lieu of Community/Global courses.

### CHEMICAL ENGINEERING MAJOR REQUIREMENTS

33 credits

#### MATHEMATICS: 10 credits

Analytical Geometry & Calculus III  
Ordinary & Differential Equations  
Probability & Statistics I

#### CHEMISTRY: 10 credits

Organic Chemistry I & Lab

*Continued*

LA ROCHE UNIVERSITY | 9000 Babcock Blvd. | Pittsburgh, PA 15237 | [laroche.edu](http://laroche.edu)

#### Freshman Admissions

844-838-4578 | 412-536-1272  
[admissions@laroche.edu](mailto:admissions@laroche.edu)

#### Transfer Admissions

412-536-1260  
[transferadmissions@laroche.edu](mailto:transferadmissions@laroche.edu)

## CURRICULUM *(continued)*

Organic Chemistry II  
Biochemistry

### ADVANCE SCIENCE & LAB

**CHOOSE ONE COURSE: 3 credits**

Analytical Chemistry  
Inorganic Chemistry  
Polymer Chemistry

### ADVANCE SCIENCE LAB

**CHOOSE 1 COURSE: 1 credit**

Organic Chemistry 2 Lab  
Analytical Chemistry 1 Lab  
Physical Chemistry 2 Lab

### ENGINEERING ELECTIVE

**CHOOSE 1 COURSE: 3-4 credits**

Materials Structure  
& Properties\*  
Statics & Mechanics of Materials I\*  
Programming II/lab

\*Pitt (Summer Year 3)

### PROFESSIONAL ELECTIVES

**6 credits**

Two courses in communication,  
advanced life science, computer

science or mathematics not  
already required by this program.  
Courses must be pre-approved.

### PRE-APPROVED TECHNICAL/ PROFESSIONAL ELECTIVES\*

*Must be courses not already  
designated as required in your  
engineering track.*

### ADVANCED LIFE SCIENCE

Microbiology with Lab  
Genetics  
General Ecology  
Cell Biology  
Biochemistry  
Immunology  
Molecular Biology

### COMMUNICATIONS

College Writing II  
Public Speaking  
Business Communications  
Writing for Public Relations  
Technical Writing

### COMPUTER SCIENCE

Programming II & Lab  
Algorithm Analysis  
Systems Programming & Lab  
Database Theory  
Computer Organization  
Operating Systems  
Telecommunications  
Advanced Database Theory

### MATHEMATICS

Discrete Mathematics I  
Discrete Mathematics II  
Probability & Statistics II  
Complex Variables  
History of Mathematics  
Modern Abstract Algebra  
Geometry  
Real Analysis

\*Any other LRU course taken  
as a technical or professional  
elective must be pre-  
approved by the University of  
Pittsburgh, Swanson School  
of Engineering's Coordinator  
of Transfer Student Services.

