

ENGINEERING SCIENCE

NANOTECHNOLOGY: CHEMISTRY/BIOENGINEERING EMPHASIS

UNIVERSITY OF PITTSBURGH



LA ROCHE UNIVERSITY



THE NEWLY EMERGING FIELD OF

NANOTECHNOLOGY is the study of atoms and molecules with an emphasis on quantum mechanical effects. From medicine to electronics, nanotechnology has potential for far-reaching applications.

If you have an interest in modern materials science, La Roche University's dual degree option with the University of Pittsburgh offers the analytical skills that you need to apply the principles of physical sciences, mathematics and engineering to solve technical problems.



CURRICULUM

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. Choose two non-introductory courses from the same department or theme
Suggestion: Modern language in lieu of Community/Global courses.

ENGINEERING SCIENCE MAJOR REQUIREMENTS

28-30 credits

MATHEMATICS

16 credits

Analytical Geometry & Calculus III
Ordinary & Differential Equations
Linear Algebra
Complex Variables
Probability & Statistics I

CHEMISTRY

Choose any 3 courses – 9-11 credits

Organic Chemistry I with Lab
Organic Chemistry I with Lab
Inorganic Chemistry
Physical Chemistry I
Physical Chemistry II
Biochemistry

ENGINEERING

3 credits

Materials Structure and Properties*

*Pitt – Summer Year 3

Continued

LA ROCHE UNIVERSITY | 9000 Babcock Blvd. | Pittsburgh, PA 15237 | laroche.edu

Freshman Admissions

844-838-4578 | 412-536-1272
admissions@laroche.edu

Transfer Admissions

412-536-1260
transferadmissions@laroche.edu

CURRICULUM *(continued)*

*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 with Lab
Algorithm Analysis

Systems Programming with 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.

