# COMPUTER SCIENCE

## LA ROCHE UNIVERSITY

**LA ROCHE UNIVERSITY'S COMPUTER SCIENCE MAJOR** provides hands on experience in programming fundamentals, computational thinking, and operating systems. With the option to focus on the application of these concepts in fields such as Information Technology, Cybersecurity, and Database. LRU prepares you for success in the computer industry. The program also offers a solid foundation for you to enter related Information Technology fields or graduate school.

La Roche additionally offers Information Technology (IT) and management information systems. Computer science focuses on using mathematics to improve programs to run more effectively in development and design. IT, a subset of management information systems, is concentrated on installing and maintaining computer systems, operating networks and databases. Managing information systems involves supporting a company's whole infrastructure.

## CURRICULUM

### COMPUTER SCIENCE COMPONENT
*37 credits*

Introduction to Computer Science

Programming I

Programming I Lab

Programming II

Programming II Lab

Algorithm Analysis

Systems Programming with Lab

Computer Organization & Design with Lab

Database Systems Theory **or** Database Management Systems

Operating Systems

Computer Security

CS Capstone Experience I

CS Capstone Experience II

### COMPUTER SCIENCE ELECTIVES
*Select any 3 courses – 9 credits*

Computer Forensics Investigation

Any 4000-level CS course

Intro to Intellectual Property

Web Page Usability & Programming

Human-Computer Interaction

Internship

### MATHEMATICS COMPONENT
*14 credits*

Analytical Geometry & Calculus I

Analytical Geometry & Calculus II

Probability & Statistics

Discrete Mathematics I **or** Discrete Structures

### PHYSICS COMPONENT
*8 credits*

Physics I

*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)*

Physics I Lab

Physics II

Physics II Lab

### ACADEMIC CORE CURRICULUM
*37 credits*

### FOUNDATIONS OF KNOWLEDGE
*15 credits*

Academic Reading and Writing

Academic Writing and Research

Digital Literacy

College Algebra

Oral Communication

### LA ROCHE EXPERIENCE
*4 credits*

LRX: Foundations

Investigating Social Problems

### BREADTH OF KNOWLEDGE
*12 credits*

Natural and Physical World*

Human Expression

Values and Ethics

Social Sciences

Global Perspectives

### DEPTH OF KNOWLEDGE
*3 credits*

Interdisciplinary Inquiry

### CORE ELECTIVES
*3 credits*

Any Breadth of Knowledge Area Course **or** Interdisciplinary Inquiry

*Fulfilled in major requirements*

### GENERAL ELECTIVES
*18 credits*