



*La Roche College is a private Catholic college where professors know each student. In addition to many other courses of study for students, the College offers biology, chemistry, computer science, mathematics and physics programs. In addition, we offer several double major programs with University of Pittsburgh.*



### Mathematics & Physics:

A major in mathematics at La Roche provides students with an introduction to the fundamental areas of mathematics. The emphasis is on those areas important in applied mathematics. Students begin to use the computer-algebra software program Mathematica in Calculus I. Classes for

mathematics majors are invariably small – ordinarily there are fewer than 10 students in upper-level classes.

This very small class size, along with a teaching-oriented faculty, fosters an environment in which many students thrive. A degree in mathematics from La Roche may serve as a stepping-stone to graduate study in mathematics, science and engineering, to careers in industry, and to teaching certification. La Roche also offers a minor in mathematics, which many computer science majors pursue. Mathematics, almost as old as civilization itself and yet the vigorous partner of the most sophisticated modern technology, is the universal language of science, and the study of it at La Roche, be it as a major or a minor, is excellent training for both mind and career.

La Roche also offers a minor in applied physics, which could be combined with a major in either mathematics or computer science. Students minoring in applied physics acquire understanding of and skill in cutting-edge technology such as biometrics and image processing. The program offers instrumentation - and computational-physics courses focusing on electronics, data communication, quantum information theory, and computational physics.

### Faculty:

Shinil Cho, Ph.D. (Ohio State University) - *Chair*  
Carlos Diaz, M.S. (University of Illinois)  
Stanley Maliszewski, M.A. (Duquesne University)  
Brian Smith, Ph.D. (Princeton University)

### Adjunct Faculty:

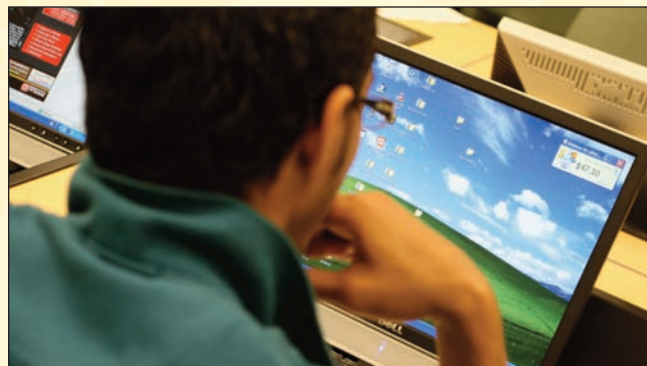
Margret Butz, Ph.D. (University of Pittsburgh)  
Michael Huston, M.B.A. (Point Park University)

Susan Profeta, M.S. (University of Pittsburgh)  
William Rushmore, M.S. (Carnegie Mellon University)  
Jacquelyn Saville, M.A. (Indiana University)  
Wayne Seelhorst, M.Ed. (University of Pittsburgh)  
Charles Stover, M.Ed. (University of Pittsburgh)  
Anthony Vincent, M.S. (Indiana University of Pennsylvania)

### Computer Science:

You will find that studying computer science at La Roche provides you with everything you need to be successful. The program follows the curriculum recommendation of the Association of the Computational Machinery (ACM) and the Institute of Electrical and Electronics Engineer (IEEE) Computer Science. Recently, La Roche's computer laboratory was remodeled and updated with new equipment that is available to computer science majors throughout the week. We also have a dedicated hardware laboratory that is used for creating custom networks and operating systems. With both of these laboratories on campus, you will always find the resources you need in order to succeed in the major and the field.

The computer science students in the program will study a wide range of subjects, including theoretical and algorithmic foundations and cutting-edge developments in telecommunications, networking and database design. In 2006, students at the NCC in Dallas won honorable mention for their Java programming. In 2009, a team of students attended the NCC in Oklahoma City and won the third place award for their web design of a Pittsburgh-area Volunteer Fire Department website.



### Faculty:

Jane Arnold, M.S. (Carnegie Mellon University) - *Chair*

### Adjunct Faculty:

Leland (Mike) McCauley, Ph.D. (University of Pittsburgh)  
Asha Sharma, M.S. (Western Illinois University)  
Aref Al-Kamel, M.S., Information Science (University of Pittsburgh)  
John Todhunter, Ph.D. (University of Pittsburgh)



### Chemistry:

This program is designed to provide the student with a strong foundation in chemistry, including a solid theoretical background as well as broad exposure to experimental techniques and current instrumentation. Upon successful completion of this program, a student will be prepared for entry level positions in chemistry-related industries and to pursue advanced degrees in a variety of scientific areas, such as medical/dental/veterinary school. In particular, La Roche's comprehensive chemistry program complies with the guidelines prepared by the Committee on Professional Training of the American Chemical Society (ACS). This group, of course, provides the 500 hours of laboratory instruction recommended by the ACS.

The department also operates on a large scale through its unique CHEMSOLVE (Chemistry Student Operated Laboratory Venture) program, which gives you extensive experience unmatched by any other in the region. Developed to simulate a "real life" service laboratory, CHEMSOLVE's operations are carried out completely by students – from initial receipt of samples, to analyses with the same methods and instruments found in professional laboratories, to final results and presentations to clients.

La Roche's Chemistry Department is among the most advanced available in the area. Grants from national institutions, such as the National Science Foundation and the National Aeronautics and Space Administration, and local professional societies have helped the college acquire a plethora of instrumentation, a new computer laboratory and a recently opened Nuclear Magnetic Resonance facility.

### Faculty:

Don T. Fujito, Ph.D. (Georgetown University) - *Chair*  
 Roberta Hartman, Ph.D. (University of Pittsburgh) - *Emeritus*

### Adjunct faculty:

Miriam Delgado-Lopez, Ph. D. (Catholic University, Peru)  
 Zane Frund, Ph.D. (University of Pittsburgh)  
 Clifford Lau, Ph.D. (Ohio State University)  
 Hubert (Hub) MacDonald, Ph.D. (University of Michigan)

### Biology:

The biology department provides scientific training as part of a liberal education and to give the student a basic comprehension of the main areas of biology. The program is designed to prepare the student for graduate work, for admission to medical/dental/veterinary school, for a biologically oriented career, or for research in the biological sciences. The biology with forensic science is a new major that prepares students for employment or graduate studies in biological sciences with forensic applications, including such professions as a crime laboratory scientist or a member of a criminal investigations team.



BioSOLVE (Biology Student Operated Laboratory Venture) is based on a business model where students will collaborate as contractors with service-oriented individuals or institutions to perform specific, applied laboratory research services. In addition, students will participate in community service associated with the organization or project to which BioSOLVE is contracted, study the role of biologists in

providing solutions to community and global problems, study and experience the nature of scientific collaborations, learn the theory behind the relevant laboratory methods, develop proficiency in the laboratory techniques needed to perform the specific contracted work, and learn the skills of complete and accurate note-keeping, data processing and scientific writing for scientific research.

### Faculty:

Frederick Sproull, Ph.D. (University of Pittsburgh) - *Chair*  
 Robert McBride, Ph.D. (University of Illinois)  
 Gail Rowe, Ph.D. (University of Wisconsin)

### Contact information:

*La Roche College Office of Admissions*  
 9000 Babcock Blvd. • Pittsburgh, PA 15237 USA  
 +1 (412) 536-1272 • [admissions@laroche.edu](mailto:admissions@laroche.edu) • [www.laroche.edu](http://www.laroche.edu)

*A private, Catholic, co-educational college north of Pittsburgh founded by the Sisters of Divine Providence in 1963, La Roche welcomes students of all religions, ethnic origins and talents. Undergraduates may choose from more than 50 majors, including the top 10 majors among today's college students. La Roche combines educational experience with clubs, athletics, social and community volunteer activities, spiritual well-being, and more to offer students preparation for life in a constantly changing global society.*