



  
LORAS  
COLLEGE™

**CHEMISTRY  
BIOCHEMISTRY**  
Chemistry Secondary Education



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# CHEMISTRY, BIOCHEMISTRY

## Chemistry Secondary Education

### Why Chemistry, Biochemistry or Chemistry/Secondary Education?

The Loras Chemistry and Biochemistry program provides students the opportunity to develop a strong foundation in chemical principles and to apply their training in laboratory applications. This foundation enables Chemistry and Biochemistry graduates to pursue a very wide range of options. These include graduate school in chemistry or a chemistry related field, going directly into the workforce for a career in the chemical or chemically based industry or government, education, engineering, forensic science, law or entering interdisciplinary fields such as medicine, dentistry and other health professions,.

### Features of the Loras College Chemistry and Biochemistry Program

At Loras, we offer a small school atmosphere coupled with the quality and depth of instruction usually found only at a larger institution. Check us out; you'll be glad that you did!

- American Chemical Society (ACS) Certified Chemistry Program. The ACS only certifies programs that "offer a broad-based and rigorous chemistry education that gives students intellectual, experimental, and communication skills to become effective scientific professionals." All ACS certified programs must meet a high set of standards for the quality of their faculty, curriculum, and facilities.
- Dedicated Chemistry Faculty. To adequately cover the discipline, a college chemistry program should have expertise in the areas of organic chemistry, inorganic chemistry, physical chemistry, analytical chemistry and biochemistry. Loras has qualified chemistry faculty trained in each of these five major areas, as well as in the important interdisciplinary area of polymer chemistry.
- Students make use of modern facilities including the MAHP Recombinant DNA laboratory, the NMR laboratory and the Carver Foundation Molecular Biology laboratory. We have modern instrumentation that includes the recent acquisitions of several FT infrared spectrometers, a triple quad gas chromatograph/mass spectrometer and an atomic absorption spectrometer. Loras has added major pieces of equipment worth over \$350,000 during the last 5 years. The 2003 acquisition of a \$250,000 Bruker 300MHz high field nuclear magnetic resonance spectrometer (updated in 2011) gives students access to an instrument found in very few small colleges. Larger institutions with this type of instrumentation seldom allow student hands-on access. Every student in the program has access to all of instrumentation throughout their time at Loras.
- Offers opportunities to apply what is learned in the classroom to real life situations such as internships. Also, the Loras Chemistry Club, an ACS Student Chapter, has won national awards for student involvement, for tutoring and demonstration shows on campus and in local schools. Each spring, members of the club attend the ACS National Meeting held in places like San Francisco and New Orleans.

- Smaller class sizes permit professors to give each student individual attention, with upper level chemistry courses seldom having enrollments greater than ten students
- Each Loras chemistry and biochemistry major conducts a research project during their junior and senior years or during summers. These research experiences are performed with Loras faculty during the academic year or at other institutions during the summer. The results of the research are presented at local, regional and national seminars and conferences. This experience helps to prepare students for careers after college.
- At Loras, all professors have a chemistry Ph.D. degree. Choose a school in which all of your courses, including laboratories, will be taught by professors with a Ph.D. in chemistry. We do not have graduate student assistants teaching undergraduate courses.

### Career Options

Recent Loras graduates have gone on to a variety of careers, professional schools and graduate schools with

- Approximately 25% in medical school.
- Another 25% in a variety of health science programs including veterinary medicine, pharmacy, nursing, osteopathic medicine, and optometry.
- 25% in graduate school or law school at institutions that include the University of Iowa, Drake, Duke, Kansas, Arkansas, Illinois at Chicago, Colorado, Wright State and Northern Illinois.
- 25% who are using their Loras training to teach in high school, or to work in industry as laboratory technicians.

### Faculty

Dr. David Speckhard  
Dr. David Oostendorp  
Dr. Edward Maslowsky  
Dr. Carl Binz  
Dr. Michael Ivanov

