



**T**he world is full of questions. We turn to chemists for answers to many of them. Is this water safe to drink? Does this new vegetable hybrid contain the vitamins I need? Chemists work to remediate air pollution, create novel antibiotics, or design new solar cells. They study gold nanoparticles, crystal engineering, and organic superconductors. With an additional concentration in biochemistry, you'll have the tools to protect and improve the quality of life itself. The world will always need people like you, and our program will prepare you to make a career out of solving problems and answering tough questions that have a real impact on our lives and environment.

## This is the place.

There's no better place to study chemistry than New Orleans. Over the past decade, our region has seen heightened attention toward toxicology, soil and water safety, and environmental health. Chemists in this city are valuable additions to a variety of expanding sectors such as medicine and energy. As our commitment to conservation and rebirth grows, Chemistry is increasingly valuable in New Orleans.

Loyno students go far. They discover elements for the periodic table (Dr. Gregory Choppin who co-discovered Mendeleevium is a Loyno alumnus). They are accepted into advanced programs at Stanford, Rice, Emory, Yale. They produce original research as undergraduates. Our Chemistry program is accredited by the American Chemical Society—and for good reason. At Loyno, you'll see that our sophisticated research facilities and lab equipment will live up to your ambitions, and we can help you get wherever you want to go.

## Courses

In addition to your concentration in biochemistry, our program structure includes thorough course work in chemistry with supporting classes in mathematics, physics, and biology so you're prepared for anything. Here's a sample of what you can expect to learn and do:

### General Chemistry Lecture + Lab

This course covers the fundamental principles of general chemistry, including the development of modern atomic theory and its role in chemical bonding, structure and reactivity, an introduction to thermodynamics and kinetics, and development of equilibria concepts.

### Organic Chemistry Lecture + Lab

Students build a strong foundation in organic chemistry and combine knowledge with practical skills by synthesizing, purifying, and identifying organic compounds. Techniques include: acid/base extraction, recrystallization, distillation, organic reactions, IR spectroscopy, refractive index, melting point and NMR.

### Biochemistry I

This course is a detailed study of the structure and function of the major classes of biological macromolecules. Topics include protein structure and folding, experimental methods used to characterize and manipulate proteins and DNA, allostery and other regulation, molecular disease, enzyme mechanism and inhibition, and membranes.

### Biochemistry II

This course examines metabolism and metabolic regulation, including vitamins and cofactors, glycolysis, TCA cycle, oxidative phosphorylation, glycogen metabolism, gluconeogenesis, photosynthesis, and the metabolism of fatty acids, lipids, amino acids, and nucleotides.