



GUIDE TO MAJORS AT YESHIVA: CHEMISTRY

Choosing a major can be stressful, but it is important to understand that you can pursue almost any career regardless of which major you choose. While there are some exceptions, most entry-level positions simply require general transferable skills—those that can be learned in one setting and applied in another. Relevant experience through internships and activities is generally more important to employers than a major. It is best to choose an area that you find interesting and where you have the ability to do well.

What is the Chemistry Major?

The study of chemistry focuses on the structure and properties of substances and their transformations. In lectures and sophisticated lab experiments using the latest technology, students experience the intellectual stimulation of studying a physical science and prepare for graduate study in chemistry, medicine, dentistry, and many other fields.

Chemistry is vital for students interested in medical and health-related careers, which are based on knowledge of the chemical sciences. It is also ideal for students interested in a broad, liberal arts education, with an emphasis on understanding the nature and interactions of the chemicals that make up the world.

What can I do with a Major in Chemistry?

A college graduate with a major in chemistry or biochemistry is prepared for a wide choice of science related careers. Career opportunities exist in the chemical and pharmaceutical industries, the health science fields, environmental protection agencies, and science education.

The chemical and pharmaceutical industries provide opportunities for applied chemical research, while the medicine and the health science fields emphasize the biological aspect of advances in chemistry. Public service-minded individuals might find their niche in environmental protection agencies, consumer advocacy groups, and various government offices. In the field of education, there is a nationwide shortage of science teachers on both the elementary and high school levels which opens up an abundance of teaching opportunities. Some additional career options available to Chemistry majors include:

- Biochemist
- Biotechnologist
- Chemical Engineer*
- Chemist
- Chemistry Teacher
- Computational Chemist
- Entomologist
- Environmental Engineer
- EPA Inspector
- FDA Inspector
- Fire Protection Engineer
- Food or Agricultural Scientist/Technologist
- Forensic Chemist

- Geochemist
- Oceanographer
- Pharmaceutical chemist
- Pharmaceutical Sales Representative
- Product Development Manager
- Research & Development Manager
- Science Journalist
- Science Laboratory Technician
- Structural Biologist
- Toxicologist
- Water Purification Chemist
- Graduate Study Required
- Patent Lawyer
- Physician
- Pharmacist
- Professor
- Research Scientist

*Students interested in a career in chemical engineering may consider the combined engineering program with Columbia University's School of Engineering and Applied Science.

*Students interested in health related careers may also wish to explore the joint programs offered between Yeshiva College and several external graduate programs, in the fields of Optometry, Physical Therapy, Physician Assistant, and Podiatry. Visit <https://yu.edu/yeshiva-college/combined-joint-programs/> for details

Skills and Abilities

Chemistry majors gain expertise in identifying and solving problems. Students learn the nature and interactions of the chemicals that make up the world. Some of the additional skills and abilities cultivated through the Chemistry major include:

- Making critical observations
- Designing experiments, charts, and graphs
- Analyzing data and trends
- Ability to operate complex instruments
- Formulating theories
- Testing hypotheses
- Assessing precision and accuracy
- Sampling for surveys
- Proficiency in reading, writing, and speaking