Everything you see, hear, smell, touch and taste involves chemistry, and every change in the observable world has its basis in the microscopic realm of atoms. Knowledge of chemistry is central to understanding disciplines as diverse as biology, materials science, geology, medicine and physics. Many chemists research why substances differ in their properties, while others use this knowledge to create new substances with useful properties.

Our faculty is diverse in their interests, offering courses in both the traditional and interdisciplinary areas of chemistry. Throughout your education, chemistry will be emphasized as a laboratory science, and as a major, you will learn basic chemical theories as well as current experimental techniques, using modern instrumentation and computational methods to solve chemical problems.

Chemistry students have many opportunities to become involved in faculty-directed independent research that investigates problems of current interest. These experiences help you develop a chemist’s analytical skills, critical thinking, creativity and the ability to work as a team. Chemistry majors at Saint Joseph’s regularly publish their findings in scientific journals and make presentations at regional and national meetings, where many have received recognition and won awards. The American Chemical Society certifies the Bachelor of Science degree program in chemistry, and special advisory options are offered for majors interested in the premedical, predental and chemistry and business curriculums.

In addition, the five-year B.S./M.S. chemistry-education program is designed for students who wish to become certified secondary school (grades 7-12) science teachers. The program incorporates the four-year B.S. degree in chemistry with additional work during the summer and a fifth year to complete the M.S. in secondary education and to become certified.

The chemistry program prepares students to choose from a wide range of career paths. Our majors pursue graduate study in chemistry or biochemistry, professional degrees in medicine, the health sciences and pharmacology, graduate studies in other fields, including business, government and law, and direct employment after graduation.

**LEARN MORE ABOUT THE CHEMISTRY MAJOR:**
- Visit the Chemistry Department’s website: [http://www.sju.edu/int/academics/cas/chemistry/index.html](http://www.sju.edu/int/academics/cas/chemistry/index.html)
- Visit the College of Arts and Sciences Advising Support Center, located in Barbelin 122 (or Haub School of Business Leahy Advising Center, located in Mandeville 289)
- Contact the Chemistry Department to schedule a meeting with a faculty member by calling 610-660-1783
- Visit the Chemistry Department’s Facebook page: [https://www.facebook.com/SJUchem](https://www.facebook.com/SJUchem)
- Follow the Chemistry Department on Twitter: [https://twitter.com/SJUChemistry](https://twitter.com/SJUChemistry)
- Speak with current students in the major
- Schedule an appointment with the Career Development Center (610-660-3100)
**WHAT CAN I DO WITH A MAJOR IN CHEMISTRY?**

Whatever you put your mind to! You can learn much more at [www.onetonline.org](http://www.onetonline.org). Following are descriptions of just a few of the careers you might pursue:

**Biochemist:** Studies the chemical composition and physical principles of living cells and organisms, their electrical and mechanical energy, and related phenomena. May conduct research to further understanding of the complex chemical combinations and reactions involved in metabolism, reproduction, growth, and heredity. May determine the effects of foods, drugs, serums, hormones, and other substances on tissues and vital processes of living organisms.

**Chemist:** Conducts qualitative and quantitative chemical analyses or chemical experiments in laboratories for quality or process control or to develop new products or knowledge.

**Chemistry Teacher:** Teaches courses pertaining to the chemical and physical properties and compositional changes of substances. Work may include instruction in the methods of qualitative and quantitative chemical analysis. Includes both teachers primarily engaged in teaching, and those who do a combination of both teaching and research.

**Lab Technician:** Conducts chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analyses of solids, liquids, and gaseous materials for purposes, such as research and development of new products or processes, quality control, maintenance of environmental standards, and other work involving experimental, theoretical, or practical application of chemistry and related sciences.

**HOW CAN I ENGAGE MY INTEREST IN CHEMISTRY OUTSIDE THE CLASSROOM?**

There are so many opportunities to get involved at Saint Joseph’s University – and to develop experience in your major while doing so! Here are just a few:

- Molloy Chemical Society
- Summer Scholars
- Sigma Xi - Scientific Research Society
- McGroddy Fronteirs in Science Seminars
- The American Chemical Society

**OUTCOMES – A CLOSER LOOK AT SJU GRADUATES WITH DEGREES IN CHEMISTRY:**

As depicted in the chart below, the majority of new graduates have started their careers in the science field. Many others have selected a variety of industries. (Data from Saint Joseph’s University Career Development Center’s Post-Graduation Survey, 2008 – 2012.)

![Chemistry Majors' Chosen Industries Chart](chart.png)
Here is a sampling of positions our new graduates have accepted:

Analytical Lab Assistant  Chemist  Chemistry Teacher
Quality Assurance Scientist  Technical Service Engineer  Lab Technician

Organizations that have hired our new graduates include:

NMS Labs  Colgate-Palmolive  NJ Analytical Labs
KVK Tech Inc  Exeter High School  Jefferson University
Lockheed Martin  River Technology  Chemtura Corporation
NMS Labs  Colgate-Palmolive  NJ Analytical Labs

Average Starting Salary – Accounting Majors – Classes of 2008 – 2012

<table>
<thead>
<tr>
<th>Graduation Year</th>
<th># of Respondents</th>
<th>Average Total Salary</th>
<th>Average Grant</th>
<th># of Grants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-2012</td>
<td>7</td>
<td>34,400</td>
<td>27,500</td>
<td>4</td>
</tr>
</tbody>
</table>

Some of the graduate schools in which our new graduates have continued their education, in programs including Physical Therapy, Philosophy, Osteopathy, Education, Applied Geoscience:

University of Maryland-Baltimore  Thomas Jefferson University
Saint Joseph's University  University of Notre Dame
University of Pennsylvania  Villanova University
Vanderbilt University  Drexel University
University of Delaware

FURTHER ASSISTANCE WITH YOUR MAJOR AND CAREER OPTIONS

The Career Development Center can help you with the process of choosing a major and exploring your career options. For assistance, please call 610-660-3100 to schedule an appointment to meet with a Career Counselor.

GETTING THE JOB – SAMPLE ACCOUNTING MAJOR RESUME- SEE BELOW
EDUCATION

Saint Joseph's University, Philadelphia, PA

Bachelor of Science in Chemistry

May 2014

Overall GPA: 3.54 / 4.00, Chemistry: 3.69 / 4.00

Valuable Coursework: Instrumental Analysis, Inorganic Chemistry, Inorganic Biochemistry, Environmental Chemistry, Biochemistry, Senior Research

EXPERIENCE

Senior Research

Saint Joseph’s University

August 2013 - Present

Philadelphia, PA

• Conduct mentor-directed research under the tutelage of Dr. Jose Cerda, PhD
• Test heme derivatives to methodically quantify the electrochemical properties of the peripheral groups.
• Investigate the redox potential specific to hydrogen bonding on the Formyl group in Heme A.
• Present research at local, regional, and national ACS expositions (2012 and 2013)
• Coordinate the effort to publish a research paper in the Journal of the American Chemical Society.

Summer Scholars – Mentor Led Summer Research

Saint Joseph’s University

May 2013 – August 2013

Philadelphia, PA

• Performed mentor-directed lab research on the electrochemical properties of heme-based interactions.
• Presented results of research to colleagues and professors.
• Used UV-Vis, Cyclic Voltammetry, Spectroelectrochem, and Origin 6.0 to investigate and analyze heme interactions.
• Prepared research to be presented at the National ACS Conference in New Orleans.

Supplemental Instructor, Philadelphia, PA

University of Pennsylvania

August 2011 – May 2012

Philadelphia, PA

• Reinforced student’s classroom education with bi-weekly extracurricular tutoring.
• Designed lesson plans, which complemented the Professor’s material.
• Worked in both large groups, and individual tutoring: created a comfortable and cooperative learning environment.

ACTIVITIES

Molloy Chemical Society – President

Saint Joseph’s University

March 2011-Present

Philadelphia, PA

• Facilitate and coordinate fundraising events.
• Organize guest lectures covering topics such as research, pharmaceuticals, patent law and medicinal chemistry.
• Design promotional material (event pages, announcements, flyers and t-shirts).
• Organize and participate in the Philadelphia Science Festival (Apr 2012 & Apr 2013).

Water Polo Club – Founder & President

Saint Joseph’s University


Philadelphia, PA

• Established a club level water polo program which competes in the Collegiate Water Polo Association.
• Planned and coached daily practices to develop individual and team skills.
• Budgeted team finances and interacted cooperatively with club organization faculty.

SKILLS

Instrumentation: UV-Vis Spectroscopy, Cyclic Voltammetry, IR Spectroscopy, NMR, and Spectroelectrochem

Computer: Broad capabilities with Microsoft Word, PowerPoint, Excel, the analysis program Origin, online databases, basic in-silico analysis (RCSB Protein Data Bank)

AWARDS

Sigma Xi: The Scientific Research Society


Spring 2013