What Can I Do With A Major In…

Chemistry

Compiled by the staff at the SUNY Oneonta Career Development Center

Introduction

Chemistry majors are provided with a wide array of job options. The majority of chemists are employed in manufacturing firms. Most of these are chemical manufacturing companies which produce plastics and synthetic materials, drugs, soaps, cleaners, paints, industrial organic materials and other chemical products. Another option for chemists is to work for state and local government, mostly in health and agriculture and for Federal Agencies. The U.S. Dept. of Health and Human Services is the major federal employer of chemists. Other chemists work for research, testing services and education services.

Functional Skill Set for Chemistry Majors

- Developing theories
- Conduct research
- Attending to data
- Curiosity
- Utilizing formulas
- Process data
- Work independently and in groups
- Oral and written communication
- Science and math ability
- Perseverance
- Analytical skills
- Follow through skills
- Perform experiments
- Observation and decision making
- Technological skills
- Remain objective
- Possess good vision and manual dexterity.
- Have aptitude for accurate details; organizes, analyzes and interprets scientific data; read, writes, speak and memorizes proficiently.
- Other skills include: information system utilization, screening, trouble-shooting, innovation, and problem solving.
Related Career Titles for Chemistry Majors

- Agricultural Scientist
- Air Analyst
- Assayer
- Attorney
- Biochemist
- Brewer Lab Assistant
- Cephalometric Analyst
- Chemical Laboratory Supervisor
- Chemical Oceanographer
- Chemist, Analytical
- Chemist, Dye
- Chemist, Glass
- Chemist, Inorganic
- Chemist, Literature Editor
- Chemist, Nuclear
- Chemist, Pharmaceutical
- Chemist, Polymers
- Chemist, Quality Control
- Chemist, Soil
- Chemistry Technologist
- Clarifying Plant Operator
- Clinical Chemist
- College Professor
- Color Development Chemist
- Combustion Engineer
- Crime Lab Analyst
- Cytotechnologist
- Dentist
- Environmental Health Specialist
- EPA Inspector
- EPR Technician
- Facilities Manager
- Fire Protection Engineer
- Food Scientist
- Food Scientist Technician
- Forensic Chemist
- Genetic Counselor
- Geochemist
- High School Teacher
- Hospital Administrator
- Hydrologist
- Industrial Hygienist
- Industrial Manager
- Laboratory Instructor
- Laboratory Tester
- Market Research Analyst
- Medical Technician
- Medicinal Chemist
- Molecular Biologist
- Museum Curator
- Museum Technician
- Nutritionist
- Occupational Safety Specialist
- Operations Manager
- Organic Chemist
- Patent Agent
- Patent Examiner
- Perfumer
- Pharmaceutical Sales Representative
- Pharmacist
- Physician
- Planner
- Plant Protection Inspector
- Plastics Engineer
- Process Engineer
- Product Tester
- Production Manager
- Quality Assurance Manager
- Quality Control Engineer
- Quality Control Technician
- Risk Manager
- Sanitarian
- Science Lab Technician
- Soil Scientist
- System Analyst
- Toxicologist
- Translator, Scientific Documents
- Underwater Technician
- Vector Control Assistant
- Veterinarian
- Wastewater Treatment Chemist
Water Purification Chemist  Yeast Culture Developer

Some Organizations that Typically Employ Chemistry Majors:

- Aerospace and Components Firms
- Agricultural/Conservation Organizations
- Airlines
- Atomic Energy Firms
- Beverage Processing Companies
- Cosmetics
- Drug, Chemical & Pharmaceutical Companies
- Educational Institutions
- Electric Light and Power Services
- Electronics and Instruments Stores
- Engineering Firms
- Environmental Protection Agency
- Equipment Companies: Automotive
- Equipment Companies: Electrical
- Equipment Companies: Mechanical
- Equipment Companies: Photographic
- Fuels and Fuel Dealerships
- Furniture Companies
- Food Processing Companies
- Forestry Centers
- Glass Production Companies
- Government (Federal, State & Local
- Hospitals
- Leather Products
- Manufacturing/Processing Companies
- Medical Clinics
- Medical Laboratories
- Medical Services
- Medical/Technical Libraries
- Metal and Mineral Products Companies
- Mining Companies
- Newspapers and magazines
- Non-profit organizations
- Nuclear
- Paper Companies
- Petroleum and Coal Firms
- Pharmaceutical Industry
- Professional and Technical Journals
- Public Health Service
- Publishing Companies
- Recreational Facilities
- Research and Consulting Organizations
- Shipping, Water, and Transportation Companies
- Social Security Administration
- Television
- Textile manufacturers
- Tire and Rubber Companies
- Tobacco Companies
- U.S. Department of Commerce
- U.S. Department of Defense
- U.S. Department of Health and Human Services
- U.S. Department of Interior
- U.S. Department of Labor
- U.S. Food & Drug Administration
- U.S. Veterans Administration
- Utilities
Start a Strategic Plan:

- Gain computer, interpersonal and communication skills.
- Participate in Internships, Field Experience Placements and Day on the Job. Plan for career related employment experience.
- Plan on applying to graduate school or for a Professional degree to advance in career opportunities.
- Chemistry education majors should also develop skills involving planning and the ability to adapt teaching methods and modalities to the various learning styles of students.

Professional Organizations and Associations for Chemists

American Society for Clinical Chemistry
2101 L St. N.W. Suite 202
Washington D.C. 20037
http://www.aacc.org

American Institute of Chemical Engineers
345 East 47th St.
New York, NY 10017
http://www.aiche.org

American Chemical Society
1155 16th St. N.W.
Washington D.C. 20036
http://www.acs.org

American Institute of Chemists
501 Wythe St.
Alexandria, VA 23312-1917

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# CHEMISTRY

## What can I do with this major?

<table>
<thead>
<tr>
<th>AREAS</th>
<th>EMPLOYERS</th>
<th>STRATEGIES</th>
</tr>
</thead>
</table>
| ### ANALYTICAL  
Research  
Development  
Analysis and Testing  
Consulting  
Environmental  
Forensics | Federal, state, and local government  
Federal agencies including National Aeronautics and Space Administration  
Manufacturing firms including textile, petroleum, food, electronics, glass, paper, packaging, machinery, cosmetics, paint, drug, and chemical industries  
Industrial production and inspection agencies  
Research laboratories and organizations  
Environmental protection organizations  
Colleges and universities | Familiarize yourself with federal, state, and local government job application processes.  
Gain experience in a laboratory setting.  
Develop proficiency with high-tech scientific equipment.  
Take electives in your area of interest. |
| ### BIOCHEMICAL  
Research  
Development  
Analysis and Testing  
Consulting  
Quality Control  
Medical  
Environmental  
Industrial Health & Safety  
Hospital Administration | Research laboratories and organizations  
Pharmaceutical and medical research firms  
Biotechnology firms  
Plant and animal breeders and growers  
Food processors  
Industrial production and inspection agencies  
Environmental protection organizations  
Federal, state and local government, such as the Centers for Disease Control  
Colleges and universities | Take additional courses in biology, biochemistry, molecular biology, genetics, cytology, and physiology.  
Develop excellent laboratory and computer skills.  
Get involved with undergraduate research with professors.  
Join related professional organizations.  
Complete a related internship with an organization in the area of your interest. |
| ### ORGANIC  
Research  
Development  
Analysis and Testing  
Quality Control  
Consulting | Industries related to petroleum, coal, wood products, plastics, textiles, and food  
Manufacturing firms developing new synthetic materials and new production processes  
Research organizations  
Federal and state government  
Colleges and universities | Gain additional laboratory and research experience through internships and summer jobs.  
Get involved with undergraduate research with professors. |
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<tbody>
<tr>
<td>GEOCHEMISTRY</td>
<td>Research laboratories and organizations</td>
<td>Take geology &amp; environmental science electives.</td>
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<tr>
<td>Environmental Remediation</td>
<td>Industries involved in mining, electronics, and synthetic materials</td>
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<tr>
<td>Research &amp; Development</td>
<td>Federal and state government</td>
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<tr>
<td>Analysis &amp; Testing</td>
<td>Colleges and universities</td>
<td></td>
</tr>
<tr>
<td>INORGANIC</td>
<td>Environmental organizations</td>
<td>Choose appropriate coursework to specialize in an area.</td>
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<tr>
<td>Research</td>
<td>Water processing plants</td>
<td>Develop additional laboratory skills and experience.</td>
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<tr>
<td>Analysis and Testing</td>
<td>Natural resources organizations</td>
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<tr>
<td>Quality Control</td>
<td>Consulting</td>
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<tr>
<td>Consulting</td>
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<tr>
<td>POLYMER CHEMISTRY</td>
<td>Industries involving textiles and plastics</td>
<td>Gain research experience through internships, part-time employment, and summer jobs.</td>
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<tr>
<td>Analysis &amp; Testing</td>
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<tr>
<td>Research &amp; Development</td>
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<tr>
<td>PHYSICAL</td>
<td>Research laboratories and organizations</td>
<td>Take related courses in social sciences and economics.</td>
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<tr>
<td>Research</td>
<td>Industries involving electrical, nuclear, gas, heat, or light energy</td>
<td>Develop strong mathematical background.</td>
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<tr>
<td>Development</td>
<td>Federal government</td>
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<tr>
<td>Analysis and Testing</td>
<td>Colleges and universities</td>
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<td>Quality Control</td>
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<tr>
<td>Consulting</td>
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<tr>
<td>EDUCATION</td>
<td>Private and public secondary schools</td>
<td>Obtain certification/licensing for teaching in public schools.</td>
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<tr>
<td>Teaching</td>
<td>Colleges and universities</td>
<td>Acquire a master's degree for community college teaching and a Ph.D. for colleges and universities.</td>
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<tr>
<td>Research</td>
<td></td>
<td>Take courses in public speaking.</td>
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<tr>
<td>Administration</td>
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<tr>
<td>BUSINESS</td>
<td>Manufacturing firms</td>
<td>Obtain a minor in business.</td>
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<tr>
<td>Technical Sales/Marketing</td>
<td>Drug stores</td>
<td>Develop strong verbal and written communication, interpersonal, and organizational skills.</td>
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<tr>
<td>Pharmaceutical Sales</td>
<td>Medical/Pharmaceutical supply companies</td>
<td>Hold leadership positions in campus organizations.</td>
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<tr>
<td>Management</td>
<td>Industries including textiles, petroleum, food, electronics, glass, paper, packaging, machinery, cosmetics, paint, drugs, and chemicals.</td>
<td>Join related student organizations, e.g., American Marketing Association, Financial Management Association, Public Relations Student Society of America, etc.</td>
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<tr>
<td>Consulting</td>
<td>Agricultural product companies</td>
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<tr>
<td>Industrial Quality Control</td>
<td>Environmental management organizations</td>
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<tr>
<td>Research &amp; Development</td>
<td>Waste management firms</td>
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**TECHNICAL WRITING**

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<tr>
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<tbody>
<tr>
<td>Writing</td>
<td>Research product development departments and organizations</td>
<td>Take advanced technical writing courses. Develop word processing and desktop publishing skills.</td>
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<tr>
<td>Editing</td>
<td>Publishing firms including books, scientific and research journals, technical press, large newspapers, and wire services</td>
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<td>Internet sites</td>
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**LAW**

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<th>AREAS</th>
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<tbody>
<tr>
<td>Patent Law</td>
<td>Manufacturing firms</td>
<td>Obtain law degree to become an attorney.</td>
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<tr>
<td>Legislation and Lobbying</td>
<td>Research and development firms</td>
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<td></td>
<td>Law firms</td>
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<td></td>
<td>Private practice</td>
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<td></td>
<td>Environmental agencies</td>
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</tbody>
</table>

**INFORMATION SPECIALISTS/TECHNICAL LIBRARIES**

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</thead>
<tbody>
<tr>
<td>Special libraries</td>
<td>Research organizations</td>
<td>Obtain master's degree in library and information science.</td>
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<td></td>
<td>Colleges and universities</td>
<td>Develop computer retrieval skills.</td>
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<tr>
<td></td>
<td>Large manufacturing firms, especially chemicals and pharmaceuticals</td>
<td>Join Special Libraries Association, Chemistry Division.</td>
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</tbody>
</table>

**GENERAL INFORMATION**

- Undergraduate degree sufficient for entry-level positions such as lab coordinator, research assistant, product testing or analysis, technical sales, or service representative.
- Maintain high grade point average and secure strong recommendations for graduate school.
- Master's degree sufficient for most applied research positions, industrial work, and some community college teaching.
- Find research opportunities with professors and other experts in the field to gain experience.
- Ph.D. degree required for university teaching and advanced positions in management and research and development. Postdoctoral experience is preferred for research positions in industry, universities, and government.
- Advanced degrees help speed career advancement.
- Develop strong computer, mathematics, and science skills/knowledge.
- Obtain part-time, volunteer, co-op, internship, or summer experience.
- Obtain practical experience using various laboratory equipment and high-tech scientific equipment and data.
- Complete an undergraduate research project.
- Consider electives in computer science, engineering, business, public speaking, and writing.
- Join related student professional organizations.