

# CAREER OPPORTUNITIES FOR CHEMISTRY MAJORS

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If there is one question that career counselors and faculty advisors are asked more often than all others by students seeking assistance with career planning, it is this: *“What can I do with this major?”* An undergraduate student in the liberal arts and sciences is actually developing a broad array of skills that might be applied to any number of careers, rather than developing an in-depth expertise in just one area. Therefore, a better question to pose might be: *“What skills am I developing in my major, and how might I explore careers that would require these skills?”*

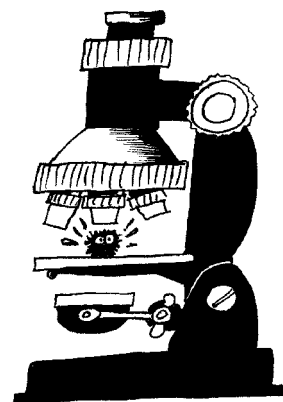
Chemists do research in government laboratories, industrial laboratories, hospitals, art museums, and food manufacturing plants. Possible fields of work for chemists include: work with plants or animals, environmental research, testing and quantity control in laboratories of agricultural chemical firms, research with international organizations or in educational institutions.

Chemists, especially those trained in biochemistry, work in collaboration with medical scientists to research illness prevention and treatments. Chemists are also involved in designing and synthesizing new medications as well as analyzing crime evidence. Chemistry is an excellent background for fields such as business management, banking and patent law.

## SKILLS/ABILITIES

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- ❖ Reviewing relevant data
- ❖ Data analysis
- ❖ Applying concepts
- ❖ Utilizing formulas
- ❖ Problem identification
- ❖ Gathering information
- ❖ Perception of patterns/structures
- ❖ Technical report preparing
- ❖ Organizing/reporting data
- ❖ Defining charts/graphs
- ❖ Informing/explaining
- ❖ Reporting
- ❖ Writing technical information
- ❖ Data processing
- ❖ Solving quantitative problems
- ❖ Calculating skills
- ❖ Tabulating data
- ❖ Perception
- ❖ Teamwork/interpersonal skills
- ❖ Sampling for surveys/marketing
- ❖ Attention to detail
- ❖ Testing an idea/hypothesis
- ❖ Presenting/summarizing research findings
- ❖ Acute observational skills
- ❖ Curiosity and creativity
- ❖ Precision/accuracy
- ❖ Writing skills (i.e. scientific journal)
- ❖ Developing theories
- ❖ Factor comparison
- ❖ Logical thinking
- ❖ Clarifying problems
- ❖ Technical skills - NMR, IR, UV-Vis, GC mass spec, DNA sequencing, gel electrophoresis, etc.



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# OCCUPATIONAL OPPORTUNITIES

*This list is just a sampling of the possible job opportunities for Chemistry Majors.*

- ❖ Pollution control engineer
- ❖ Product safety engineer
- ❖ Petroleum inspector
- ❖ Insecticides tester
- ❖ Nutrition analyst
- ❖ Patent law specialist
- ❖ Cosmetic analyst
- ❖ Pest control
- ❖ Chemical engineer
- ❖ Petroleum engineer
- ❖ Food processing manager
- ❖ Sewer system supervisor
- ❖ Water works supervisor
- ❖ Market research analyst
- ❖ Catalyst sales coordinator
- ❖ Biomedical engineer
- ❖ Operator, chemical reactor
- ❖ Range manager
- ❖ Physical assayer
- ❖ Advertising manager
- ❖ Technical sales representative
- ❖ Chemical lab technician
- ❖ Applications manager
- ❖ Textile chemist
- ❖ Industrial hygienist
- ❖ Researcher
- ❖ Mineralogist
- ❖ Cytologist
- ❖ Agronomist
- ❖ Anatomist
- ❖ Mycologist
- ❖ Physical metallurgist
- ❖ Research dietician
- ❖ Histopathologist
- ❖ Hydrologist
- ❖ Environmental analyst
- ❖ Biochemist
- ❖ Food Chemist
- ❖ Pathologist
- ❖ Microbiologist
- ❖ Geneticist
- ❖ Dairy technologist
- ❖ Animal nutritionist
- ❖ Animal scientist
- ❖ Forensic chemist
- ❖ Serology
- ❖ Odontologist
- ❖ Criminologist
- ❖ Spectroscopist
- ❖ Drug analyst
- ❖ Toxicologist
- ❖ System analyst
- ❖ Teacher
- ❖ Clinical dietician
- ❖ Soil conservationist
- ❖ Wood technologist
- ❖ Fluid mechanical engineer
- ❖ Analytical chemist
- ❖ Organic chemist
- ❖ Polymer chemist
- ❖ Paint chemist
- ❖ Meteorological chemist
- ❖ Inorganic chemist
- ❖ Pharmaceutical chemist
- ❖ Radiation health specialist
- ❖ Physical chemist
- ❖ Food technologist
- ❖ Astronaut
- ❖ Chemical oceanographer
- ❖ Science journal editor
- ❖ Public relations
- ❖ Museum scientist
- ❖ Art conservator
- ❖ Copy writer
- ❖ Solid waste chemist
- ❖ Enzymologist
- ❖ Ceramic chemist
- ❖ Process manager



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# RESEARCHING YOUR CAREER IDEAS

## How do you find out what's out there?

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Researching careers is a time-consuming, but necessary process. Waiting until graduation to start thinking about your career plans is as absurd as studying after you've taken your final exams.

### 1. Written and On-line Resources:

- ❖ Visit Career & Counseling Services' Career Resource Center  
(located on the Ground Floor of East Hathorn Hall)
- ❖ Visit the Chalmer Davee Library
- ❖ Browse the Internet, such as Career & Counseling Services' Web Page  
([www.uwrf.edu/ccs](http://www.uwrf.edu/ccs))

### 2. People Resources:

- ❖ Talk with Faculty and Alumni
- ❖ Join Professional Organizations
- ❖ Conduct Occupational Interviews
- ❖ Use Career & Counseling Services' "Career Information Network"
- ❖ Consult Employer Directories and the Yellow Pages

### 3. Obtain Direct Experience:

- ❖ Job Shadowing
- ❖ Volunteer or part-time work
- ❖ **Internships are essential!** Talk with your departmental faculty coordinator for internship information.



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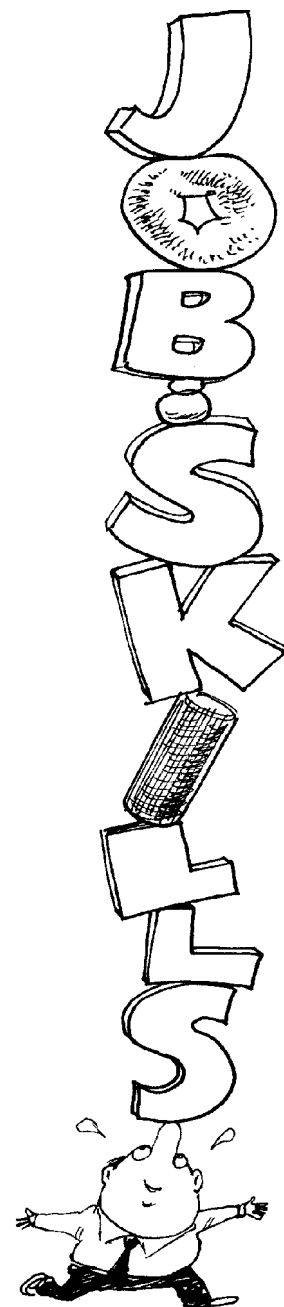
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# Suggestions to Enhance Your Skills

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- ❖ Obtain internships or do research on campus. Start your Freshman year!
- ❖ Develop strong computer, mathematics, and science skills/knowledge.
- ❖ Obtain practical experience using various laboratory equipment and high tech scientific equipment and data.
- ❖ Take additional courses in biology, biochemistry, molecular biology, genetics, cytology, and physiology.
- ❖ Consider electives in computer science, engineering, business, public speaking, and writing.
- ❖ Join related professional organizations.
- ❖ Read related professional magazines, journals, and literature.
- ❖ Go to seminars both on campus or at neighboring campuses.
- ❖ Present research results at a scientific meeting.
- ❖ Apply for Collaborative Research Grants, the McNair Program, etc.
- ❖ Get involved with student organizations relevant to your career goals (i.e. Chemistry Club, etc.).
- ❖ Read cases that show how chemistry plays out in the decisions we make about products and the environment.
- ❖ Become a tutor. It will solidify your knowledge, improve interpersonal skills, and you will have the satisfaction of helping someone else succeed!
- ❖ Develop lab skills. Read up on helpful hints for cleaning, storing and calibrating pH electrodes.
- ❖ Search the Internet. There are tons of fabulous sites out there:
  - \* Visit [www.apconnection.com](http://www.apconnection.com) to view terms, practice tests, articles, and books. This is a free educational resource on the net!
  - \* Download chemistry tutorials at [www.virtualsoftware.com](http://www.virtualsoftware.com)
  - \* Check out [www.cram.com](http://www.cram.com) for study aids that cover all organic, inorganic, periodic table, etc. Formulas and facts at your fingertips.



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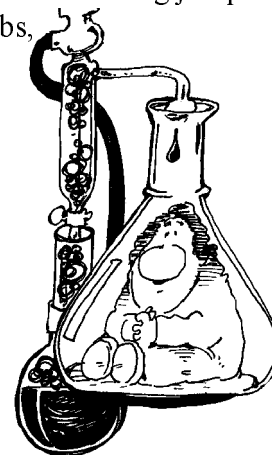
*Career & Counseling Services' Career Resource Center  
(Ground Floor, East Hathorn Hall)*

*Career & Counseling Services' Career Resource Center is open every day from 8:00 AM to 4:30 PM; we are also open until 7:00 PM Thursday evenings. The following books may be of particular interest to students majoring in Chemistry:*

- ❖ Opportunities in Research and Development Careers
- ❖ Opportunities in Biotechnology Careers
- ❖ Opportunities in Science Technician Careers
- ❖ Life Science Careers
- ❖ Great Jobs for Chemistry Majors
- ❖ Careers in Science and Engineering
- ❖ Opportunities in Chemistry Careers
- ❖ Opportunities in Aerospace Careers
- ❖ Opportunities in Engineering Careers
- ❖ Opportunities in Energy Careers
- ❖ Hi-Tech Jobs for Lo-Tech People
- ❖ Job Opportunities for Engineering and Computer Science Majors
- ❖ 100 Jobs in Technology
- ❖ Opportunities in Technical Writing and Communication Careers
- ❖ Planning Your Career in Alternative Medicine

## Internet Sites

- ❖ Career Services Web Site [www.uwrf.edu/ccs](http://www.uwrf.edu/ccs)
- ❖ [chemindustry.com](http://chemindustry.com) - searching agent for chemistry and related industries
- ❖ Get chemistry advice online from experienced chemists offering live expertise via webcam, chat, audio, and e-mail [www.kasamba.com](http://www.kasamba.com)
- ❖ Job search on the internet at [jobsleuth.com](http://jobsleuth.com) Free notification of newly posted jobs matching job profiles users can create chemistry information, databases, software, journals, news, jobs, conferences, books, links and investment opportunities in chemistry, biotech, and pharmaceuticals
- ❖ Chem Center: The American Chemical Society Online - A professional society of over 151,000 chemists and chemical engineers. Extensive career resources including workshops and job databases [www.acs.org](http://www.acs.org)



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