

Chemistry

What can I do with this major?

OCCUPATIONS	EMPLOYERS	SKILLS TO DEVELOP
<p><u>ANALYTICAL</u> Research Development Analysis and Testing Consulting Environmental Forensics</p>	<p>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</p>	<ul style="list-style-type: none"> • Learn federal, state, and local government job application process. • Gain experience in a laboratory. • Become proficient with high-tech scientific equipment. • Take electives in your area of interest.
<p><u>BIOCHEMICAL</u> Research Development Analysis and Testing Consulting Quality Control Medical Environmental Industrial Health & Safety Hospital Administration</p>	<p>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</p>	<ul style="list-style-type: none"> • Take additional courses in biology, biochemistry, molecular biology, genetics, and physiology.
<p><u>POLYMER CHEMISTRY</u> Research & Development Analysis & Testing</p>	<p>Industrial & commercial organizations such as textiles and plastics</p>	<ul style="list-style-type: none"> • Gain research experience.
<p><u>ORGANIC</u> Research Development Analysis and Testing Quality Control Consulting</p>	<p>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</p>	<ul style="list-style-type: none"> • Gain additional laboratory and research experience through internships and summer jobs.

OCCUPATIONS**EMPLOYERS****SKILLS TO DEVELOP****INORGANIC**

Research
 Analysis and Testing
 Quality Control
 Consulting

Research laboratories and organizations
 Industries involved in mining, electronics, and synthetic materials
 Federal and state government
 Colleges and universities

- Choose appropriate coursework to specialize in an area.
- Develop additional laboratory skills and experience.

PHYSICAL

Research
 Development
 Analysis and Testing
 Quality Control
 Consulting

Research laboratories and organizations
 Industries involving electrical, nuclear, gas, heat, or light energy
 Federal government
 Colleges and universities

- Take related courses in social sciences and economics.
- Obtain strong mathematical background.

EDUCATION

Teaching
 Research
 Administration

Private and public secondary schools
 Colleges and universities

- Obtain certification/licensing for teaching in public schools.
- Acquire a master's degree for community college teaching and a Ph.D. for colleges and universities.
- Gain experience as a tutor, camp counselor, church schoolteacher, etc.
- Build strong relationships with professors, supervisors, or other community leaders for strong personal recommendations.
- Volunteer as a tutor.
- Gain volunteer experience with Big Brother/Sister program, tutoring, sports, summer camps, teen counseling, childcare centers, or with other special populations.

BUSINESS

Technical Sales/Marketing
 Pharmaceutical Sales
 Management
 Banking/Finance
 Advertising/Public Relations
 Consulting
 Industrial Quality Control
 Research & Development

Manufacturing firms
 Drug stores
 Medical/Pharmaceutical supply companies
 Industries including textiles, petroleum, food, electronics, glass, paper, packaging, machinery, cosmetics, paint, drugs, and chemicals. Agricultural product companies
 Environmental management organizations
 Waste management firms

- Take courses in public speaking.
- Take basic business classes such as accounting and finance.
- Gain business experience through part-time jobs, summer work, and internships.
- Develop excellent computer skills. Learn to use software applications such as spreadsheets, databases, and word processing.
- Develop strong verbal and written communication, interpersonal, and organizational skills.
- Hold leadership positions in campus organizations.

GEOCHEMISTRY

Environmental Remediation
 Research & Development
 Analysis & Testing

Environmental organizations
 Water processing plants
 Natural resources organizations

- Take Geology & Environmental Science electives.
- Obtain internships in the Environmental field

OCCUPATIONS**EMPLOYERS****SKILLS TO DEVELOP****TECHNICAL WRITING**

Proposals
Specification Manuals
Writing
Editing

Research product development departments and organizations
Publishing firms including books, scientific and research journals, technical press, newspapers, and wire services

- Take advanced writing courses.
- Become proficient with word processing and desktop publishing.

LAW

Patent Agents
Patent Attorneys
Legislator/Lobbyist

Manufacturing firms
Research and development firms
Law firms
Private practice
Environmental agencies

- Obtain law degree to become an attorney.
- Obtain summer or part-time work in a law firm.
- Complete special training requirements for paralegal positions.
- Become skillful in debate and public speaking.
- Organize campus events, speakers, or political rallies.

**INFORMATION SPECIALISTS/
TECHNICAL LIBRARIES**

Special libraries
Research organizations
Colleges and universities
Large manufacturing firms, especially chemicals and pharmaceuticals

- Obtain Master's degree in library and information science.
- Develop computer retrieval skills.
- Join Special Libraries Association, Chemistry Division.

Strategies For Placement In Chemistry

- Undergraduate degree sufficient for entry-level positions such as lab coordinator, research assistant, product testing or analysis, technical sales, or service representative.
- Master's degree sufficient for most applied research positions, industrial work, and some community college teaching.
- 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.
- Read related professional magazines and journals.

Additional Resources:

What does a chemist do?: from the Bureau of Labor

Career Brochure for Biochemistry & Molecular Biology Careers: From the American Society for Biochemistry and Molecular Biology

Internet Resources:

Vault: more information on the every day life of a chemist. This site is accessible through the Career Services Website: www.capital.edu/careers

Industry Profile - Chemistry: www.wetfeet.com/asp/careerlist.asp

WetFeet.com guide to Chemistry: covers Industry Trends & Overview, "Love-Hate" (pros and cons of this field), Major Players and Job Descriptions & Tips.

American Chemical Society: www.chemistry.org