

# CHEMISTRY: ENVIRONMENTAL & CHEMISTRY

What can I do with this degree?

AREAS	EMPLOYERS	PREPARATION
<p><b>ANALYTICAL</b></p> <ul style="list-style-type: none"> <li>• Research</li> <li>• Development</li> <li>• Analysis and Testing</li> <li>• Consulting</li> <li>• Environmental</li> <li>• Forensics</li> </ul>	<ul style="list-style-type: none"> <li>• Federal, state, and local government</li> <li>• Federal agencies including National Aeronautics and Space Administration</li> <li>• Manufacturing firms including textile, petroleum, food, electronics, glass, paper, packaging, machinery, cosmetics, paint, drug, and chemical industries</li> <li>• Industrial production and inspection agencies</li> <li>• Research laboratories and organizations</li> <li>• Colleges and universities</li> <li>• Environmental protection organizations</li> </ul>	<ul style="list-style-type: none"> <li>❖ Learn federal, state, and local government job application process.</li> <li>❖ Gain experience in a laboratory.</li> <li>❖ Become proficient with high-tech scientific equipment.</li> <li>❖ Take electives in your area of interest.</li> </ul>
<p><b>BIOCHEMICAL</b></p> <ul style="list-style-type: none"> <li>• Research</li> <li>• Development</li> <li>• Analysis and Testing</li> <li>• Consulting</li> <li>• Quality Control</li> <li>• Medical</li> <li>• Environmental</li> <li>• Industrial Health &amp; Safety</li> <li>• Hospital Administration</li> </ul>	<ul style="list-style-type: none"> <li>• Research laboratories and organizations</li> <li>• Pharmaceutical and medical research firms</li> <li>• Biotechnology firms</li> <li>• Plant and animal breeders and growers</li> <li>• Food processors</li> <li>• Industrial production and inspection agencies</li> <li>• Environmental protection organizations</li> <li>• Federal, state and local government, such as the Centers for Disease Control</li> <li>• Colleges and universities</li> </ul>	<ul style="list-style-type: none"> <li>❖ Take additional courses in biology, biochemistry, molecular biology, genetics, cytology, and physiology.</li> </ul>
<p><b>ORGANIC</b></p> <ul style="list-style-type: none"> <li>• Research</li> <li>• Development</li> <li>• Analysis and Testing</li> <li>• Quality Control</li> <li>• Consulting</li> </ul>	<ul style="list-style-type: none"> <li>• Industries related to petroleum, coal, wood products, plastics, textiles, and food</li> <li>• Manufacturing firms developing new synthetic materials and new production processes</li> <li>• Research organizations</li> <li>• Federal and state government</li> <li>• Colleges and universities</li> </ul>	<ul style="list-style-type: none"> <li>❖ Gain additional laboratory and research experience through internships and summer jobs.</li> </ul>
<p><b>GEOCHEMISTRY</b></p> <ul style="list-style-type: none"> <li>• Environmental Remediation</li> <li>• Research &amp; Development</li> <li>• Analysis &amp; Testing</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental organizations</li> <li>• Water processing plants</li> <li>• Natural resources organizations</li> </ul>	<ul style="list-style-type: none"> <li>❖ Take Geology &amp; Environmental Science electives.</li> </ul>

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<b>INORGANIC</b> <ul style="list-style-type: none"> <li>Environmental Remediation</li> <li>Research &amp; Development</li> <li>Analysis &amp; Testing</li> </ul>	<ul style="list-style-type: none"> <li>Research laboratories and organizations</li> <li>Industries involved in mining, electronics, and synthetic materials</li> <li>Federal and state government</li> <li>Colleges and universities</li> </ul>	<ul style="list-style-type: none"> <li>Choose appropriate coursework to specialize in an area.</li> <li>Develop additional laboratory skills and experience.</li> </ul>
<b>POLYMER CHEMISTRY</b> <ul style="list-style-type: none"> <li>Research</li> <li>Analysis and Testing</li> <li>Quality Control</li> <li>Consulting</li> </ul>	<ul style="list-style-type: none"> <li>Industrial &amp; commercial organizations such as textiles and plastics</li> </ul>	<ul style="list-style-type: none"> <li>Gain research experience.</li> </ul>
<b>PHYSICAL</b> <ul style="list-style-type: none"> <li>Research</li> <li>Development</li> <li>Analysis and Testing</li> <li>Quality Control</li> <li>Consulting</li> </ul>	<ul style="list-style-type: none"> <li>Research laboratories and organizations</li> <li>Industries involving electrical, nuclear, gas, heat, or light energy</li> <li>Federal government</li> <li>Colleges and universities</li> </ul>	<ul style="list-style-type: none"> <li>Take related courses in social sciences and economics.</li> <li>Obtain strong mathematical background.</li> </ul>
<b>EDUCATION</b> <ul style="list-style-type: none"> <li>Teaching</li> <li>Research</li> <li>Administration</li> </ul>	<ul style="list-style-type: none"> <li>Private and public secondary schools</li> <li>Colleges and universities</li> </ul>	<ul style="list-style-type: none"> <li>Obtain certification/licensing for teaching in public schools.</li> <li>Acquire a master's degree for community college teaching and a Ph.D. for colleges and universities.</li> </ul>
<b>BUSINESS</b> <ul style="list-style-type: none"> <li>Technical Sales/Marketing</li> <li>Pharmaceutical Sales</li> <li>Management</li> <li>Banking/Finance</li> <li>Advertising/Public Relations</li> <li>Consulting</li> <li>Industrial Quality Control</li> <li>Research &amp; Development</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturing firms</li> <li>Drug stores</li> <li>Medical/Pharmaceutical supply companies</li> <li>Industries including textiles, petroleum, food, electronics, glass, paper, packaging, machinery,</li> <li>Cosmetics, paint, drugs, and chemicals.</li> <li>Agricultural product companies</li> <li>Environmental management organizations</li> <li>Waste management firms</li> </ul>	<ul style="list-style-type: none"> <li>Take courses in public speaking.</li> <li>Obtain a minor in business.</li> <li>Develop strong verbal and written communication, interpersonal, and organizational skills.</li> <li>Hold leadership positions in campus organizations.</li> <li>Join related student organizations, e.g., American Marketing Association, Financial Management Association, Public Relations Student Society of America, etc.</li> </ul>
<b>TECHNICAL WRITING</b> <ul style="list-style-type: none"> <li>Proposals</li> <li>Specification Manuals</li> <li>Writing</li> <li>Editing</li> </ul>	<ul style="list-style-type: none"> <li>Research product development departments and organizations</li> <li>Publishing firms including books, scientific and research journals, technical press, large newspapers, and wire services</li> </ul>	<ul style="list-style-type: none"> <li>Take advanced technical writing courses.</li> <li>Become proficient with word processing and desktop publishing.</li> </ul>

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## STRATEGIES

- 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.
- Maintain excellent grades.
- 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.

## LINKS

[American Academy of Forensic Science](#)

[American Chemical Society](#)

[Science Careers](#)

[Careers in Science and Engineering](#)

[The Scientist's Employment Network](#)

[PhDs.org](#)

[Chemists and Materials Scientists from the Occupational Outlook Handbook](#)

[Science Technicians from the Occupational Outlook Handbook](#)

[Teachers-Postsecondary from the Occupational Outlook Handbook](#)