
CHEMISTRY What can I do with this degree?

Chemistry is the science of matter. Chemists study the composition, properties and transformation of substances and various elementary forms of matter. The curriculum at Texas State prepares the students to work in research, production, quality control, technical services, and/or sales. According to the Department of Chemistry, "graduates have an excellent record of job placement in such diverse areas as the petrochemical industry, computer chip manufacturing, aerospace companies, pharmaceutical companies, the food industry, or as teachers in secondary schools. Many also seek advanced degrees or pursue careers in medicine, dentistry, or pharmacy."

Chemistry Skills

Leadership skills

- Managing time, energy and resources effectively
- Ability to work independently and as a team
- Organizing, analyzing and conceptualizing

Communication/Writing skills

- Writing factual material clearly and concisely
- Comprehending scientific material

Analytical/Research/Problem Solving

- Ability to conduct and clearly explain scientific research
- Managing data and instruments
- Understanding and using organizing principles
- Making critical observations and appropriate decisions

Artistic/Creative skills

- Designing experiments, charts, graphs
- Developing theories and testing hypothesis

Good vision and manual dexterity

Maintaining precision and accuracy

Technological, Science and Math skills

Possible Work Settings

- Aerospace firms
- Agricultural chemical/product companies
- Airlines
- Analysis and testing
- Atomic energy firms
- Beverage manufacturers
- Biotechnology firms
- Ceramics manufacturers
- Chemical equipment manufacturers
- Chemical industries/manufacturers
- Construction companies
- Consulting organizations
- Cosmetics industry
- Drug industry
- Electronic companies
- Environmental engineering companies
- Food manufacturers and processors
- Forestry centers
- Fuel dealerships
- Glass & Textiles industry
- Hazardous waste removal companies
- Hospitals
- Machinery industry
- Medical laboratories/services
- Metallurgical companies
- Mineral Products Companies
- Mining Companies
- Oil and gas companies
- Packing Industry
- Paint manufacturers
- Petroleum and Coal Firms
- Petroleum refineries
- Pharmaceutical manufacturers
- Photographic products
- Plastics manufacturers
- Public health service
- Pulp and paper manufacturers
- Research Laboratories
- Rubber processing firms
- Scientific journals
- Soap and detergents manufacturers
- Specialty chemical companies
- Textile manufacturers
- Tobacco companies
- Utility companies
- Veterinary hospitals
- Waste treatment facilities

AREAS OF SPECIALIZATION

- General Chemistry
- Analytical Chemistry
- Organic Chemistry
- Inorganic Chemistry
- Biochemistry
- Physical Chemistry
- Geochemistry
- Polymer Chemistry
- Chemical Engineering
- Forensic Chemistry

CAREER PATHS

(Some of the occupations outlined in this brochure may require additional education or training)

...in Education

Sample Job Titles

- Adjunct faculty
- Assistant faculty
- Associate faculty
- Instructor
- Lecturer
- Professor
- Teacher
- Lab Assistant/Manager

Possible Work Settings

- Colleges
- Universities
- High Schools

Professional Organizations

American Association for the Advancement of Science, <http://www.aaas.org/>

American Association of University Professors, <http://www.aaup.org/aaup>

National Education Association, <http://www.aaup.org/aaup>

...in Science Management and Support (Business)

Areas of Interest

- Acquisitions and mergers
- Commercial development
- Consulting
- Investment and financial analysis
- Licensing (Patent Examiner)
- Product Tester
- Quality Control Manager
- New ventures
- Research Analysis
- Product management
- Purchasing/Marketing
- Sales (Pharmaceutical)
- Patent Agents

Professional Organizations

American Marketing Association,

<http://www.marketingpower.com/Pages/default.aspx>

National Association of Chemical Distributors, <http://www.nacd.com/>

National Association of Sales Professionals, <http://www.nasp.com/>

National Paint, and Coatings Association, <http://www.paint.org/>

...in Research

Sample Job Titles

- Analytical chemist
- Application chemist
- Assayer
- Assistant chief chemist
- Chemical laboratory Technician/Chief/Director
- Cell Research Chemist
- Clinical chemist
- Colorist
- Organic/Inorganic chemist
- Food chemist
- Lab technician
- Laboratory Tester
- Pharmaceutical Chemist
- Environmental Chemist
- Proteins Chemist
- Yeast culture developer
- Geneticist
- Soil scientist
- Quality Analyst

Professional Organizations

American Association of Cereal Chemists, <http://www.aaccnet.org/>

American Association for Clinical Chemistry, www.aacc.org

American Chemistry Council, http://www.americanchemistry.com/s_acc/index.asp

American Chemical Society, <http://portal.acs.org/portal/acs/corg/content>

American Institute of Chemical Engineers, <http://www.aiche.org/>

American Petroleum Institute, <http://www.api.org/>

Council for Chemical Research, <http://www.ccrhq.org/>

Federation of American Scientists, www.fas.org

Royal Society of Chemistry Chemsoc Network, www.chemsoc.org

Soap and Detergent Association, <http://www.cleaning101.com/>

The North American Catalysis Society, <http://www.nacatsoc.org/>

...in Toxicology

Areas of Interest

- Forensic toxicologists
- Medical and clinical toxicologists
- Veterinary toxicologists
- Environmental toxicologists
- Environmental toxicologists
- Food safety toxicologists
- Regulatory toxicologists

Professional Organizations

Chemical Industry Institute of Toxicology, <http://www.thehamner.org/>

...in Government

Sample Job Titles

- Researcher
- Lab technician
- Staff scientist
- Environmental monitor

Possible Work Settings

- Nuclear regulatory commission
- National aeronautics and space administration
- National institutes of health
- Center for Disease Control and Prevention
- Food and Drug Administration
- Chemical Industries
- State environmental management agencies
- Universities and colleges
- U.S. Department of Agriculture
- U.S. Department of Defense
- U.S. Department of Health and Human Services
- U.S. Environmental Protection Agency
- U.S. Department of Commerce
- U.S. Department of Energy
- U.S. Navy

...in Chemical Engineering

Sample Job Titles

- Biomedical specialist
- Compliance officer
- Environmental engineer
- Plant engineer
- Process design engineer
- Project engineer
- Quality control engineer
- Technical services engineer

Professional Organizations

American Chemical Society,

<http://portal.acs.org/portal/acs/corg/content>

American Institute of Chemical Engineers,

<http://www.aiche.org>

American Petroleum Institute, <http://www.api.org/>

Materials Research Industry, http://www.mrs.org/s_mrs/index.asp

Society of Plastics Engineers, <http://www.4spe.org/>

National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, <http://www.nobcche.org/>

...in Preparation to Other Careers

Sample of Careers

- Medicine
- Pharmacy
- Law
- Forensics

RESOURCES

Texas State University-Student Organizations

Biochemistry Society
Chemistry Club

Professional Organizations

American Society for Biochemistry and Molecular Biology, <http://www.asbmb.org/>
American Institute of Biological Sciences, <http://www.aibs.org/core/index.html>
The American Society of Forensic Sciences, <http://www.aafs.org/>
American Society of Crime Laboratory Directors, <http://www.asclد.org/>
Forensic Chemistry Network, <http://www.geocities.com/CapeCanaveral/4329/>
Royal Society of Chemistry, <http://www.rsc.org/>
Chemical Structure Association Trust, <http://www.csa-trust.org/default.asp>
Chemical Heritage Foundation, <http://www.chemheritage.org/>
The American Institute of Chemists, <http://www.theaic.org/DesktopDefault.aspx>

Job Search

Science Jobs, www.sciencejobs.com/search.action;jsessionid=CLEFGPLFHCPJ
ChemistryJobs.com, www.chemistryjobs.com
Nature Jobs-Chemistry, www.nature.com/naturejobs/index.html
Chemistry.org Jobs, www.chemistry.org/
ChemJobs.net, <http://www.chemjobs.net/chemjobs.html>
Science Careers, <http://sciencecareers.sciencemag.org/>
Agricultural Biotech Chemical Job List, <http://www.nationjob.com/ag>
Organic Chemistry Jobs Worldwide, <http://www.organicworldwide.net/jobs/>
iHireChemist.com, <http://www.ihirechemists.com/>
Chemconnect.com, <http://www.chemconnect.com/>
ChemWeb, <http://www.chemweb.com/jobs>
BioSpace, <http://www.biospace.com/>
HireRx.com, <http://www.hirerx.com/>

Additional Resources

Occupational Outlook Handbook

Chemical Week, <http://www.chemweek.com/home/>

Chemistry & Industry, <http://www.chemind.org/CI/index.jsp>

Portland State Career Center, <http://www.pdx.edu/careers/what-can-i-do-degree-chemistry>

Oklahoma State University, <http://ascareers.okstate.edu/pdf/Chemistry.pdf>

University of Tennessee, Knoxville,

<http://career.utk.edu/students/majors/pdf/chemistry.pdf>

Career Library Resources

Great Jobs for Chemistry Majors by Mark Rowh, 2006 & 1999

Career Opportunities in Science by Susan Echaore-McDavid, 2003

Careers in Science by Thomas Easton, 2004

Information for this handout compiled from:

Career Center at Augusta State University, Career Services at University of Wisconsin-Eau Claire, The Career Center at University of North Carolina Wilmington, Trent Career Center at Trent University, Career Center at Portland State Career Center