What Can I Do With a Major In…

Chemistry

https://chemistry.unt.edu/

General information on Careers for Chemistry Majors:

Chemistry is the study of properties and transformations of matter. A bachelor’s degree from the University of North Texas in chemistry will prepare you for many industrial or government positions. To be a professional chemist or teach at a university, you may also need to earn a master’s and possibly a doctoral degree in chemistry.

Chemists work for manufacturers of chemicals, electronic and scientific instruments, food, oil and gas, and paper. They also are employed by national and private laboratories, research firms and government agencies. The U.S. departments of Agriculture, Defense, and Health and Human Services, the Food and Drug Administration, and the National Institutes of Health have many jobs for chemists. Some chemists identify the presence and concentration of pollutants in air, soil and water for local or state governments and companies.

With a background in chemistry, you also may become a product developer or sales representative for a manufacturer of chemical products, pharmaceuticals or laboratory equipment. You might synthesize new useful materials or teach high school chemistry.

A major in chemistry also can prepare you to enter dental, medical or veterinary school, or a training program to become a chiropractor, medical technician, optometrist, pharmacist, podiatrist or other health care professional. UNT offers pre-professional advising if you want a career in health care.
**Majoring in Chemistry**

The UNT chemistry program has been accredited by the American Chemical Society, meaning the program has passed strict academic standards for excellence in education. The UNT Chemistry Department offers three undergraduate degree programs:

- Bachelor of Science degree if you are planning to become professional chemists with industries or universities. This program is accredited by the ACS, meaning that the program has passed strict academic standards for excellence in chemistry instruction.

- Bachelor of Arts degree if you desire a chemistry major and planning careers in chemistry-related areas such as business, marketing and sales, professional health services (medicine, dentistry, veterinary medicine, medical technology, etc.), environmental studies, pharmacology and patent law.

- Bachelor of Arts and Bachelor of Science with teaching certification degree designed if you intend to teach chemistry and related sciences at the elementary and secondary school levels.

Regardless of your degree plan, as a chemistry major you will take courses in these areas of chemistry:

- Analytical — the study of the structure, composition and nature of substances
- Inorganic — the study of noncarbon-based compounds such as those found in electronic components
- Organic — the study of carbon-based compounds such as those found in medicines and plastics
- Physical — the study of characteristics of atoms and molecules and chemical reactions

You may specialize in one of these areas as a professional chemist. You will also take courses in statistical measurements and methods, and you will learn to use the scientific instruments used in chemical research.
*For more information about specific classes and requirements for students beginning in 2016-2017 follow the links provided below.

BS in Chemistry
BA in Chemistry
BS in Chemistry with a Forensics Certification
BA/BS in Chemistry with a Teaching Certification

**Career Tips for Jobs with a Chemistry Degree**

- Develop strong verbal, written, teamwork and problem-solving skills.
- Choose courses with laboratory components to build experimental and instrumentation skills.
- Gain experience in area of interest through internships, research with professors and/or complete a senior research project. [http://chemistry.unt.edu/research](http://chemistry.unt.edu/research)
- Consider taking a course in grant writing.
- Maintain high grade point average and secure strong recommendations for graduate school admission.
- Earn master’s degree in chemistry for advanced positions, greater responsibility and higher pay.
- Obtain Ph.D. to direct research projects and lead research teams.

**Related Career Titles**

**Entry-Level (Bachelor’s Degree):**

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<thead>
<tr>
<th>Research or Laboratory</th>
<th>Formulation Chemist</th>
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<tbody>
<tr>
<td>Assistant/Tech/Specialist</td>
<td>Analytical Chemist</td>
</tr>
<tr>
<td><strong>Process Chemist</strong></td>
<td><strong>Environmental Chemist</strong></td>
</tr>
<tr>
<td>Food Science Technician</td>
<td><strong>Water Quality Specialist</strong></td>
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<tr>
<td><strong>Food Scientist or Technologist</strong></td>
<td><strong>Hydrologist</strong></td>
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<tr>
<td>Flavor Chemist/Flavorist</td>
<td><strong>Hazardous Materials Chemist</strong></td>
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<tr>
<td>Nutritional Chemist</td>
<td><strong>Quality Assurance Analyst</strong></td>
</tr>
<tr>
<td>Agricultural Chemist</td>
<td><strong>Product Development and Testing</strong></td>
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</table>
Medical Device or Pharmaceutical Sales
Chemical Indexer and Document Analyst
Forensic Chemist
Chemical Hygiene Officer
Science Communicator

Occupational Health and Safety Technician
High School/Middle School Chemistry Teacher
Scientific Writer
Technical Writer

**Jobs Requiring Additional Experience (Master’s, Doctorate, Certifications)**

Senior Researcher
Research Manager
**Medicinal Chemist**
Polymer Chemist
Materials Scientist
**Toxicologist**
Chemical Engineer

Geochemist
Oil and Gas Chemist
Chemical Librarian
Information Specialist
Environmental Lawyer
Patent Law
Industrial In-House Counsel

**Health Professions requiring additional schooling and/or certifications**

Dietician/Nutritionist
Athletic Trainer
Medical Doctor (M.D or D.O)
Radiation Therapy Technician
Orthotics/Prosthetics
Veterinarian
Physician Assistant
EMT
Speech Pathologist/Audiologist
Dentist

Dental Hygienist or Dental Assistant
Nurse
Pharmacist
Pharmacy Technician
Podiatrist
Optometrist
Physical Therapist
Occupational Therapist
Healthcare/Medical Social Worker
Healthcare Administrator/Manager

**Work Environments**

State and Federal Government
US Food and Drug Administration
US Environmental Protection Agency
US Department of Agriculture

US Department of Energy
NASA
National Institute of Health
Center for Disease Control
Public Health Organizations
Biotechnology Firms
Research Laboratories
Medical Research Laboratories
Private Research Labs
Government Research Labs
Private Business/Corporations
Pharmaceutical Companies
Food/Beverage Companies
Cosmetic Companies
Adhesive/Paint/Synthetic Companies
Plastics Companies
Photographic Companies
Petroleum/Gas Industry
Product Development Departments

Analysis Departments
Testing Departments
Quality Assurance Departments
Environmental Agencies
Water Treatment Plants
Waste Management Companies
Agricultural Chemical Companies
Plant and Animal Breeders
Museums
Magazines/Journals
Colleges/Universities
Middle/High Schools
Law Firms
Publishing Firms

Examples of Employers Hiring This Major:

Duplium Corporation
Kingsley Tools
PCI The Data Company
Pepsi Co.
Mary Kay
Procter and Gamble
Alcon Pharmaceuticals
JPS Health Network
Sherwin-Williams Garland Manufacturing
Lam Research
NCH Corporation- Mohawk Labs Lab Corp
Jaken Co. Inc.
Surgical Monitoring Associates
The Grapevine Group
Accu-Chem Laboratories

Mary Crowley Cancer Research Centers
Baylor Medical Center
UT Southwestern Medical Center
Children’s Medical Center
Trace Life Sciences, Inc
Food and Drug Administration
Houston Police Department Crime Lab
BASF
MARIA Project - UT and Methodist Medical Center
Macrocycles, Inc.
Lynntech, Inc
University of Oklahoma, School of Industrial Engineering
Schreiber Foods, Inc.  
Exponent  
Halliburton  
QSO, Inc.  
Quest Diagnostics  
Kforce Professional Staffing  
VWR International, LLC  
Custom Nutrition Laboratories  
Ecolab  
Bio-Synthesis, Inc.  
Aura Optical Systems, L.P.  
Gradalis, Inc  
OUR LAB / MOD LAB  
Metrohm-Peak LLC  
Orchid Cellmark  
ATMI  
JEL Management  
Certes Environmental Laboratories  
Nature's Formula  
Aerotek Professional Services  
United Allergy Labs.  
US ARMY, MATERIALS & PROCESS ENGINEERING DIVISION  
Mary Crowley Cancer Research Centers  
Baylor Medical Center  
UT Southwestern Medical Center  
Children’s Medical Center  
Trace Life Sciences, Inc  
Food and Drug Administration  
Houston Police Department Crime Lab  
BASF  
MARIA Project - UT and Methodist Medical Center  
Macroyclics, Inc.  
Lynntech, Inc  
University of Oklahoma, School of Industrial Engineering  
Food Safety Net Services  
QORE Property Sciences  
TALEM, Inc.  
Fruit of the Earth  
Microconsult, Inc.  
Pure Chem Separation, L.P.  
Viachem Inc.  
Voluntary Purchasing Groups, Inc.  
Spraylat Corporation  

**Websites for Exploring**

**Chemistry Careers**


Chemistry Career Profiles- [http://www.rsc.org/careers/future/what-jobs-can-i-do](http://www.rsc.org/careers/future/what-jobs-can-i-do)


Student Organizations at UNT- (Learn more at UNT ORGSYNC)

Forensic Science Club
The Triple Helix
Alpha Epsilon Delta-Health Pre-professional Honor Society
Alpha Delta-The Minority Pre-Health Organization
Medically Dedicated Students Organization
Pre-Physician Assistant Club
Eagles Pre-Pharmacy Association

Chemistry Job Search Sites

Chemistry Jobs From ACS, http://chemistryjobs.acs.org/jobs

Professional Organizations

American Chemical Society, http://www.acs.org/content/acs/en.html
American Society for Biochemistry and Molecular Biology, http://www.asbmb.org/
American Institute of Chemical Engineers, http://www.aiche.org/
National Association of Science Writers, http://www.nasw.org/
Crop Life America, http://www.croplifecamerica.org/
Soap and Detergent Association, http://www.cleaninginstitute.org/
American Association of for Clinical Chemistry, www.aacc.org
Council for chemical Research, http://www.ccrhq.org/

American Petroleum Institute, http://www.api.org/
**Additional Resources**


Eagle Careers: [http://careercenter.unt.edu/eagle_network.html](http://careercenter.unt.edu/eagle_network.html)

LinkedIn: [http://university.linkedin.com/linkedin-for-students.html](http://university.linkedin.com/linkedin-for-students.html)


USAjobs: [https://www.usajobs.gov/StudentsAndGrads](https://www.usajobs.gov/StudentsAndGrads)

CareerOneStop: [http://www.careeronestop.org/](http://www.careeronestop.org/)


Need help figuring all this out? Call the Career Center and make an appointment with your Career Advisor! You can also get help with resume and cover letter writing and interview skills preparation.

*Information for this handout compiled from the following Career Services Departments:

Central Washington University: [http://www.cwu.edu/career/](http://www.cwu.edu/career/)

Indiana University-Purdue University Fort Wayne: [http://www.ipfw.edu/offices/career/](http://www.ipfw.edu/offices/career/)

Texas State University: [http://www.careerservices.txstate.edu/](http://www.careerservices.txstate.edu/)

University of North Carolina Wilmington: [http://www.uncw.edu/career/index.html](http://www.uncw.edu/career/index.html)

University of North Texas: [http://careercenter.unt.edu/](http://careercenter.unt.edu/)

University of Tennessee-Knoxville: [http://career.utk.edu/](http://career.utk.edu/)

University of Wisconsin-Eau Claire: [http://www.uwec.edu/Career/index.htm](http://www.uwec.edu/Career/index.htm)