

Bachelor of Science: Chemistry**Minor: Chemistry****Certificate: Biotechnology**

Chemistry is the study of composition, structure, and properties of matter and the interactions between them. The KU chemistry program provides extensive hands-on laboratory experience to develop the skills required for industry and graduate school and is approved by the American Chemical Society. Chemistry majors may go on to have careers in a variety of industries, research laboratories and government agencies. With a Bachelor of Science degree, graduates may find employment doing laboratory work, assisting on a research team, working in product development, or may work in the business-related areas of plant management, marketing or sales. Employers recommend one or more

Career types associated with Chemistry

(Is this a good fit for you? Are you a...)

- Investigative - "Thinker"
- Realistic - "Doer"
- Enterprising - "Leader"

Related skills, values, and qualities

- Proficiency in reading, writing, thinking, questioning, analyzing and problem solving
- Ability to organize, analyze and interpret scientific research
- Strong math skills
- Proficiency with computers
- Good manual dexterity and ability to operate scientific equipment
- Aptitude for accuracy and detail
- Ability to conduct and explain scientific research

Courses Chemistry majors typically enjoy

- Algebra/Trigonometry/Calculus
- Chemistry
- Computer Science
- Earth Science
- Geometry
- Physical Science

Common interests of Chemistry majors

- Conducting research and participating in science fairs and competitions
- Attending science exhibits, museums, and demonstrations
- Participating in chemistry or science clubs
- Working part-time or volunteering in a pharmacy, hospital, or with an environmental conservation organization
- Watching scientific programs
- Cooking

For more information about the major

Contact the Physical Sciences Department, 425 Boehm, 610-683-4447 or visit www.kutztown.edu/Chemistry

KU Majors related to Chemistry

Biology, Biochemistry, Environmental Science, Marine Biology, Secondary Education— Science

Investigative students may also be interested in: Anthropology, Computer Science, Criminal Justice, Economics*, Geography, Geology, German Studies, History, International Studies*, Mathematics, Multicultural Studies*, Physics, Political Science, Psychology, Sociology, Spanish, and Women's Studies*

* minor only

FOUR STEPS TO SUCCESS

EXPLORE

1ST YEAR

- Enroll in the Career Exploration Certificate.
- Attend info sessions to learn about career development and personal branding.
- Take a career assessment to identify and confirm interests.
- Get involved in campus clubs and organizations.
- Develop basic workplace skills through jobs or volunteer work.
- Talk with professors, family, and friends about career ideas.
- Conduct informational interviews with professionals working in fields of interest.
- Develop a relationship with your professors and faculty advisor.

DISCOVER

2ND YEAR

- Meet with CDC career coach.
- Attend info sessions to learn about resume writing, and externships.
- Confirm your choice of major and consider options for double major or minor.
- Research careers of interest.
- Complete a job shadowing (externship) experience.
- Seek meaningful employment or volunteer work in a field related to your major.
- Explore options for undergraduate research and study abroad.
- Write a resume and have it reviewed by the CDC.
- Manage your online presence.

EXPERIENCE

3RD YEAR

- Enroll in the Career Success Certificate.
- Complete an internship and/or undergraduate research.
- Attend info sessions about internships, interviewing, job search strategies, and grad school.
- Build a LinkedIn profile and continue to monitor your online presence.
- Complete a mock interview.
- Build skills through research projects, part-time employment, and volunteer work.
- Participate in employer panels, site visits & networking events.
- Attend internship & job fairs.
- Take on a leadership role in a student organization or work.
- Consider graduate school options and prepare for admissions tests.

IMPLEMENT

4TH YEAR

- Attend your Senior Kick-off and other info sessions to prepare for job search/grad school.
- Update your resume and LinkedIn profile.
- Create cover letter drafts.
- Gain experience through internships and/or undergraduate research.
- Secure references for job/grad school applications.
- Create your "30 second" commercial/elevator pitch.
- Meet with CDC to develop job search strategies.
- Research employers.
- Network with professionals through events and social media.
- Join a professional organization in your discipline.
- Attend the senior etiquette luncheon or dinner.
- Participate in job fairs and on-campus interviewing.

Sample Career Titles

Chemistry majors can be found working in a wide variety of career fields. Here are just some career titles that may be of interest. Please note that some jobs may require further education and training. To learn more about these careers, visit <http://online.onetcenter.org> or www.bls.gov/oco.

- Agricultural Scientist
- Agronomist
- Anesthesiologist
- Assayer
- Biochemist
- Chemical Engineer
- Chemical Oceanographer
- Chemist
- Chemistry Technologist
- Clarifying Plant Operator
- College Professor
- Consumer Protection Specialist
- Crime Lab Analyst
- Cytotechnologist
- Dentist
- Dietician
- Environmental Health Specialist

- Food and Drug Analyst
- Food Scientist
- Forensic Chemist
- Genetic Counselor
- Geneticist
- Geologist
- High School Teacher
- Hydrologist
- Industrial Health Engineer
- Industrial Hygienist
- Metallurgist
- Molecular Biologist
- Nuclear Scientist
- Nutritionist
- Occupational Safety Specialist
- Patent Examiner
- Perfumer

- Pharmaceutical Sales Rep.
- Pharmacist
- Pharmacologist
- Physician
- Plastics Engineer
- Product Tester
- Quality Assurance Manager
- Risk Manager
- Soil Scientist
- Toxicologist
- Underwater Technician
- Veterinarian
- Wastewater Treatment Chemist
- Water Purification Specialist

Common Internship Sites and Employers

Chemistry majors often find internships and employment in the following fields/industries.

- Chemical Companies
- Colleges & Universities
- Cosmetology Labs
- Engineering Firms
- Food Companies/Administration
- Newspapers and Magazines
- Mining Companies
- Petroleum Refineries
- Pharmaceutical Companies
- State & Federal Government
- Textile Manufacturers

Handshake

Handshake is the primary online resource
for preparing and connecting students and alumni with employers.
www.kutztown.edu/handshake

Useful Websites for Chemistry Majors

Whether you are researching related career fields, applying for internships or jobs, or planning to join a professional association, these websites are for you!

Industry/Employment Information

Careers in Federal Government
www.makingthedifference.org

Careers Resources for STEM
www.careercornerstone.org

CIRRUS—Chemistry Internet Resource
for Research
cirrus.chem.plu.edu

ChemWeb.com
chemweb.com

Chemical Elements
chemicalelements.com

Journal of Chemical Education
jchemed.chem.wisc.edu

Life Sciences World
www.lifesciencesworld.com

National Academies
www.nas.edu

Pharma. Research & Manufacturing
www.phrma.org

LinkedIn Job Search
www.linkedin.com/jobs

Research Experience for Undergraduates
REU's
<https://new.nsf.gov/funding/opportunities/research-experiences-undergraduates-reu>

Job/Internship Search Sites

BioPharmGuy
<http://biopharmguy.com>

BioSpace
www.biospace.com

Chemistry Jobs
chemistryjobs.com

Environmental Careers World Job Bank
www.environmentaljobs.com

Medical Jobs
www.medicaljobs.org

MedZilla
www.medzilla.com

New Scientist Jobs www.newscientistjobs.com

Science Careers www.sciencecareers.org

Professional Associations

American Academy of Forensic Science
www.aafs.org

American Association for the
Advancement of Science www.aaas.org

American Assoc. of Clinical Chemistry
www.aacc.org

American Chemical Society www.acs.org

American Institute of Chemists www.theaic.org

Council for Chemical Research www.ccrhq.org

Counsel for the Advancement of Science Writing
www.casw.org

Related Area Employers

Actalent
Aptagen
BioSpectra
Borough of Kutztown Water
Department
Carpenter Technology
DaVinci Science Center
East Penn Manufacturing
Eurofins Scientific
EnerSys
Environmental Protection Agency
International Flavors and
Fragrances
Lehigh County Authority
Lubrizol Life Sciences
NSF-Research Experience for
Undergraduates
Merck & Co., Inc.
M.J. Reider Associates, Inc.
Nestle Waters
PA-DEP
Pfizer, Inc.
Suburban Testing Labs
Teva Pharmaceuticals
Quaker Chemical
Wacker Chemical

Building Your Resume for a Career in Chemistry

Building a strong resume for your career field starts long before you ever start your job search. Employers want to hire graduates who not only have the necessary educational background but also have experience applying that knowledge.

Chandra Chemistry

cchem000@live.kutztown.edu, www.linkedin.com/in/chandra, 555-555-5555

PROFILE

Interested in working for a chemical company.

INSTRUMENTATION

Beckman 110B Solvent Delivery Mobile
7725i Rheodyne P/N
Agilent InfinityLab Poroshell 120 EC-C18
Varian Cary 50 Spectrometer
Epsilon Potentiostat E5

Hewlett Packard 1100 HPLC
Agilent Cary 60 UV-Visible Spectrometer
SSI 500 Detector Variable UV/Vis
Shimadzu LC-MS-8030
Shimadzu Nexera XR LC-20AD

Learn more about your field and develop the necessary skills for employment by gaining hands-on experience through internships & related experiences

EDUCATION

B.S. Kutztown University of Pennsylvania
Major: Chemistry, Minor: Mathematics
GPA: 3.88
Dean's List

Kutztown, PA
May 20xx

Fall 20xx-Spring 20xx

Study Abroad: Kutztown/American College of Thessaloniki

Summer 20xx

Related Courses: Advanced Biochemistry, Advanced Organic Chemistry, Advanced Inorganic Chemistry, Organometallic Chemistry, Analytical Chemistry

RESEARCH EXPERIENCE

Chemical Analysis of Indoor Particulate Matter
Kutztown University, Dr. Chemistry

Fall 20xx-Present

- Utilized the DustTrak DRX portable aerosol monitor to investigate indoor particle concentrations
- Presented results to students and faculty at Annual Berks County Undergraduate Research & Creativity Conference (April 20xx)

Utilize summer breaks to acquire valuable experience via volunteer or employment opportunities related to your major.

INTERNSHIP & EXTERNSHIP EXPERIENCE

Lancaster Laboratories, Inc.

Chemistry Intern

- Assisted scientists with testing chemical and waste levels in drinking water
- Utilized EPA test methods to determine water quality
- Completed 40 hours of laboratory technique, testing and safety training

Student Extern

- Observed process of water quality testing
- Discussed process of vapor and air analysis

Lancaster, PA
Summer 20xx

Sept 20xx

RELATED EXPERIENCE

Kutztown University

Chemistry Tutor

- Explain chemical lab techniques and concepts (Organic Chemistry, Inorganic Chemistry)
- Assist students with study skills and comprehension

Kutztown, PA
Fall 20xx-Present

CAMPUS INVOLVEMENT & PROFESSIONAL DEVELOPMENT

Member, Student Affiliates of the American Chemical Society

Recipient, Career Success Certificate, Kutztown University Career Development Center

Recipient, Career Exploration Certificate, Kutztown University Career Development Center

Fall 20xx-Present
Fall 20xx
Fall 20xx

WORK EXPERIENCE

Kutztown University Health & Wellness Center

Desk Receptionist

- Schedule appointments, manage waiting room, record and file confidential information

Kutztown, PA
Fall 20xx-Present

Develop professionally through campus involvement and professional memberships. This illustrates responsibility, leadership abilities and time management skills.