

A Chemistry Degree—things you should know

Types of Employers

Chemist employers are categorized as three types:

Industrial (private companies) like Merck, DuPont, Exxon, Johnson & Johnson, etc.

Government like FBI, EPA, Dept of Agriculture, SRS

Academic like high schools and colleges

Fields to find work (partial list)

Archeology, Cosmetics, Education, Environmental, Food, Forensic, Paper, Petroleum, Pharmaceuticals, Plastics, Power (including Nuclear), Quality Assurance (QA)/Quality Control (QC)

Types of Jobs (partial list)

Analyst, Engineer, Manager, Researcher, Salesman, Technician, Teacher

Do I specialize?

For degrees beyond the Bachelor's level, specialization is required. Some schools offer concentrations at the Bachelor's level as well.

Classic chemistry specializations:

Analytical—What is it? How much is present?

Biochemical—studies structure, composition, and chemical reactions of substances in living systems

Inorganic—synthesis and behavior of compounds not based on carbon (inorganic or organometallic)

Organic—deals with structure, properties and reactions of substance that contain carbon

Physical—fundamental understanding at the molecular and atomic level of matter

Other specializations: Agriculture, Education*, Environmental, Food and Flavor, Forensics*, Geological, Materials, Medicinal, Nuclear*, Polymers, Water

For full descriptions see www.acs.org → careers → what chemists do

*BS specializations offered at Georgia Regents University

Can you get a job?

Unemployment among chemists overall is 4.2% in 2012. This is high for our profession where unemployment has ranged from 1.5 to 4.6 % in the years between 1995 and 2012. Unemployment was highest in 2011. Note the levels are always lower than the national average (usually about half). With more advanced degrees, the unemployment level is lower.

Do you have to continue school after the Bachelors?

There are jobs available for chemists with a Bachelor's degree. A chemistry degree is also valued in nonchemistry professions. In addition, there are many jobs available for chemistry degrees at the Master's and PhD levels. Chemistry is also an appropriate Bachelor's degree for graduate work in many other fields.

What if I don't like the Lab?

Chemistry is also a great degree for students who plan to pursue careers in

Medicine, Pharmacy, Dentistry, Law or many other fields

A combination of a technical degree (like chemistry) and a non-technical masters (such as MBA or Law) is highly sought by a variety of companies, patent firms, financial institutions, etc. and is often both interesting and lucrative.

Typical Salaries

Salary depends on degree, type of employer and actual job.

Salaries are higher for larger companies.

Chemical engineers make the best salaries of all (and have lower unemployment!).

2012 Salary Data for chemists of all experience levels:

Median Salaries for All Chemists		Median Salaries for Industrial Chemists	
B.S.	\$73,900	B.S.	\$73,700
M.S.	\$85,000	M.S.	\$93,900
Ph.D.	\$100,600	Ph.D.	\$120,000
Chem E (engineer)	\$93,000 (Bachelor) \$120,000 (higher)	Chem E	\$120,000 (average all)
Industry	\$106,000		
Government	\$104,000		
Academics	\$71,158		

2011 Starting Salary Data (median salaries):

2011 All fields	\$40,000	\$46,700	\$85,000
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Complete Salary Surveys: www.acs.org → careers → salaries and surveys

Perks of being a Chemistry Major

*Many schools are actively recruiting science majors and may give special consideration to students willing to enter math or science, particularly the physical sciences (physics and chemistry)

*Because of the need for scientists and engineers, there are often scholarships geared to these disciplines. Keywords to search: chemistry, science, physical science, STEM (science, technology, engineering, math)

*Chemistry departments often have opportunities for students not as available in other disciplines
e.g., undergraduate research, lab assistant, professional meetings that encourage under-graduate attendance/participation

*Chemistry departments are usually small so there may be substantial mentoring and student-faculty interaction.

*Jobs actually working in chemistry are available at all degree levels: bachelors, masters, doctorate.

*Graduate programs in chemistry actually PAY students to attend them and typically offer tuition waivers and stipends for acting as a teaching or research assistant. A typical stipend in 2011 is \$26,000 per year.

References

American Chemical Society. Career Page. *Salary Surveys and starting Salary Surveys or What Chemists Do.*

www.acs.org

Information courtesy of the American Chemical Society, Savannah River Section

