

Chemists search for and put to use new knowledge about chemicals. Chemical research has led to the discovery and development of new and improved synthetic fibers, paints, adhesives, drugs, cosmetics, electronic components, lubricants, and thousands of other products. Chemists also develop processes that save energy and reduce pollution, such as improved oil refining and petrochemical processing methods. Research on the chemistry of living things spurs advances in medicine, agriculture, food processing, and other fields.

Chemists working in applied research laboratories use their knowledge of the basic building blocks of all materials (that is, chemicals) to keep America filled to the brim with low-priced, high-quality consumer goods. Among the products that chemists take credit for creating are nylon, plastic, and Viagra. The field of chemistry is split into sub fields. **Organic Chemists**, for instance, study carbon-based chemicals found in living things, while **Physical Chemists** study the fundamentals of chemical reactions. **Analytical Chemists** determine the structure, composition, and nature of substances by examining and identifying the various elements or compounds that make up a substance. They are absolutely crucial to the pharmaceutical industry because pharmaceutical companies need to know the identity of compounds that they hope to turn into drugs. **Macromolecular Chemists** study the behavior of atoms and molecules. **Medicinal Chemists** study the structural properties of compounds intended for applications to human medicine. **Materials Chemists** study and develop new materials to improve existing products or make new ones.

Some of the strongest job growth will continue to take place at pharmaceutical companies, biotechnology firms eager to create new drugs to treat America's aging population, consumer products (food, toiletries, cosmetics, beverages) and semiconductor industries.

Salary Information:

- Chemistry
\$32,500 Bachelor's Entry Level Salary (U.S. Bureau of Labor Statistics, 2007)
\$43,600-\$65,000 Master's/PhD Median Salary (U.S. Bureau of Labor Statistics, 2007)
[*Salary varies based on education/advanced degree, work-experience & setting/location.]

Transfer Information:

- A Bachelor's degree is usually the minimum educational requirement for entry-level chemist positions; many research jobs require a PhD. Those who want to teach Chemistry/Science at public elementary, middle or secondary schools must have a teaching certificate in addition to a Bachelor's degree

Additional Information:

- American Chemical Society: www.acs.org

