



Chemist's Job Description

Choosing a career path is normally done at the high school level in the United States. Some individuals already have a career choice in mind, although the details of what education, training, and qualifications you have to have may not be known. To help you better understand what chemist jobs entail we will first discuss what chemists do before launching into the education, qualification training, best places to work, and expected earnings.



Chemists [<http://www.energycrossing.com>] are scientists who have been trained in chemistry. Chemistry studies the composition, structure, properties of matter, and the chemical reactions within a lab or outside of it. Chemists study organic and inorganic matter to understand the properties in the world and how to form them. For example, **biochemistry** [<http://www.biotechcrossing.com>] is the study of biology in a chemical manner. Biochemistry will study biological organisms for physical and energy related properties. Bioluminescence has been one area of chemistry study within biochemistry because of the unique properties of organisms that have the ability to create their own light. Chemists will also study the analytical side to chemistry by analysis of different samples to better understand the chemical composition and structure.

There are several disciplines within chemistry to create **jobs** [<http://www.employmentcrossing.com/>]. We have mentioned most of these options above. Other chemist jobs include materials chemistry, nuclear chemistry, physical chemistry, and theoretical chemistry. Much of the work for chemist jobs entails a laboratory in which chemicals can be studied in a controlled manner. There are certain parts of a position that may require collection of samples as well as testing outside of a lab. These aspects of the chemist jobs are usually straightforward tests such as water purity, soil samples, etc.

Everything in the **environment** [<http://www.environmentalcrossing.com/>] is composed of chemicals. It doesn't matter whether it was simulated in a lab or naturally occurred in the environment without help. The knowledge that comes from chemist jobs can help lead to discoveries of new materials, chemicals, or improve methods created in the past. For example oil refining or petrochemical processing are two areas of top study right now, given current situations. The study of living organisms in chemistry allows advancement in medicine, food processing, and other fields. Without chemists to help improve the quality of life or other aspects of the world it is hard to advance.

Education:

Now that you have a keen understanding of what chemist jobs entail we can take a further look at the **education** [<http://www.educationcrossing.com/>] needed for these jobs. There are three levels of education required to work in chemist jobs. After graduating from high school a student will need to proceed into a four year degree program for a bachelor's degree in Science. The four year degree program will offer math, English, biology, and chemistry courses. Most students are also required to take elective courses to make up the needed amount of credits. There are several universities in the United States as well as outside of the US that offer chemistry degree programs. To be taken seriously in the field of chemistry it is best to choose a high profile university such as Stanford, Yale, etc that offers the best courses.

The second type of degree you can earn for the chemistry profession is a master's degree. The master's degree program generally takes an additional two years, and can only be earned once the bachelor's has been completed. You also must be accepted to a graduate degree program. In the master's degree program you learn more about your specific area of study in chemistry.

The third degree is a Ph. D. The doctorate program will also require a graduate enrollment in a university. The doctorate program can vary in length. Typically once the required classes have been finished there is still the doctorate thesis to write and present before the Ph. D will be awarded. Some individuals can complete the Ph. D program in two years, while others may take longer. It will depend on your field of study and the time applied to the doctorate thesis.

Qualifications Training:

During your education at a university you will be qualified to accept a position as a chemist. The entry level positions will require laboratory hours, as well as some field work depending on the area of your specialty. With a bachelor's degree you can expect to start in the entry level position and remain there until you have earned enough lab hours to be promoted



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or earn your master's degree. The higher level positions in the chemist jobs will require a higher level of education. To explain this further we will look at some of the best places to work.



Best Places to Work:

The Federal Executive Branch of chemistry is top on the list. The Fed only hires the best chemists to head their labs in the research and development, manufacturing, and biotechnology. They require the highest level of education, the Ph. D. They do have a few entry level positions, but again these are offered to a select few.

A position in pharmaceuticals is another top chemist job. The pharmaceutical industry is growing requiring more hands to be available in the research and development, lab work, and finding new medicines. In the pharmaceutical positions you

can expect to find many entry level positions for bachelor's degrees. These positions are typically ones of assistants.

Biotechnology and the manufacturing industry are the other two best places to work in the field. They offer top pay for all positions and these two areas are growing more rapidly than other fields.

To explain further about the chemist jobs it is best to understand the expected pay. For a laboratory worker the expected pay is \$46,000 a year. Pharmaceutical and medicine manufacturing is \$57,000 to \$63,000 a year. Research and development salaries tend to be \$68,000 a year to start. The last position within the Fed is normally \$88,000 per year.

The salaries are rather high because of the work involved for chemist jobs. There are a lot of hours spent working on understanding the world and its chemicals to help save lives and make living easier.

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