



Chemical Information Specialists

... Manage technical information

Chemical information specialists manage technical information as an occupation. With the exponential increase in the number of scientific journals, papers, and patents published today, the management of technical information is becoming an increasingly complicated task. Research scientists are often unable to keep up with the periodicals and patent literature in their own fields. The primary role of all chemical information specialists is to organize this information and make it available and easily accessible to researchers, students, industry professionals, and others.

Opportunities in chemical information include being a scientific librarian, a technical information specialist, a market researcher or management consultant, a technical publisher, a software developer, or a computer programmer. Many people start their careers as document analysts or indexers of periodical literature. Indexing often leads to working with this information in other capacities, including sales and marketing, management, programming, and editorial development. Some indexers move into industry and become technical information specialists. At chemical companies, they support the research chemists by providing the background information necessary to undertake new experiments. Outside of industry, a similar role is played by scientific librarians who manage information for academic researchers.

Other individuals start their careers in lab work and then move into technical information jobs. These individuals can be successful, particularly as technical information specialists, because they have experience with the ways that information is used for making decisions in chemical research.

... Work with computers and apply research techniques

One of the fastest growing areas for chemical information specialists is computer software development. Databases make it possible to search for periodical abstracts and molecular information for computer modeling. In the 1960s and 1970s, chemical information specialists were people who used computers to search for information. With the proliferation of personal computers in the 1980s, it became possible for individuals to search databases themselves.

Now, this information is available on the Internet, so anyone with appropriate access can search for and retrieve technical data.

Information specialists used to be intermediaries; however, now they are becoming expert resources. There is a real need for people with expertise in the use of databases and in chemical research techniques.

... Work with people

A job in chemical information is not only about managing technical information. Some chemical information specialists say what they enjoy most about their work is interacting with other people. Whether they work as consultants, librarians, or computer programmers, information specialists combine their technical skills with good communication skills and the ability to work in a service-oriented position. In an industrial research organization, technical information specialists increasingly are asked to participate in all aspects of information and document management. Because of their skills and experience with finding and disseminating information, they may be called on to manage proprietary information resources, develop company Intranets, or work on document management and control projects.

... Obtain careers or jobs outside the lab

A chemistry degree can be the key to jobs other than those in a lab or a classroom, and a chemist can bring so much value to such positions. Some technical software companies require their sales representatives to have a chemistry degree. Opportunities outside the laboratory, such as those in chemical information, are open to those with a chemistry degree because they have the knowledge to communicate with both scientists and lay people.

Chemists need to know where their interest in chemistry fits into the overall picture. People who have made their careers in chemical information often find that they like the theory of chemistry more than the practice of it. They love the discipline of chemistry, but choose to apply it to careers outside the lab. A career in the field of chemical information enables them to keep this interest central to their work.



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1155 Sixteenth Street, NW, Washington, DC 20036; 800-227-5558; chemistry.org
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FACT FILE: Chemical Information Specialists

WORK DESCRIPTION ► Chemical information specialists manage technical information in a variety of ways, depending on their positions. Most jobs require a good deal of reading and analyzing technical data. Chemistry training is vital to understanding the material and distilling what is most important from it. The presentation and organization of information is also a component of the job.

WORKING CONDITIONS ► Chemical information specialists generally work in a business or academic environment. Most spend a good deal of the day at their desks. Some travel or work in the laboratory, depending on the nature of their positions. Because it is a service industry, there is a high level of contact with other people.

PLACES OF EMPLOYMENT ► Chemical information specialists are hired by libraries, chemical companies, market research firms, and management consulting firms. They are also employed by the technical and trade divisions of publishing houses and by software developers. In many cases, the focus of these publishing or software companies is purely scientific.

PERSONAL CHARACTERISTICS ► A greater interest in scientific literature than in scientific method is a good sign that you would be well suited to a career in chemical information. An eye for detail and a propensity for public service are important. Most chemical information specialists stress the importance of being able to work with people and communicate well, both verbally and in writing.

EDUCATION AND TRAINING ► Educational requirements vary considerably depending on the area of chemical information in which you work. Indexers and document analysts generally have a bachelor's degree in chemistry, although a master's or doctoral degree may be required for more specialized work. Additional training and a master's degree in library science (M.L.S.) are necessary to be a chemical librarian in an academic environment; information specialists in industry usually are required to have an advanced degree in their scientific disciplines. The ability to search for chemical structures and for biosequences is also a highly desirable skill. Market researchers, consultants, and individuals in sales and management positions generally combine their technical training with a business degree.

JOB OUTLOOK ► The job outlook for chemical information specialists is very strong for the foreseeable future. Science librarians say the market is improving, but obtaining a position often requires a willingness to relocate. The use of computers in chemical information positions continues to be a real growth area; a high demand exists for people who can show both technical understanding and computer expertise.

SALARY RANGE ► According to a survey conducted by the ACS Chemical Information Division, the mean salary for chemical information professionals is \$70,000 per year. Those in industry earn an average of \$50,000 per year. These salaries roughly reflect starting salaries and were based on respondents who had been in their positions less than four years. Positions requiring computer skills pay more. Management and business/marketing jobs pay salaries that are in the low \$70,000s. Employment in information software fields, particularly the development of new search and retrieval techniques and technologies, can be extremely lucrative.

FOR MORE INFORMATION

American Society for Information Science and Technology
1320 Fenwick Lane, Suite 510
Silver Spring, MD 20910
(301) 495-0900
www.asis.org

Special Libraries Association (Chemical Division)
1700 18th Street, NW
Washington, DC 20009
(202) 234-4700
www.sla.org

WHAT YOU CAN DO NOW ► To determine how well suited you are to this particular career, find opportunities to work in the field. Do not make the mistake many chemical information specialists have made of spending summers in college working only in a university lab. Look for other options outside the academic environment. It is important to think about your future and what role you would like your training in chemistry to play, and consider continuing your education by pursuing a master's or doctoral degree.