

IT Careers

The growth of computers, the Internet, and the Web have created many new job opportunities in the IT (Information Technology) field. *IT* encompasses all aspects of computer-related technology. It is also referred to as *MIS* (Management Information Services) and *IS* (Information Services).

Education requirements for IT careers vary widely. An undergraduate degree in computer science, engineering, or business is often required. A graduate degree may also be required in highly specialized fields. Some careers require only a specialized certification course in an area such as networking. Other skills that are required in this industry are teamwork, problem-solving, oral and written communication, up-to-date technical knowledge, and computer experience.

data-entry operator

A data-entry operator types data into a computer. Data-entry operators may work for banks entering cancelled checks, department stores entering inventory figures, or educational institutions entering student records. A data-entry operator should possess a high school diploma or associate degree and the ability to type quickly and accurately.

systems analyst

A systems analyst designs and manages data-processing and other business applications. The analyst must determine how an organization will use the computer system, what data will be stored, how it will be accessed, and how the system is expected to grow in the future. A systems analyst should possess a comprehensive knowledge of data-processing methods, software, hardware, and programming languages. Most systems analysts are college graduates who have majored in computer science or information systems or both.

programmer

The programmer creates software based on a design and specification. A programmer should possess a detailed knowledge of the programming language or languages being used as well as an ability to reason analytically and pay close attention to details. Many businesses employ programmers who have graduated from a technical school or community college with a degree in programming. Large or specialized companies that need highly sophisticated programming usually require employees with a four-year college degree and/or previous experience.

manager

The MIS department in some companies is very large. The manager organizes the computer and human resources of the department in order to best achieve the organization's goals. An MIS manager should possess a detailed understanding of data-processing methods, hardware, and software. A college degree in business administration with a concentration in information systems is usually required.

computer scientist

The study of computer science is a very broad field involving many disciplines including science, electronics, and mathematics. A computer scientist often works in research at a university or computer manufacturer developing new computer applications software and hardware. It is computer scientists who design and develop robots, natural language processors, and the many applications that we have mentioned. A computer scientist usually has both undergraduate and graduate degrees in computer science.

computer engineer

Computer engineers design and manufacture computers. This field is broad and includes engineers who develop new computer applications. Other engineers translate ideas produced by researchers into manufactured products. A computer engineer usually possesses both undergraduate and graduate degrees in engineering.

manufacturing worker

The people who help build computer systems need to possess the ability to work well with tools. Manufacturing workers usually have earned a high school diploma or community college degree. Good preparation for such a career includes taking courses in mechanical arts as well as science and mathematics.

technical support technician

Working over the phone, through e-mail, and online forums, technical support technicians assist users with questions on a company's products. A technical support technician is usually a graduate of a technical school or community college.

sales associate

A large number of people sell computers either as representatives who travel and visit clients or as salespeople in computer stores. It is important that they possess a thorough knowledge of the computer equipment they sell and be able to explain how it may be used. The level of education required for this job will depend on the sophistication of the equipment being sold. Often a high school or community college degree is sufficient. The knowledge required to sell large computer systems may require a four-year college degree.

teachers and professors

Employees currently working in a computer-related field are often there because of computer teachers. In high schools and colleges, teachers and professors do research and teach all aspects of computing from computer science to ethics. For teaching at the high school level, a four-year college degree in a computer field is the minimum. At the college level, a graduate degree is the minimum requirement.

technology coordinator

At most educational institutions, it is the job of the technology coordinator to plan and oversee the acquisition, distribution, and utilization of computer technology. Schools require such a person to ensure that they have working computer facilities and are keeping up with new advancements in technology. A graduate degree in a computer field is often required.

intranet analyst

Intranet analysts set up and maintain an intranet for a company or organization. This involves managing company intranet projects, technical support, and creating reports. This job requires technical knowledge of networks, network security features, computers, and software as well as personal communication skills.

network administrator

A network administrator is responsible for a company's network. Duties could include installing the network hardware and software, as well as maintaining the network so it runs properly. LAN manager is another term for network administrator.

Web Careers

IT careers also include Web careers, a job market that is continually expanding and changing. Web career job titles, duties, and education and experience requirements vary from company to company. Typically the larger the company, the more specialized the job will

be. For example, in a large company, a Web developer may just implement a Web site. Whereas, in a small company the Web developer may design, implement, and maintain the Web site.

Web professionals often specialize in areas of expertise such as information architecture, programming, graphics, animations, or marketing, to name just a few. Job experience and specialized training are usually required to gain expertise in a particular area. Typical Web career titles and job descriptions include:

Web developer

Web developers design, build, and program Web sites. They determine the Web site strategy, which includes the hardware to be used and the design and navigation of the site. They also design tools, such as reports and databases, to measure the success of the Web site.

Web developers require programming and technical skills. Often the development is divided into back-end development and front-end development. Back-end development involves designing the hardware and database infrastructure, such as where orders are fulfilled. Front-end development involves the navigation and design of the Web site.

Web designer

Web designers create the Web page layouts and graphics for Web sites. The work a Web designer does usually determines whether users will stay at a Web site. Their job involves presenting Web pages so they are interesting and accessible.

A Web designer requires knowledge of HTML, Web implementation software such as Dreamweaver and Flash, and graphic editing software such as Fireworks, PhotoShop, or Illustrator. Since technology changes rapidly, Web designers must keep up-to-date on new technologies, techniques, and design standards.

Webmaster

Webmaster responsibilities can include designing and creating Web pages and maintaining the site. A Webmaster is also responsible for answering e-mail about the Web site. A Webmaster possesses extensive Internet knowledge, programming skills, and design experience.

Web author

Web authors create textual content for Web pages. A Web author has good writing skills and carefully considers the text as it will be presented on the Web.

There are also many small to large companies that provide IT services. These companies include:

- ISPs (Internet Service Providers) provide access to the Internet. Employees have a wide range of technical knowledge about networks, computers, and software since clients will have a variety of equipment. Personal communication skills are also necessary for sales and technical support.
- Web hosts provide space on a server where users can post their Web pages. Employees have technical knowledge of networks, computers, and the World Wide Web. Personal communication skills are also necessary for sales and technical support.