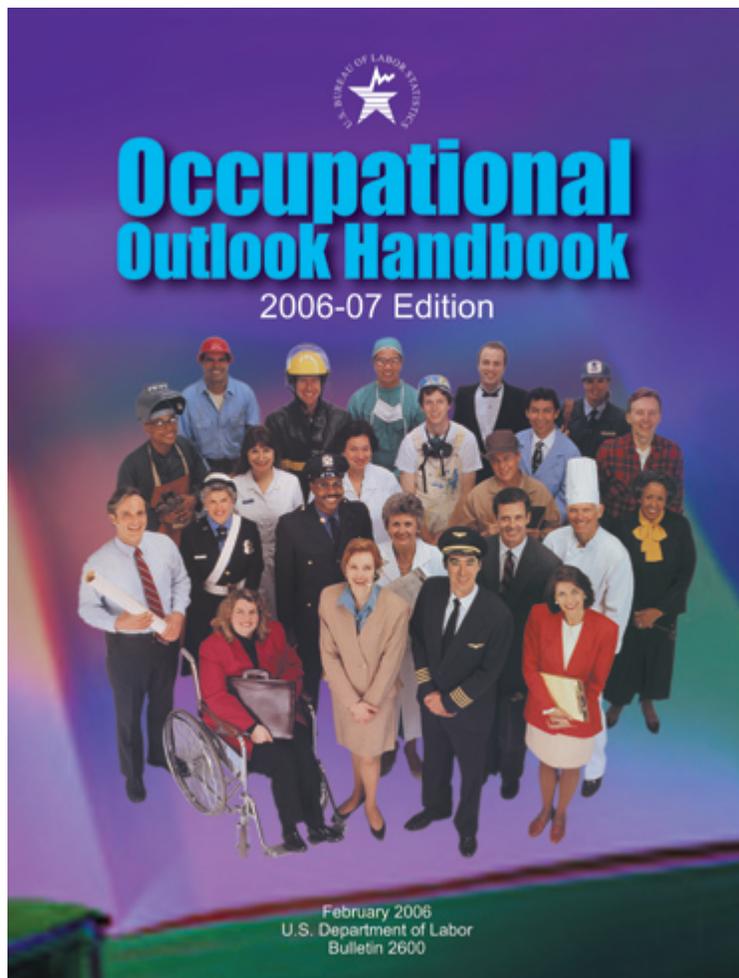


# Legal and Social Science Occupations



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U.S. Department of Labor  
Bureau of Labor Statistics



## Occupations Included in this Reprint

Archivists, curators, and museum technicians  
Court reporters  
Economists  
Judges, magistrates, and other judicial workers  
Lawyers  
Market and survey researchers  
Paralegals and legal assistants  
Psychologists  
Social scientists, other  
Urban and regional planners

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# Archivists, Curators, and Museum Technicians

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(O\*NET 25-4011.00, 25-4012.00, 25-4013.00)

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## Significant Points

- Most worked in museums, historical sites, and similar institutions; educational institutions; or in Federal, State, or local government.
- A graduate degree and related work experience generally are required.
- Keen competition is expected for most jobs because qualified applicants generally outnumber job openings.

## Nature of the Work

Archivists, curators, and museum technicians acquire and preserve important documents and other valuable items for permanent storage or display. They work for museums, governments, zoos, colleges and universities, corporations, and other institutions that require experts to preserve important records. They also describe, catalogue, analyze, exhibit, and maintain valuable objects and collections for the benefit of researchers and the public. These documents and collections may include works of art, transcripts of meetings, coins and stamps, living and preserved plants and animals, and historic objects, buildings, and sites.

Archivists and curators plan and oversee the arrangement, cataloguing, and exhibition of collections and, along with technicians and conservators, maintain collections. Archivists and curators may coordinate educational and public outreach programs, such as tours, workshops, lectures, and classes, and may work with the boards of institutions to administer plans and policies. They also may research topics or items relevant to their collections. Although some duties of archivists and curators are similar, the types of items they deal with differ: curators usually handle objects with cultural, biological, or historical significance, such as sculptures, textiles, and paintings, while archivists handle mainly records and documents that are retained because of their importance and potential value in the future.

*Archivists* collect, organize, and maintain control over a wide range of information deemed important enough for permanent safekeeping. This information takes many forms: photographs, films, video and sound recordings, computer tapes, and video and optical disks, as well as more traditional paper records, letters, and documents. Archivists work for a variety of organizations, including government agencies, museums, historical societies, corporations, and educational institutions that use or generate records of great potential value to researchers, exhibitors, genealogists, and others who would benefit from having access to original source material.

Archivists maintain records in accordance with accepted standards and practices that ensure the long-term preservation and easy retrieval of the documents. Records may be saved on any medium, including paper, film, videotape, audiotape, electronic disk, or computer. They also may be copied onto some other format to protect the original and to make the records more accessible to researchers who use them. As various storage media evolve, archivists must keep abreast of technological advances in electronic information storage.

Archivists often specialize in an area of history or technology so they can more accurately determine which records in that area qualify for retention and should become part of the archives. Archivists also may work with specialized forms of records, such as manuscripts,

electronic records, photographs, cartographic records, motion pictures, and sound recordings.

Computers are increasingly being used to generate and maintain archival records. Professional standards for the use of computers in handling archival records are still evolving. Expanding computer capabilities that allow more records to be stored and exhibited electronically have transformed, and are expected to continue to transform, many aspects of archival collections.

*Curators* administer the affairs of museums, zoos, aquariums, botanical gardens, nature centers, and historic sites. The head curator of the museum is usually called the *museum director*. Curators direct the acquisition, storage, and exhibition of collections, including negotiating and authorizing the purchase, sale, exchange, or loan of collections. They are also responsible for authenticating, evaluating, and categorizing the specimens in a collection. Curators oversee and help conduct the institution's research projects and related educational programs. Today, an increasing part of a curator's duties involves fundraising and promotion, which may include the writing and reviewing of grant proposals, journal articles, and publicity materials, as well as attendance at meetings, conventions, and civic events.

Most curators specialize in a particular field, such as botany, art, paleontology, or history. Those working in large institutions may be highly specialized. A large natural-history museum, for example, would employ separate curators for its collections of birds, fishes, insects, and mammals. Some curators maintain their collections, others do research, and others perform administrative tasks. In small institutions with only one or a few curators, one curator may be responsible for a number of tasks, from maintaining collections to directing the affairs of the museum.

*Conservators* manage, care for, preserve, treat, and document works of art, artifacts, and specimens—work that may require substantial historical, scientific, and archaeological research. They use x rays, chemical testing, microscopes, special lights, and other laboratory equipment and techniques to examine objects and determine their condition, their need for treatment or restoration, and the appropriate method for preserving them. Conservators document their findings and treat items to minimize their deterioration or to restore them to their original state. Conservators usually specialize in a particular material or group of objects, such as documents and books, paintings, decorative arts, textiles, metals, or architectural material.

*Museum technicians* assist curators by performing various preparatory and maintenance tasks on museum items. Some museum technicians also may assist curators with research. Archives technicians help archivists organize, maintain, and provide access to historical documentary materials.

## Working Conditions

The working conditions of archivists and curators vary. Some spend most of their time working with the public, providing reference assistance and educational services. Others perform research or process records, which often means working alone or in offices with only a few people. Those who restore and install exhibits or work with bulky, heavy record containers may lift objects, climb, or stretch. Those in zoos, botanical gardens, and other outdoor museums and historic sites frequently walk great distances.

Curators who work in large institutions may travel extensively to evaluate potential additions to the collection, organize exhibitions, and conduct research in their area of expertise. However, travel is rare for curators employed in small institutions.

## Training, Other Qualifications, and Advancement

Employment as an archivist, conservator, or curator usually requires graduate education and related work experience. While complet-



*Archivists organize and maintain documents such as photographs, manuscripts, and letters.*

ing their formal education, many archivists and curators work in archives or museums to gain the “hands-on” experience that many employers seek.

Although archivists earn a variety of undergraduate degrees, a graduate degree in history or library science, with courses in archival science, is preferred by most employers. Also, a few institutions now offer master’s degrees in archival studies. Some positions may require knowledge of the discipline related to the collection, such as business or medicine. Many colleges and universities offer courses or practical training in archival science as part of their history, library science, or other curriculum. The Academy of Certified Archivists offers voluntary certification for archivists. The designation “Certified Archivist” is obtained by those with at least a master’s degree and a year of appropriate archival experience. The certification process requires candidates to pass a written examination, and they must renew their certification periodically.

Archivists need research and analytical ability to understand the content of documents and the context in which they were created and to decipher deteriorated or poor-quality printed matter, handwritten manuscripts, photographs, or films. A background in preservation management is often required of archivists because they are responsible for taking proper care of their records. Archivists also must be able to organize large amounts of information and write clear instructions for its retrieval and use. In addition, computer skills and the ability to work with electronic records and databases are very important. Because electronic records are becoming the prevalent

form of recordkeeping, and archivists must create searchable databases, a knowledge of Web technology is increasingly being required.

Many archives, including one-person shops, are very small and have limited opportunities for promotion. Archivists typically advance by transferring to a larger unit that has supervisory positions. A doctorate in history, library science, or a related field may be needed for some advanced positions, such as director of a State archive.

For employment as a curator, most museums require a master’s degree in an appropriate discipline of the museum’s specialty—art, history, or archaeology—or in museum studies. Many employers prefer a doctoral degree, particularly for curators in natural history or science museums. Earning two graduate degrees—in museum studies (museumology) and a specialized subject—gives a candidate a distinct advantage in this competitive job market. In small museums, curatorial positions may be available to individuals with a bachelor’s degree. For some positions, an internship of full-time museum work supplemented by courses in museum practices is needed.

Curatorial positions often require knowledge in a number of fields. For historic and artistic conservation, courses in chemistry, physics, and art are desirable. Because curators—particularly those in small museums—may have administrative and managerial responsibilities, courses in business administration, public relations, marketing, and fundraising also are recommended. Like archivists, curators need computer skills and the ability to work with electronic databases. Many curators are responsible for posting information on the Internet, so they also need to be familiar with digital imaging, scanning technology, and copyright law.

Curators must be flexible because of their wide variety of duties, among which are the design and presentation of exhibits. In small museums, curators need manual dexterity to build exhibits or restore objects. Leadership ability and business skills are important for museum directors, while marketing skills are valuable in increasing museum attendance and fundraising.

In large museums, curators may advance through several levels of responsibility, eventually becoming the museum director. Curators in smaller museums often advance to larger ones. Individual research and publications are important for advancement in larger institutions.

When hiring conservators, employers look for a master’s degree in conservation or in a closely related field, together with substantial experience. There are only a few graduate programs in museum conservation techniques in the United States. Competition for entry to these programs is keen; to qualify, a student must have a background in chemistry, archaeology or studio art, and art history, as well as work experience. For some programs, knowledge of a foreign language also is helpful. Conservation apprenticeships or internships as an undergraduate can enhance one’s admission prospects. Graduate programs last 2 to 4 years, the latter years of which include internship training. A few individuals enter conservation through apprenticeships with museums, nonprofit organizations, and conservators in private practice. Apprenticeships should be supplemented with courses in chemistry, studio art, and history. Apprenticeship training, although accepted, is a more difficult route into the conservation profession.

Museum technicians usually need a bachelor’s degree in an appropriate discipline of the museum’s specialty, training in museum studies, or previous experience working in museums, particularly in the design of exhibits. Similarly, archives technicians usually need a bachelor’s degree in library science or history, or relevant work experience. Technician positions often serve as a steppingstone for individuals interested in archival and curatorial work. Except in small museums, a master’s degree is needed for advancement.

Relatively few schools grant a bachelor’s degree in museum studies. More common are undergraduate minors or tracks of study

that are part of an undergraduate degree in a related field, such as art history, history, or archaeology. Students interested in further study may obtain a master's degree in museum studies, offered in colleges and universities throughout the country. However, many employers feel that, while museum studies are helpful, a thorough knowledge of the museum's specialty and museum work experience are more important.

Continuing education, which enables archivists, curators, and museum technicians to keep up with developments in the field, is available through meetings, conferences, and workshops sponsored by archival, historical, and museum associations. Some larger organizations, such as the National Archives, offer such training in-house.

### Employment

Archivists, curators, and museum technicians held about 27,000 jobs in 2004. About 34 percent were employed in museums, historical sites, and similar institutions, and 16 percent worked for State and private educational institutions, mainly college and university libraries. Nearly 28 percent worked in Federal, State, and local government, excluding educational institutions. Most Federal archivists work for the National Archives and Records Administration; others manage military archives in the U.S. Department of Defense. Most Federal Government curators work at the Smithsonian Institution, in the military museums of the Department of Defense, and in archaeological and other museums and historic sites managed by the U.S. Department of the Interior. All State governments have archival or historical-record sections employing archivists. State and local governments also have numerous historical museums, parks, libraries, and zoos employing curators.

Some large corporations that have archives or record centers employ archivists to manage the growing volume of records created or maintained as required by law or necessary to the firms' operations. Religious and fraternal organizations, professional associations, conservation organizations, major private collectors, and research firms also employ archivists and curators.

Conservators may work under contract to treat particular items, rather than as regular employees of a museum or other institution. These conservators may work on their own as private contractors, or they may work as an employee of a conservation laboratory or regional conservation center that contracts their services to museums.

### Job Outlook

Keen competition is expected for most jobs as archivists, curators, and museum technicians because qualified applicants generally outnumber job openings. Graduates with highly specialized training, such as master's degrees in both library science and history, with a concentration in archives or records management and extensive computer skills, should have the best opportunities for jobs as archivists. A curator job also is attractive to many people, and many applicants have the necessary training and knowledge of the subject, but there are only a few openings. Consequently, candidates may have to work part time, as an intern, or even as a volunteer assistant curator or research associate after completing their formal education. Substantial work experience in collection management, research, exhibit design, or restoration, as well as database management skills, will be necessary for permanent status.

The job outlook for conservators may be more favorable, particularly for graduates of conservation programs. However, competition is stiff for the limited number of openings in these programs, and applicants need a technical background. Conservation program graduates with knowledge of a foreign language and a willingness to relocate will have an advantage over less qualified candidates.

Employment of archivists, curators, and museum technicians is expected to increase about as fast as the average for all occupations

through 2014. Jobs are expected to grow as public and private organizations emphasize establishing archives and organizing records and information and as public interest in science, art, history, and technology increases. Museum and zoo attendance has experienced a drop in recent years because of a weak economy, but the long-term trend has been a rise in attendance, and this trend is expected to continue. There is healthy public and private support for and interest in museums, which will generate demand for archivists, curators, and museum technicians. However, museums and other cultural institutions can be subject to cuts in funding during recessions or periods of budget tightening, reducing demand for these workers. Although the rate of turnover among archivists and curators is relatively low, the need to replace workers who leave the occupation or stop working will create some additional job openings.

### Earnings

Median annual earnings of archivists in May 2004 were \$36,470. The middle 50 percent earned between \$28,900 and \$46,480. The lowest 10 percent earned less than \$21,780, and the highest 10 percent earned more than \$61,260. Median annual earnings of curators in May 2004 were \$43,620. The middle 50 percent earned between \$32,790 and \$58,280. The lowest 10 percent earned less than \$25,360, and the highest 10 percent earned more than \$77,490. Median annual earnings of museum technicians and conservators in May 2004 were \$31,820. The middle 50 percent earned between \$23,770 and \$43,020. The lowest 10 percent earned less than \$18,210, and the highest 10 percent earned more than \$58,260.

In 2005, the average annual salary for archivists in the Federal Government in nonsupervisory, supervisory, and managerial positions was \$75,876; for museum curators, \$76,126; for museum specialists and technicians, \$55,291; and for archives technicians, \$41,347.

### Related Occupations

The skills that archivists, curators, and museum technicians use in preserving, organizing, and displaying objects or information of historical interest are shared by artists and related workers; librarians; and anthropologists and archeologists, historians, and other social scientists.

### Sources of Additional Information

For information on archivists and on schools offering courses in archival studies, contact:

► Society of American Archivists, 527 South Wells St., 5th floor, Chicago, IL 60607-3922. Internet: <http://www.archivists.org>

For general information about careers as a curator and schools offering courses in museum studies, contact:

► American Association of Museums, 1575 Eye St. NW., Suite 400, Washington, DC 20005. Internet: <http://www.aam-us.org>

For information about careers and education programs in conservation and preservation, contact:

► American Institute for Conservation of Historic and Artistic Works, 1717 K St. NW., Suite 200, Washington, DC 20006. Internet: <http://aic.stanford.edu>

For information about archivists and archivist certification, contact:

► Academy of Certified Archivists, 48 Howard St., Albany, NY 12207. Internet: <http://www.certifiedarchivists.org>

For information about government archivists, contact:

► National Association of Government Archivists and Records Administrators, 48 Howard St., Albany, NY 12207. Internet: <http://www.nagara.org>

Information on obtaining positions as archivists, curators, and museum technicians with the Federal Government is available from the Office of Personnel Management through USAJOBS, the Federal Government's official employment information system. This resource for locating and applying for job opportunities can be

accessed through the Internet at <http://www.usajobs.opm.gov> or through an interactive voice response telephone system at (703) 724-1850 or TDD (978) 461-8404. These numbers are not tollfree, and charges may result.

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## Court Reporters

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### Significant Points

- Job prospects are expected to be excellent as job openings continue to outnumber jobseekers.
- Demand for real-time and broadcast captioning and translating will spur employment growth.
- The amount of training required to become a court reporter varies with the type of reporting chosen.
- Job opportunities should be best for those with certification.

### Nature of the Work

Court reporters typically create verbatim transcripts of speeches, conversations, legal proceedings, meetings, and other events when written accounts of spoken words are necessary for correspondence, records, or legal proof. Court reporters play a critical role not only in judicial proceedings, but also at every meeting where the spoken word must be preserved as a written transcript. They are responsible for ensuring a complete, accurate, and secure legal record. In addition to preparing and protecting the legal record, many court reporters assist judges and trial attorneys in a variety of ways, such as organizing and searching for information in the official record or making suggestions to judges and attorneys regarding courtroom administration and procedure. Increasingly, court reporters are providing closed-captioning and real-time translating services to the deaf and hard-of-hearing community.

There are several methods of court reporting. The most common method is called stenographic. Using a stenotype machine, stenotypists document all statements made in official proceedings. The machine allows them to press multiple keys at a time to record combinations of letters representing sounds, words, or phrases. These symbols are electronically recorded and then translated and displayed as text in a process called computer-aided transcription. Real-time court reporting is another method of court reporting, wherein stenotype machines used for real-time captioning are linked directly to the computer. As the reporter keys in the symbols, they instantly appear as text on the screen. This process, called Communications Access Realtime Translation (CART), is used in courts, in classrooms, at meetings, and for closed captioning for the hearing-impaired on television.

Electronic reporting refers to the use of audio equipment to record court proceedings. The court reporter monitors the process, takes notes to identify speakers, and listens to the recording to ensure clarity and quality. The equipment used may include analog tape recorders or digital equipment. Electronic reporters and transcribers often are responsible for producing a subsequent written transcript of the recorded proceeding.

Another method of court reporting is called voice writing. Using the voice-writing method, a court reporter speaks directly into a voice silencer—a hand-held mask containing a microphone. As the reporter repeats the testimony into the recorder, the mask prevents the reporter from being heard

during testimony. Voice writers record everything that is said by judges, witnesses, attorneys, and other parties to a proceeding, including gestures and emotional reactions.

Regardless of the method used, accuracy in court reporting is crucial because the court reporter is the only person creating an official transcript. In a judicial setting, for example, appeals often depend on the court reporter's transcript.

Some voice writers produce a transcript in real time, using computer speech recognition technology. Other voice writers prefer to translate their voice files after the proceeding is over, or they transcribe the files manually, without using speech recognition at all. In any event, speech recognition-enabled voice writers pursue not only court reporting careers, but also careers as closed captioners, CART reporters for hearing-impaired individuals, and Internet streaming text providers or caption providers.

Court reporters who use either the stenographic or voice-writing method are responsible for a number of duties both before and after transcribing events. First, they must create and maintain the computer dictionary that they use to translate stenographic strokes or voice files into written text. They may customize the dictionary with parts of words, entire words, or terminology specific to the proceeding, program, or event—such as a religious service—they plan to transcribe. After documenting proceedings, court reporters must edit their CAT translation for correct grammar, for accurate identification of proper names and places, and to ensure that the record or testimony is discernible. They usually prepare written transcripts,



*Court reporters prepare written transcripts, make copies, and provide information from the transcripts to courts, counsels, parties, and the public.*

make copies, and provide information from the transcript to courts, counsels, parties, and the public on request. Court reporters also develop procedures for easy storage and retrieval of all stenographic notes and voice files in paper or digital format.

Although many court reporters record official proceedings in the courtroom, others work outside the courtroom. For example, they may take depositions for attorneys in offices and document proceedings of meetings, conventions, and other private activities. Still others capture the proceedings taking place in government agencies at all levels, from the U.S. Congress to State and local governing bodies. Court reporters who specialize in captioning live television programming for people with hearing loss are commonly known as stenocaptioners. They work for television networks or cable stations, captioning news, emergency broadcasts, sporting events, and other programming. With CART and broadcast captioning, the level of understanding gained by a person with hearing loss depends entirely on the skill of the stenocaptioner. In an emergency, such as a tornado or a hurricane, people's safety may depend on the accuracy of information provided in the form of captioning.

### **Working Conditions**

The majority of court reporters work in comfortable settings, such as offices of attorneys, courtrooms, legislatures, and conventions. An increasing number of court reporters work from home-based offices as independent contractors, or freelancers.

Work in this occupation presents few hazards, although sitting in the same position for long periods can be tiring, and workers can suffer wrist, back, neck, or eye strain. Workers also risk repetitive stress injuries such as carpal tunnel syndrome. In addition, the pressure to be accurate and fast can be stressful.

Many official court reporters work a standard 40-hour week. Self-employed court reporters, or freelancers, usually work flexible hours, including part time, evenings, and weekends, or they may be on call.

### **Training, Other Qualifications, and Advancement**

The amount of training required to become a court reporter varies with the type of reporting chosen. It usually takes less than a year to become a voice writer, while electronic reporters and transcribers learn their skills on the job. In contrast, the average length of time it takes to become a stenotypist is 33 months. Training is offered by about 160 postsecondary vocational and technical schools and colleges. The National Court Reporters Association (NCRA) has approved about 70 programs, all of which offer courses in stenotype computer-aided transcription and real-time reporting. NCRA-approved programs require students to capture a minimum of 225 words per minute, a requirement for Federal Government employment as well.

Some States require court reporters to be notary publics. Others require the Certified Court Reporter (CCR) designation, for which a reporter must pass a State test administered by a board of examiners. The NCRA confers the entry-level designation Registered Professional Reporter (RPR) upon those who pass a four-part examination and participate in mandatory continuing education programs. Although voluntary, the designation is recognized as a mark of distinction in the field. A reporter may obtain additional certifications that demonstrate higher levels of competency, such as Registered Merit Reporter (RMR) or Registered Diplomate Reporter (RDR). The RDR is the highest level of certification available to court reporters. To earn it, a court reporter must either have 5 consecutive years of experience as an RMR or be an RMR and hold a 4-year bachelor's degree.

The NCRA also offers the designations Certified Realtime Reporter (CRR), Certified Broadcast Captioner (CBC), and Certified

CART Provider (CCP). These designations promote and recognize competence in instantaneously converting the spoken word into the written word.

Some States require voice writers to pass a test and to earn State licensure. As a substitute for State licensure, the National Verbatim Reporters Association offers three national certifications to voice writers: Certified Verbatim Reporter (CVR), the Certificate of Merit (CM), and Real-Time Verbatim Reporter (RVR). Earning these certifications is sufficient to be licensed in States where the voice method of court reporting is permitted. To get the CM or RVR, one must first earn the CVR. Candidates for the CVR must pass a written test covering spelling, punctuation, vocabulary, legal and medical terminology, and also must pass three 5-minute dictation and transcription examinations that test for speed, accuracy, and silence. Passing the CM exam requires high levels of speed, knowledge, and accuracy. The RVR measures the candidate's skill at real-time transcription. To retain these certifications, the voice writer must obtain continuing education credits. Credits are given for voice writer education courses, continuing legal education courses, and college courses.

The American Association of Electronic Reporters and Transcribers (AAERT) certifies electronic court reporters. Certification is voluntary and includes a written and a practical examination. To be eligible to take the exams, candidates must have at least 2 years of court reporting or transcribing experience, must be eligible for notary public commissions in their States, and must have completed high school. AAERT offers three types of certificates—Certified Electronic Court Reporter (CER), Certified Electronic Court Transcriber (CET), and Certified Electronic Court Reporter and Transcriber (CERT). Some employers may require electronic court reporters and transcribers to obtain certificates once they are eligible.

In addition to possessing speed and accuracy, court reporters must have excellent listening skills, as well as good English grammar, vocabulary, and punctuation skills. Voice writers must learn to listen and speak simultaneously and very quickly, while also identifying speakers and describing peripheral activities in the courtroom or deposition room. They must be aware of business practices and current events as well as the correct spelling of names of people, places, and events that may be mentioned in a broadcast or in court proceedings. For those who work in courtrooms, an expert knowledge of legal terminology and criminal and appellate procedure is essential. Because capturing proceedings requires the use of computerized stenography or speech recognition equipment, court reporters must be knowledgeable about computer hardware and software applications.

With experience and education, court reporters can advance to administrative and management, consulting, or teaching positions.

### **Employment**

Court reporters held about 18,000 jobs in 2004. About 60 percent worked for State and local governments, a reflection of the large number of court reporters working in courts, legislatures, and various agencies. Most of the remaining wage and salary workers worked for court reporting agencies. Around 13 percent of court reporters were self-employed.

### **Job Outlook**

Job opportunities for court reporters are expected to be excellent as job openings continue to outnumber jobseekers. Court reporters with certification should have the best job opportunities. The favorable job market reflects the fact that fewer people are entering this profession, particularly as stenographic typists.

Employment of court reporters is projected to grow about as fast as the average for all occupations through 2014. Demand for court reporter services will be spurred by the continuing need for accurate transcription of proceedings in courts and in pretrial

depositions, and by the growing need to create captions for live or prerecorded television and to provide other real-time translating services for the deaf and hard-of-hearing community. Voice writers have become more widely accepted because of the difficulty in attracting workers and as the accuracy of speech recognition technology improves. Still, many courts allow only stenotypists to perform court reporting duties; as a result, demand for these highly skilled reporters will remain high.

Federal legislation mandates that, by 2006, all new television programming must be captioned for the deaf and hard-of-hearing. In addition, the Americans with Disabilities Act gives deaf and hard-of-hearing students in colleges and universities the right to request access to real-time translation in their classes. Both of these factors are expected to increase demand for court reporters to provide real-time captioning and CART services. Although these services forgo transcripts and differ from traditional court reporting, which uses computer-aided transcription to turn spoken words into permanent text, they require the same skills that court reporters learn in their training.

Despite increasing numbers of civil and criminal cases, budget constraints are expected to limit the ability of Federal, State, and local courts to expand, thereby also limiting the demand for traditional court reporting services in courtrooms and other legal venues. Further, because of the difficulty in attracting workers and in efforts to control costs, many courtrooms have installed tape recorders that are maintained by electronic court reporters and transcribers to record court proceedings. However, courts use electronic reporters and transcribers only in a limited capacity, and court reporters will continue to be used in felony trials and other proceedings. Despite the use of audiotape and videotape technology, court reporters can quickly turn spoken words into readable, searchable, permanent text, and they will continue to be needed to produce written legal transcripts and proceedings for publication.

### Earnings

Court reporters had median annual earnings of \$42,920 in May 2004. The middle 50 percent earned between \$30,680 and \$60,760. The lowest paid 10 percent earned less than \$23,690, and the highest paid 10 percent earned more than \$80,300. Median annual earnings in May 2004 were \$41,070 for court reporters working in local government.

Both compensation and compensation methods for court reporters vary with the type of reporting job, the experience of the individual reporter, the level of certification achieved, and the region of the country. Official court reporters earn a salary and a per-page fee for transcripts. Many salaried court reporters supplement their income by doing freelance work. Freelance court reporters are paid per job and receive a per-page fee for transcripts. CART providers are paid by the hour. Stenocaptioners receive a salary and benefits if they work as employees of a captioning company; stenocaptioners working as independent contractors are paid by the hour.

### Related Occupations

Workers in several other occupations type, record information, and process paperwork. Among these are secretaries and administrative assistants; medical transcriptionists; data entry and information processing workers; receptionists and information clerks; and human resources assistants, except payroll and timekeeping. Other workers who provide legal support include paralegals and legal assistants.

### Sources of Additional Information

State employment service offices can provide information about job openings for court reporters. For information about careers, training, and certification in court reporting, contact:

► National Court Reporters Association, 8224 Old Courthouse Rd., Vienna,

VA 22182. Internet: <http://www.ncraonline.org>

► United States Court Reporters Association, P.O. Box 465, Chicago, IL 60690-0465. Internet: <http://www.uscra.org>

► National Verbatim Reporters Association, 207 Third Ave., Hattiesburg, MS 39401. Internet: <http://www.nvra.org>

► American Association of Electronic Reporters and Transcribers, 23812 Rock Circle, Bothell, WA 98021-8573. Internet: <http://www.aaert.org>

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## Economists

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### Significant Points

- Slower than average job growth is expected as firms increasingly employ workers to perform more specialized tasks with titles that reflect the specific duties of the job rather than the general title of economist.
- Job seekers with a background in economics should have good opportunities, although some of these opportunities will be in related occupations.
- Candidates who hold a master's or Ph.D. degree in economics will have the best employment prospects and advancement opportunities.
- Quantitative skills are important in all economics specialties.

### Nature of the Work

Economists study how society distributes scarce resources, such as land, labor, raw materials, and machinery, to produce goods and services. They conduct research, collect and analyze data, monitor economic trends, and develop forecasts. They research issues such as energy costs, inflation, interest rates, exchange rates, business cycles, taxes, or employment levels.

Economists devise methods and procedures for obtaining the data they need. For example, sampling techniques may be used to conduct a survey, and various mathematical modeling techniques may be used to develop forecasts. Preparing reports, including tables and charts, on research results is an important part of an economist's job. Presenting economic and statistical concepts in a clear and meaningful way is particularly important for economists whose research is directed toward making policies for an organization. Some economists also might perform economic analysis for the media.

Many economists specialize in a particular area of economics, although general knowledge of basic economic principles is useful in each area. *Microeconomists* study the supply and demand decisions of individuals and firms, such as how profits can be maximized and how much of a good or service consumers will demand at a certain price. *Industrial economists* or *organizational economists* study the market structure of particular industries in terms of the number of competitors within those industries and examine the market decisions of competitive firms and monopolies. These economists also may be concerned with anti-trust policy and its impact on market structure. *Macroeconomists* study historical trends in the whole economy and forecast future trends in areas such as unemployment, inflation, economic growth, productivity, and investment. Closely related to macroeconomists are *monetary economists* or *financial economists*, who study the money and banking system and the effects of changing interest rates. *International economists* study international financial markets, exchange rates, and the effects of various trade policies such as tariffs. *Labor economists* or *demographic economists*

study the supply and demand for labor and the determination of wages. These economists also try to explain the reasons for unemployment and the effects of changing demographic trends, such as an aging population and increasing immigration, on labor markets. *Public finance economists* are involved primarily in studying the role of the government in the economy and the effects of tax cuts, budget deficits, and welfare policies. *Econometricians* investigate all areas of economics and use mathematical techniques such as calculus, game theory, and regression analysis to formulate economic models that help to explain economic relationships and that are used to develop forecasts related to the nature and length of business cycles, the effects of a specific rate of inflation on the economy, the effects of tax legislation on unemployment levels, and other economic phenomena. Many economists have applied these fundamental areas of economics to specific applications such as health, education, agriculture, urban and regional economics, law, history, energy, and the environment.

Most economists are concerned with practical applications of economic policy and work for a variety of organizations. Economists working for corporations are involved primarily in microeconomic issues, such as forecasting consumer demand and sales of the firm's products. Some analyze their competitors' growth and market share and advise their company on how to handle the competition. Others monitor legislation passed by Congress, such as environmental and worker safety regulations, and assess its impact on their business. Corporations with many international branches or subsidiaries might employ economists to monitor the economic situations in countries where they do business or to provide a risk assessment of a country into which the company might expand.

Economists working in economic consulting or research firms may perform the same tasks as economists working for corporations. Economists in consulting firms also perform much of the macroeconomic analysis and forecasting that is conducted in the United States. These economists collect data on various indicators, maintain databases, analyze historical trends, and develop models to forecast growth, inflation, unemployment, or interest rates. Their analyses and forecasts are frequently published in newspapers and journal articles.

Another large employer of economists is the government. Economists in the Federal Government administer most of the surveys and collect the majority of the economic data characterizing the United States. For example, economists in the U.S. Department of Commerce collect and analyze data on the production, distribution, and consumption of commodities produced in the United States and overseas, while economists employed by the U.S. Department of Labor collect and analyze data on the domestic economy, including data on prices, wages, employment, productivity, and safety and health. Economists who work for government agencies also assess economic conditions in the United States or abroad in order to estimate the economic effects of specific changes in legislation or public policy. Government economists advise policy makers in areas such as telecommunications deregulation, Social Security revamping, the effects of tax cuts on the budget deficit, and the effectiveness of imposing tariffs on imported steel. An economist working in State or local government might analyze data on the growth of school-age or prison populations, and on employment and unemployment rates, in order to project future spending needs.

### **Working Conditions**

Economists have structured work schedules. They often work alone, writing reports, preparing statistical charts, and using computers, but they also may be an integral part of a research team. Most work under pressure of deadlines and tight schedules, which may require overtime. Their routine may be interrupted by special requests for



*Preparing reports, including tables and charts, on research results is an important part of an economist's job.*

data and by the need to attend meetings or conferences. Frequent travel may be necessary.

### **Training, Other Qualifications, and Advancement**

A master's or Ph.D. degree in economics is required for many private-sector economist jobs and for advancement to more responsible positions. Economics includes numerous specialties at the graduate level, such as advanced economic theory, econometrics, international economics, and labor economics. Students should select graduate schools that are strong in specialties in which they are interested. Undergraduate economics majors can choose from a variety of courses, ranging from microeconomics, macroeconomics, and econometrics to more philosophical courses, such as the history of economic thought. Because of the importance of quantitative skills to economists, courses in mathematics, statistics, econometrics, sampling theory and survey design, and computer science are extremely helpful. Some schools help graduate students find internships or part-time employment in government agencies, economic consulting or research firms, or financial institutions prior to graduation.

In the Federal Government, candidates for entry-level economist positions must have a bachelor's degree with a minimum of 21 semester hours of economics and 3 hours of statistics, accounting, or calculus.

Whether working in government, industry, research organizations, or consulting firms, economists with a bachelor's degree usually qualify for most entry-level positions as a research assistant, for administrative or management trainee positions, or for various sales jobs. A master's degree usually is required to qualify for more responsible research and administrative positions. Many businesses, research and consulting firms, and government agencies seek individuals who have strong computer and quantitative skills and can perform complex research. A Ph.D. is necessary for top economist positions in many organizations. Many corporation and government executives have a strong background in economics.

A master's degree usually is the minimum requirement for a job as an instructor in a junior or community college. In most colleges and universities, however, a Ph.D. is necessary for appointment as an instructor. A Ph.D. and extensive publications in academic journals are required for a professorship, tenure, and promotion.

Aspiring economists should gain experience gathering and analyzing data, conducting interviews or surveys, and writing reports on their findings while in college. This experience can prove invaluable later in obtaining a full-time position in the field, because much of

the economist's work, especially in the beginning, may center on these duties. With experience, economists eventually are assigned their own research projects. Related job experience, such as work as a stock or bond trader, might be advantageous.

Those considering careers as economists should be able to pay attention to details, because much time is spent on precise data analysis. Patience and persistence are necessary qualities, given that economists must spend long hours on independent study and problem solving. Good communication skills also are useful, as economists must be able to present their findings, both orally and in writing, in a clear, concise manner.

### **Employment**

Economists held about 13,000 jobs in 2004. Government employed 58 percent of economists, in a wide range of government agencies, with 34 percent in Federal government and 24 percent in State and local government. The U.S. Departments of Labor, Agriculture, and State are the largest Federal employers of economists. The remaining jobs were spread throughout private industry, particularly in scientific research and development services and management, scientific, and technical consulting services. A number of economists combine a full-time job in government, academia, or business with part-time or consulting work in another setting.

Employment of economists is concentrated in large cities. Some work abroad for companies with major international operations, for U.S. Government agencies, and for international organizations, such as the World Bank, International Monetary Fund, and United Nations.

In addition to the previously mentioned jobs, economists hold faculty positions in colleges and universities. Economics faculties have flexible work schedules and may divide their time among teaching, research, consulting, and administration. (See the statement on teachers—postsecondary elsewhere in the *Handbook*.)

### **Job Outlook**

Employment of economists is expected to grow more slowly than the average for all occupations through 2014. Employment growth should be the fastest in private industry, especially in management, scientific, and technical consulting services. Rising demand for economic analysis in virtually every industry should stem from the growing complexity of the global economy, the effects of competition on businesses, and increased reliance on quantitative methods for analyzing and forecasting business, sales, and other economic trends. Some corporations choose to hire economic consultants to fill these needs, rather than keeping an economist on staff. This practice should result in more economists being employed in consulting services. However, job growth will be limited as firms increasingly employ workers to perform more specialized tasks with titles that reflect the specific duties of the job instead of the general title of economist. In addition, few new jobs are expected in government, but the need to replace experienced workers who transfer to other occupations or who retire or leave the labor force for other reasons will lead to job openings for economists across all industries in which they are employed.

Individuals with a background in economics should have job opportunities, although some of these opportunities will be in related occupations. As firms increasingly employ workers to perform more specialized tasks, the best opportunities for individuals with backgrounds in economics are expected to be in positions that have titles other than economist. Some examples of job titles often held by those with an economics background are financial analyst, market analyst, public policy consultant, researcher or research assistant, and econometrician.

A master's or Ph.D. degree, coupled with a strong background in economic theory, mathematics, statistics, and econometrics,

provides the basis for acquiring any specialty within the economics field. Economists who are skilled in quantitative techniques and their application to economic modeling and forecasting, and who also have good communications skills, should have the best job opportunities. Like those in many other disciplines, however, Ph.D. holders are likely to face keen competition for tenured teaching positions in colleges and universities.

Bachelor's degree holders may face competition for the limited number of economist positions for which they qualify. However, they will qualify for a number of other positions in which they can take advantage of their economic knowledge by conducting research, developing surveys, or analyzing data. Many graduates with bachelor's degrees will find jobs in industry and business as management or sales trainees or as administrative assistants. Bachelor's degree holders with good quantitative skills and a strong background in mathematics, statistics, survey design, and computer science also may be hired by private firms as researchers. Some will find jobs in government.

Candidates who meet State certification requirements may become high school economics teachers. The demand for secondary school economics teachers is expected to grow, as economics becomes an increasingly important and popular course. (See the statement on teachers—preschool, kindergarten, elementary, middle, and secondary elsewhere in the *Handbook*.)

### **Earnings**

Median annual wage and salary earnings of economists were \$72,780 in May 2004. The middle 50 percent earned between \$53,650 and \$96,240. The lowest 10 percent earned less than \$41,040, and the highest 10 percent earned more than \$129,170.

The Federal Government recognizes education and experience in certifying applicants for entry-level positions. The starting salary for economists having a bachelor's degree was about \$24,667 a year in 2005; however, those with superior academic records could begin at \$30,567. Those having a master's degree could qualify for positions at an annual salary of \$37,390. Those with a Ph.D. could begin at \$45,239, while some individuals with experience and an advanced degree could start at \$54,221. Starting salaries were slightly higher in selected geographical areas where the prevailing local pay was higher. The average annual salary for economists employed by the Federal Government was \$89,441 a year in 2005.

### **Related Occupations**

Economists are concerned with understanding and interpreting financial matters, among other subjects. Other occupations in this area include accountants and auditors; actuaries; budget analysts; financial analysts and personal financial advisors; financial managers; insurance underwriters; loan officers; and purchasing managers, buyers, and purchasing agents. Other occupations involved in market research and data collection are management analysts and market and survey researchers.

### **Sources of Additional Information**

For information on careers in business economics, contact:

► National Association for Business Economics, 1233 20th St. NW., Suite 505, Washington, DC 20036.

Information on obtaining positions as economists with the Federal Government is available from the Office of Personnel Management through USAJOBS, the Federal Government's official employment information system. This resource for locating and applying for job opportunities can be accessed through the Internet at <http://www.usajobs.opm.gov> or through an interactive voice response telephone system at (703) 724-1850 or TDD (978) 461-8404. These numbers are not tollfree, and charges may result.

## Judges, Magistrates, and Other Judicial Workers

(O\*NET 23-1021.00, 23-1022.00, 23-1023.00)

### Significant Points

- A bachelor's degree and work experience are the minimum requirements for a judgeship or magistrate position, but most workers filling these positions also have law degrees.
- Overall employment is projected to grow about as fast as the average, but varies by occupational specialty.
- Judges and magistrates are expected encounter competition for jobs because of the prestige associated with serving on the bench.

### Nature of the Work

Judges, magistrates, and other judicial workers apply the law and oversee the legal process in courts according to local, State, and Federal statutes. They preside over cases concerning every aspect of society, from traffic offenses to disputes over the management of professional sports to issues concerning the rights of huge corporations. All judicial workers must ensure that trials and hearings are conducted fairly and that the court safeguards the legal rights of all parties involved.

The most visible responsibility of judges is presiding over trials or hearings and listening as attorneys represent the parties present. Judges rule on the admissibility of evidence and the methods of conducting testimony, and they may be called on to settle disputes between opposing attorneys. Also, they ensure that rules and procedures are followed, and, if unusual circumstances arise for which standard procedures have not been established, judges interpret the law to determine the manner in which the trial will proceed.

Judges often hold pretrial hearings for cases. They listen to allegations and determine whether the evidence presented merits a trial. In criminal cases, judges may decide that persons charged with crimes should be held in jail pending trial, or they may set conditions for their release. In civil cases, they occasionally impose restrictions on the parties until a trial is held.

In many trials, juries are selected to decide guilt or innocence in criminal cases or liability and compensation in civil cases. Judges instruct juries on applicable laws, direct them to deduce the facts from the evidence presented, and hear their verdict. When the law does not require a jury trial or when the parties waive their right to a jury, judges decide cases. In such instances, the judge determines guilt in criminal cases and imposes sentences; in civil cases, the judge awards relief—such as compensation for damages—to the parties to the lawsuit, called litigants. Judges also work outside the courtroom in their chambers or private offices. There, judges read documents on pleadings and motions, research legal issues, write opinions, and oversee the court's operations. In some jurisdictions, judges also manage the courts' administrative and clerical staff.

Judges' duties vary according to the extent of their jurisdictions and powers. *General trial court judges* of the Federal and State court systems have jurisdiction over any case in their system. They usually try civil cases transcending the jurisdiction of lower courts and all cases involving felony offenses. Federal and State *appellate court judges*, although few in number, have the power to overrule decisions made by trial court or *administrative law judges*; appellate court judges exercise their power if they determine that legal errors were made in a case or if legal



*Judges must ensure that trials and hearings are conducted fairly and that the court safeguards the legal rights of all parties involved.*

precedent does not support the judgment of the lower court. Appellate court judges rule on a small number of cases and rarely have direct contact with litigants. Instead, they usually base their decisions on lower court records and on lawyers' written and oral arguments.

Many State court judges preside in courts whose jurisdiction is limited by law to certain types of cases. A variety of titles are assigned to these judges; among the most common are *municipal court judge*, *county court judge*, *magistrate*, and *justice of the peace*. Traffic violations, misdemeanors, small-claims cases, and pretrial hearings constitute the bulk of the work of State court judges, but some States allow these judges to handle cases involving domestic relations, probate, contracts, and other selected areas of the law.

*Administrative law judges*, sometimes called *hearing officers* or *adjudicators*, are employed by government agencies to make determinations for administrative agencies. These judges make decisions, for example, on a person's eligibility for various Social Security or workers' compensation benefits, on protection of the environment, on the enforcement of health and safety regulations, on employment discrimination, and on compliance with economic regulatory requirements.

Arbitration, mediation, and conciliation—collectively called appropriate dispute resolution (ADR)—are alternative processes that can be used to settle disputes between parties. All ADR hearings are private and confidential, and the processes are less formal than a court trial. If no settlement is reached through ADR, no statements made during the proceedings are admissible as evidence in any subsequent litigation.

There are two types of arbitration—compulsory and voluntary. During compulsory arbitration, opposing parties submit their dispute to one or more impartial persons, called arbitrators, for a final and non-binding decision. Either party may reject the ruling and request a trial in court. Voluntary arbitration is a process in which opposing parties choose one or more arbitrators to hear their dispute and submit a final, binding decision. Arbitrators usually are attorneys or business persons with expertise in a particular field. The parties identify, in advance, the issues to be resolved by arbitration, the scope of the relief to be awarded, and many of the procedural aspects of the process.

Mediation, or neutral evaluation, involves an attempt by the parties to resolve their dispute with the aid of a neutral third party. This process generally is used when the parties wish to preserve their relationship. A mediator may offer suggestions, but resolution of the dispute rests with the parties themselves. Mediation proceedings also are confidential and private. If the parties are unable to reach a settlement, they are free to pursue other options. The parties usually decide in advance how they will contribute to the cost of mediation. However, many mediators volunteer their services, or they may be court staff. Courts ask that voluntary mediators provide their services at the lowest possible rate and that parties split the cost. Depending on the type of case, court-referred community mediation centers may charge a small fee to the parties involved in mediation.

Conciliation, or facilitation, is similar to mediation. The conciliator's role is to guide the parties to a settlement. The parties must decide in advance whether they will be bound by the conciliator's recommendations; they generally share equally in the cost of the conciliation.

### **Working Conditions**

Judges, magistrates, and other judicial workers do most of their work in offices, law libraries, and courtrooms. Work in these occupations presents few hazards, although sitting in the same position in the courtroom for long periods can be tiring. Most judges wear robes when they are in a courtroom. Judges typically work a standard 40-hour week, but many work more than 50 hours per week. Some judges with limited jurisdiction are employed part time and divide their time between their judicial responsibilities and other careers.

Arbitrators, mediators, and conciliators usually work in private offices or meeting rooms; no public record is made of the proceedings.

### **Training, Other Qualifications, and Advancement**

A bachelor's degree and work experience usually constitute the minimum requirements for a judgeship or magistrate position. A number of lawyers become judges, and most judges have first been lawyers. In fact, Federal and State judges usually are required to be lawyers. About 40 States allow nonlawyers to hold limited-jurisdiction judgeships, but opportunities are better for those with law experience. Federal administrative law judges must be lawyers and pass a competitive examination administered by the U.S. Office of Personnel Management. Some State administrative law judges and other hearing officials are not required to be lawyers.

Federal administrative law judges are appointed by various Federal agencies, with virtually lifetime tenure. Federal magistrate judges are appointed by district judges—the life-tenured Federal judges of district courts—to serve in a U.S. district court for 8 years. A part-time Federal magistrate judge's term of office is 4 years. Some State judges are appointed, but the remainder are elected in partisan or nonpartisan State elections. Many State and local judges serve fixed renewable terms ranging from 4 or 6 years for some trial court judgeships to as long as 14 years or even life for other trial or appellate court judgeships. Judicial nominating commissions, composed of members of the bar and the public, are used to screen candidates for judgeships in many States and for some Federal judgeships.

All States have some type of orientation for newly elected or appointed judges. The Federal Judicial Center, American Bar Association, National Judicial College, and National Center for State Courts provide judicial education and training for judges and other judicial-branch personnel. General and continuing education courses usually last from a few days to 3 weeks in length. More than half of all States, as well as Puerto Rico, require judges to enroll in continuing education courses while serving on the bench.

Training and education requirements for arbitrators, mediators, and conciliators differ from those for judges. Mediators who practice in

State-funded or court-funded mediation programs usually must meet specific training or experience standards, which vary by State and court. In most States, individuals who offer private mediation services do not need a license, certification, or specific coursework; however, many private mediators and most of those affiliated with mediation organizations and programs have completed mediation training and agreed to comply with certain ethical standards. For example, the American Arbitration Association (AAA) requires mediators listed on its mediation panel to complete an AAA training course, receive recommendations from the trainers, and complete an apprenticeship.

Training for arbitrators, mediators, and conciliators is available through independent mediation programs, national and local mediation membership organizations, and postsecondary schools. In 2004, 16 colleges or universities in the United States offered master's degrees in dispute resolution or conflict management, and 2 offered doctoral degrees. Many more schools offer conflict-management specializations within other degree programs. Degrees in public policy, law, and related fields also provide good background for prospective arbitrators, mediators, and conciliators.

### **Employment**

Judges, magistrates, and other judicial workers held 47,000 jobs in 2004. Judges, magistrates, and magistrate judges held 27,000 jobs, all in State and local governments. Administrative law judges, adjudicators, and hearing officers held about 16,000 jobs; 52 percent in State governments, 29 percent Federal Government, and 20 percent in local governments. Arbitrators, mediators, and conciliators held another 5,200 jobs. Approximately 40 percent worked for State and local governments. The remainder worked for labor organizations, law offices, insurance carriers, and other private companies and for organizations that specialize in providing dispute resolution services.

### **Job Outlook**

Overall employment of judges, magistrates, and other judicial workers is projected to about as fast as the average for all occupations through 2014. Budgetary pressures at all levels of government will hold down the hiring of judges, despite rising caseloads, particularly in Federal courts. Most job openings will arise as judges retire. However, additional openings will occur when new judgeships are authorized by law or when judges are elevated to higher judicial offices.

Public concerns about crime and safety, as well as a public willingness to go to court to settle disputes, should spur demand for judges. Both the quantity and the complexity of judges' work have increased because of developments in information technology, medical science, electronic commerce, and globalization. The prestige associated with serving on the bench will ensure continued competition for judge and magistrate positions. However, a growing number of judges and candidates for judgeships are choosing to forgo the bench and work in the private sector, where pay is significantly higher. This movement may lessen the competition somewhat. Becoming a judge often is difficult because judicial candidates must compete with other qualified people and because they frequently must gain political support to be elected or appointed, and getting that support can be expensive.

Employment of arbitrators, mediators, and conciliators is expected to grow about as fast as the average for all occupations through 2014. Many individuals and businesses try to avoid litigation, which can involve lengthy delays, high costs, unwanted publicity, and ill will. Arbitration and other alternatives to litigation usually are faster, less expensive, and more conclusive, spurring demand for the services of arbitrators, mediators, and conciliators. Administrative law judges also are expected to experience average growth in employment.

## Earnings

Judges, magistrate judges, and magistrates had median annual earnings of \$93,070 in May 2004. The middle 50 percent earned between \$54,140 and \$124,400. The top 10 percent earned more than \$141,750, while the bottom 10 percent earned less than \$29,920. Median annual earnings in the industries employing the largest numbers of judges, magistrate judges, and magistrates in May 2004 were \$111,810 in State government and \$65,800 in local government. Administrative law judges, adjudicators, and hearing officers earned a median of \$68,930, and arbitrators, mediators, and conciliators earned a median of \$54,760.

In the Federal court system, the Chief Justice of the U.S. Supreme Court earned \$208,100 in 2005, and the Associate Justices earned \$199,200. Federal court of appeals judges earned \$171,800 a year, while district court judges had salaries of \$162,100, as did judges in the Court of Federal Claims and the Court of International Trade. Federal judges with limited jurisdiction, such as magistrates and bankruptcy court judges, had salaries of \$149,132.

According to a 2004 survey by the National Center for State Courts, salaries of chief justices of State high courts averaged \$130,461 and ranged from \$95,000 to \$191,483. Annual salaries of associate justices of the State highest courts averaged \$126,159 and ranged from \$95,000 to \$175,575. Salaries of State intermediate appellate court judges averaged \$122,682 and ranged from \$94,212 to \$164,604. Salaries of State judges of general jurisdiction trial courts averaged \$113,504 and ranged from \$88,164 to \$158,100.

Most salaried judges are provided health, life, and dental insurance; pension plans; judicial immunity protection; expense accounts; vacation, holiday, and sick leave; and contributions to retirement plans made on their behalf. In many States, judicial compensation committees, which make recommendations on the amount of salary increases, determine judicial salaries. States without commissions have statutes that regulate judicial salaries, link judicial salaries to the increases in pay for Federal judges, or adjust annual pay according to the change in the Consumer Price Index, calculated by the U.S. Bureau of Labor Statistics.

## Related Occupations

Legal training and mediation skills are useful to those in many other occupations, including counselors; lawyers; paralegals and legal assistants; title examiners, abstractors, and searchers; law clerks; and detectives and criminal investigators.

## Sources of Additional Information

Information on judges, magistrates, and other judicial workers may be obtained from:

► National Center for State Courts, 300 Newport Ave., Williamsburg, VA 23185-4147. Internet: <http://www.ncsonline.org>

Information on arbitrators, mediators, and conciliators may be obtained from:

► American Arbitration Association, 335 Madison Ave., Floor 10, New York, NY 10017-4605. Internet: <http://www.adr.org>

# Lawyers

(O\*NET 23-1011.00)

## Significant Points

- Competition for job openings should be keen because of the large number of students graduating from law school each year.
- Formal requirements to become a lawyer generally include a 4-year college degree, 3 years of law school, and passing a written bar examination; however, some requirements may vary by State.
- Competition for admission to most law schools is intense.
- About 3 out of 4 lawyers practiced privately, either as partners in law firms or in solo practices.

## Nature of the Work

The legal system affects nearly every aspect of our society, from buying a home to crossing the street. Lawyers form the backbone of this vital system, linking it to society in numerous ways. For that reason, they hold positions of great responsibility and are obligated to adhere to a strict code of ethics.

*Lawyers*, also called *attorneys*, act as both advocates and advisors in our society. As advocates, they represent one of the parties in criminal and civil trials by presenting evidence and arguing in court to support their client. As advisors, lawyers counsel their clients concerning their legal rights and obligations and suggest particular courses of action in business and personal matters. Whether acting as an advocate or an advisor, all attorneys research the intent of laws and judicial decisions and apply the law to the specific circumstances faced by their client.

The more detailed aspects of a lawyer's job depend upon his or her field of specialization and position. Although all lawyers are licensed to represent parties in court, some appear in court more frequently than others. Trial lawyers, who specialize in trial work, must be able to think quickly and speak with ease and authority. In addition, familiarity with courtroom rules and strategy is particularly important in trial work. Still, trial lawyers spend the majority of their time outside the courtroom, conducting research, interviewing clients and witnesses, and handling other details in preparation for a trial.

Lawyers may specialize in a number of areas, such as bankruptcy, probate, international, or elder law. Those specializing in environmental law, for example, may represent interest groups, waste disposal companies, or construction firms in their dealings with the U.S. Environmental Protection Agency (EPA) and other Federal and State agencies. These lawyers help clients prepare and file for licenses and applications for approval before certain activities may occur. In addition, they represent clients' interests in administrative adjudications.

Some lawyers specialize in the growing field of intellectual property, helping to protect clients' claims to copyrights, artwork under contract, product designs, and computer programs. Still other lawyers advise insurance companies about the legality of insurance transactions, guiding the company in writing insurance policies to conform with the law and to protect the companies from unwarranted claims. When claims are filed against insurance companies, these attorneys review the claims and represent the companies in court.

Most lawyers are in private practice, concentrating on criminal or civil law. In criminal law, lawyers represent individuals who have been charged with crimes and argue their cases in courts of law. Attorneys



*Lawyers research the intent of the laws and judicial decisions and apply the law to the specific circumstances faced by their client.*

dealing with civil law assist clients with litigation, wills, trusts, contracts, mortgages, titles, and leases. Other lawyers handle only public-interest cases—civil or criminal—which may have an impact extending well beyond the individual client.

Lawyers are sometimes employed full time by a single client. If the client is a corporation, the lawyer is known as “house counsel” and usually advises the company concerning legal issues related to its business activities. These issues might involve patents, government regulations, contracts with other companies, property interests, or collective bargaining agreements with unions.

A significant number of attorneys are employed at the various levels of government. Lawyers who work for State attorneys general, prosecutors, public defenders, and courts play a key role in the criminal justice system. At the Federal level, attorneys investigate cases for the U.S. Department of Justice and other agencies. Government lawyers also help develop programs, draft and interpret laws and legislation, establish enforcement procedures, and argue civil and criminal cases on behalf of the government.

Other lawyers work for legal aid societies—private, nonprofit organizations established to serve disadvantaged people. These lawyers generally handle civil, rather than criminal, cases. A relatively small number of trained attorneys work in law schools. Most are faculty members who specialize in one or more subjects; however, some serve as administrators. Others work full time in nonacademic settings and teach part time. (For additional information, see the *Handbook* section on teachers—postsecondary.)

Lawyers are increasingly using various forms of technology to perform their varied tasks more efficiently. Although all lawyers continue to use law libraries to prepare cases, some supplement conventional printed sources with computer sources, such as the Internet and legal databases. Software is used to search this legal literature automatically and to identify legal texts relevant to a specific case. In litigation involving many supporting documents, lawyers may use computers to organize and index material. Lawyers also utilize electronic filing, videoconferencing, and voice-recognition technology to share information more effectively with other parties involved in a case.

### **Working Conditions**

Lawyers do most of their work in offices, law libraries, and courtrooms. They sometimes meet in clients’ homes or places of business and, when necessary, in hospitals or prisons. They may travel to

attend meetings, gather evidence, and appear before courts, legislative bodies, and other authorities.

Salaried lawyers usually have structured work schedules. Lawyers who are in private practice may work irregular hours while conducting research, conferring with clients, or preparing briefs during nonoffice hours. Lawyers often work long hours, and of those who regularly work full time, about half work 50 hours or more per week. They may face particularly heavy pressure when a case is being tried. Preparation for court includes keeping abreast of the latest laws and judicial decisions.

Although legal work generally is not seasonal, the work of tax lawyers and other specialists may be an exception. Because lawyers in private practice often can determine their own workload and the point at which they will retire, many stay in practice well beyond the usual retirement age.

### **Training, Other Qualifications, and Advancement**

To practice law in the courts of any State or other jurisdiction, a person must be licensed, or admitted to its bar, under rules established by the jurisdiction’s highest court. All States require that applicants for admission to the bar pass a written bar examination; most States also require applicants to pass a separate written ethics examination. Lawyers who have been admitted to the bar in one State occasionally may be admitted to the bar in another without taking an examination if they meet the latter jurisdiction’s standards of good moral character and a specified period of legal experience. In most cases, however, lawyers must pass the bar examination in each State in which they plan to practice. Federal courts and agencies set their own qualifications for those practicing before or in them.

To qualify for the bar examination in most States, an applicant usually must earn a college degree and graduate from a law school accredited by the American Bar Association (ABA) or the proper State authorities. ABA accreditation signifies that the law school—particularly its library and faculty—meets certain standards developed to promote quality legal education. As of 2005, there were 191 ABA-accredited law schools; others were approved by State authorities only. With certain exceptions, graduates of schools not approved by the ABA are restricted to taking the bar examination and practicing in the State or other jurisdiction in which the school is located; most of these schools are in California. In 2005, seven States—California, Maine, New York, Vermont, Virginia, Washington, and Wyoming—accepted the study of law in a law office as qualification for taking the bar examination; three jurisdictions—California, the District of Columbia, and New Mexico—now accept the study of law by correspondence. Several States require registration and approval of students by the State Board of Law Examiners, either before the students enter law school or during their early years of legal study.

Although there is no nationwide bar examination, 48 States, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands require the 6-hour Multistate Bar Examination (MBE) as part of the overall bar examination; the MBE is not required in Louisiana or Washington. The MBE covers a broad range of issues, and sometimes a locally prepared State bar examination is given in addition to it. The 3-hour Multistate Essay Examination (MEE) is used as part of the bar examination in several States. States vary in their use of MBE and MEE scores.

Many States also require Multistate Performance Testing (MPT) to test the practical skills of beginning lawyers. Requirements vary by State, although the test usually is taken at the same time as the bar exam and is a one-time requirement.

The required college and law school education usually takes 7 years of full-time study after high school—4 years of undergraduate study, followed by 3 years of law school. Law school applicants must have a bachelor's degree to qualify for admission. To meet the needs of students who can attend only part time, a number of law schools have night or part-time divisions, which usually require 4 years of study; about 1 in 10 graduates from ABA-approved schools attended part time.

Although there is no recommended “prelaw” major, prospective lawyers should develop proficiency in writing and speaking, reading, researching, analyzing, and thinking logically—skills needed to succeed both in law school and in the profession. Regardless of major, a multidisciplinary background is recommended. Courses in English, foreign languages, public speaking, government, philosophy, history, economics, mathematics, and computer science, among others, are useful. Students interested in a particular aspect of law may find related courses helpful. For example, prospective patent lawyers need a strong background in engineering or science, and future tax lawyers must have extensive knowledge of accounting.

Acceptance by most law schools depends on the applicant's ability to demonstrate an aptitude for the study of law, usually through good undergraduate grades, the Law School Admission Test (LSAT), the quality of the applicant's undergraduate school, any prior work experience, and sometimes, a personal interview. However, law schools vary in the weight they place on each of these and other factors.

All law schools approved by the ABA require applicants to take the LSAT. Nearly all law schools require applicants to have certified transcripts sent to the Law School Data Assembly Service, which then submits the applicants' LSAT scores and their standardized records of college grades to the law schools of their choice. Both this service and the LSAT are administered by the Law School Admission Council. Competition for admission to many law schools—especially the most prestigious ones—generally is intense, with the number of applicants greatly exceeding the number that can be admitted.

During the first year or year and a half of law school, students usually study core courses, such as constitutional law, contracts, property law, torts, civil procedure, and legal writing. In the remaining time, they may elect specialized courses in fields such as tax, labor, or corporate law. Law students often acquire practical experience by participating in school-sponsored legal clinic activities; in the school's moot court competitions, in which students conduct appellate arguments; in practice trials under the supervision of experienced lawyers and judges; and through research and writing on legal issues for the school's law journal.

A number of law schools have clinical programs in which students gain legal experience through practice trials and projects under the supervision of practicing lawyers and law school faculty. Law school clinical programs might include work in legal aid clinics, for example, or on the staff of legislative committees. Part-time or summer clerkships in law firms, government agencies, and corporate legal departments also provide valuable experience. Such training can lead directly to a job after graduation and can help students decide what kind of practice best suits them. Clerkships also may be an important source of financial aid.

In 2004, law school graduates in 52 jurisdictions were required to pass the Multistate Professional Responsibility Examination (MPRE), which tests their knowledge of the ABA codes on professional responsibility and judicial conduct. In some States, the MPRE may be taken during law school, usually after completing a course on legal ethics.

Law school graduates receive the degree of *juris doctor* (J.D.) as the first professional degree. Advanced law degrees may be desir-

able for those planning to specialize, research, or teach. Some law students pursue joint degree programs, which usually require an additional semester or year of study. Joint degree programs are offered in a number of areas, including law and business administration or public administration.

After graduation, lawyers must keep informed about legal and nonlegal developments that affect their practices. Currently, 40 States and jurisdictions mandate continuing legal education (CLE). Many law schools and State and local bar associations provide continuing education courses that help lawyers stay abreast of recent developments. Some States allow CLE credits to be obtained through participation in seminars on the Internet.

The practice of law involves a great deal of responsibility. Individuals planning careers in law should like to work with people and be able to win the respect and confidence of their clients, associates, and the public. Perseverance, creativity, and reasoning ability also are essential to lawyers, who often analyze complex cases and handle new and unique legal problems.

Most beginning lawyers start in salaried positions. Newly hired salaried attorneys usually start as associates and work with more experienced lawyers or judges. After several years of gaining more responsibilities, some lawyers are admitted to partnership in their firm or go into practice for themselves. Some experienced lawyers are nominated or elected to judgeships. (See the section on judges, magistrates, and other judicial workers elsewhere in the *Handbook*.) Others become full-time law school faculty or administrators; a growing number of these lawyers have advanced degrees in other fields as well.

Some attorneys use their legal training in administrative or managerial positions in various departments of large corporations. A transfer from a corporation's legal department to another department often is viewed as a way to gain administrative experience and rise in the ranks of management.

## Employment

Lawyers held about 735,000 jobs in 2004. Approximately 3 out of 4 lawyers practiced privately, either as partners in law firms or in solo practices. Most salaried lawyers held positions in government or with corporations or nonprofit organizations. The greatest number of lawyers working in government were employed at the local level. In the Federal Government, lawyers work for many different agencies, but are concentrated in the Departments of Justice, Treasury, and Defense. Many salaried lawyers working outside of government are employed as house counsel by public utilities, banks, insurance companies, real estate agencies, manufacturing firms, and other business firms and nonprofit organizations. Some also have part-time independent practices, while others work part time as lawyers and full time in another occupation.

## Job Outlook

Employment of lawyers is expected to grow about as fast as the average for all occupations through 2014, primarily as a result of growth in the population and in the general level of business activities. Job growth among lawyers also will result from increasing demand for legal services in such areas as health care, intellectual property, venture capital, energy, elder, antitrust, and environmental law. In addition, the wider availability and affordability of legal clinics should result in increased use of legal services by middle-income people. However, growth in demand for lawyers will be limited as businesses, in an effort to reduce costs, increasingly use large accounting firms and paralegals to perform some of the same functions that lawyers do. For example, accounting firms may provide employee-benefit counseling, process documents, or handle various

other services previously performed by a law firm. Also, mediation and dispute resolution increasingly are being used as alternatives to litigation.

Competition for job openings should continue to be keen because of the large number of students graduating from law school each year. Graduates with superior academic records from highly regarded law schools will have the best job opportunities. Perhaps as a result of competition for attorney positions, lawyers are increasingly finding work in nontraditional areas for which legal training is an asset, but not normally a requirement—for example, administrative, managerial, and business positions in banks, insurance firms, real estate companies, government agencies, and other organizations. Employment opportunities are expected to continue to arise in these organizations at a growing rate.

As in the past, some graduates may have to accept positions in areas outside of their field of interest or for which they feel overqualified. Some recent law school graduates who have been unable to find permanent positions are turning to the growing number of temporary staffing firms that place attorneys in short-term jobs until they are able to secure full-time positions. This service allows companies to hire lawyers on an “as-needed” basis and permits beginning lawyers to develop practical skills while looking for permanent positions.

Because of the keen competition for jobs, a law graduate’s geographic mobility and work experience assume greater importance. The willingness to relocate may be an advantage in getting a job, but to be licensed in another State, a lawyer may have to take an additional State bar examination. In addition, employers are increasingly seeking graduates who have advanced law degrees and experience in a specialty, such as tax, patent, or admiralty law.

Employment growth for lawyers will continue to be concentrated in salaried jobs, as businesses and all levels of government employ a growing number of staff attorneys and as employment in the legal services industry grows. Most salaried positions are in urban areas where government agencies, law firms, and big corporations are concentrated. The number of self-employed lawyers is expected to decrease slowly, reflecting the difficulty of establishing a profitable new practice in the face of competition from larger, established law firms. Moreover, the growing complexity of law, which encourages specialization, along with the cost of maintaining up-to-date legal research materials, favors larger firms.

For lawyers who wish to work independently, establishing a new practice will probably be easiest in small towns and expanding suburban areas. In such communities, competition from larger, established law firms is likely to be less keen than in big cities, and new lawyers may find it easier to become known to potential clients.

Some lawyers are adversely affected by cyclical swings in the economy. During recessions, demand declines for some discretionary legal services, such as planning estates, drafting wills, and handling real estate transactions. Also, corporations are less likely to litigate cases when declining sales and profits result in budgetary restrictions. Some corporations and law firms will not hire new attorneys until business improves, and these establishments may even cut staff to contain costs. Several factors, however, mitigate the overall impact of recessions on lawyers; during recessions, for example, individuals and corporations face other legal problems, such as bankruptcies, foreclosures, and divorces requiring legal action.

## Earnings

Lawyers In May 2004, the median annual earnings of all lawyers were \$94,930. The middle half of the occupation earned between \$64,620 and \$143,620. Median annual earnings in the industries employing the largest numbers of lawyers in May 2004 were as follows:

Management of companies and enterprises .....	\$126,250
Federal Government.....	108,090
Legal services.....	99,580
Local government .....	73,410
State government .....	70,280

Median salaries of lawyers 9 months after graduation from law school in 2004 varied by type of work, as indicated in table 1.

**Table 1. Median salaries of lawyers 9 months after graduation, 2004**

All graduates .....	\$55,000
<i>Type of work</i>	
Private practice.....	80,000
Business/industry .....	60,000
Judicial clerkship and government.....	44,700
Academe .....	40,000

Source: *National Association of Law Placement*

Salaries of experienced attorneys vary widely according to the type, size, and location of their employer. Lawyers who own their own practices usually earn less than those who are partners in law firms. Lawyers starting their own practice may need to work part time in other occupations to supplement their income until their practice is well established.

Most salaried lawyers are provided health and life insurance, and contributions are made to retirement plans on their behalf. Lawyers who practice independently are covered only if they arrange and pay for such benefits themselves.

## Related Occupations

Legal training is necessary in many other occupations, including paralegals and legal assistants; law clerks; title examiners, abstractors, and searchers; and judges, magistrates, and other judicial workers.

## Sources of Additional Information

Information on law schools and a career in law may be obtained from the following organizations:

► American Bar Association, 321 North Clark St., Chicago, IL 60610. Internet: <http://www.abanet.org>

► National Association for Law Placement, 1025 Connecticut Ave. NW., Suite 1110, Washington, DC 20036. Internet: <http://www.nalp.org>

Information on the LSAT, the Law School Data Assembly Service, the law school application process, and financial aid available to law students may be obtained from:

► Law School Admission Council, P.O. Box 40, Newtown, PA 18940. Internet: <http://www.lsac.org>

Information on obtaining positions as lawyers with the Federal Government is available from the Office of Personnel Management through USAJOBS, the Federal Government’s official employment information system. This resource for locating and applying for job opportunities can be accessed through the Internet at <http://www.usajobs.opm.gov> or through an interactive voice response telephone system at (703) 724-1850 or TDD (978) 461-8404. These numbers are not tollfree, and charges may result.

The requirements for admission to the bar in a particular State or other jurisdiction also may be obtained at the State capital, from the clerk of the Supreme Court, or from the administrator of the State Board of Bar Examiners.

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## Market and Survey Researchers

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(O\*NET 19-3021.00, 19-3022.00)

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### Significant Points

- Market and survey researchers need at least a bachelor's degree, but a master's degree may be required for employment; continuing education also is important.
- Employment is expected to grow faster than average.
- Job opportunities should be best for those with a master's or Ph.D. degree in marketing or a related field and strong quantitative skills.

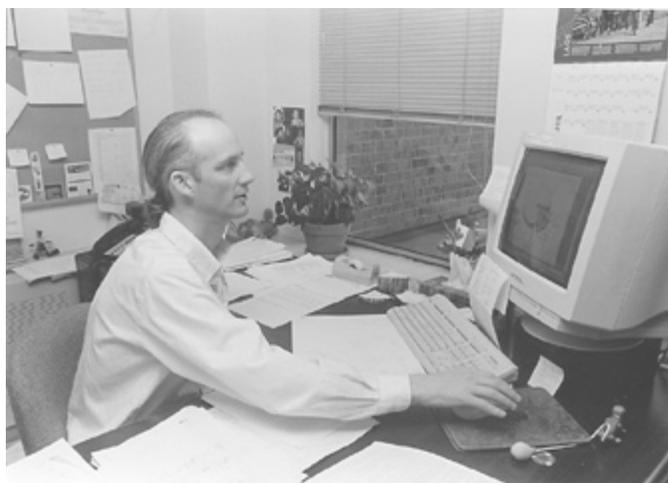
### Nature of the Work

*Market, or marketing, research analysts* are concerned with the potential sales of a product or service. Gathering statistical data on competitors and examining prices, sales, and methods of marketing and distribution, they analyze data on past sales to predict future sales. Market research analysts devise methods and procedures for obtaining the data they need. Often, they design telephone, mail, or Internet surveys to assess consumer preferences. They conduct some surveys as personal interviews, going door-to-door, leading focus group discussions, or setting up booths in public places such as shopping malls. Trained interviewers usually conduct the surveys under the market research analyst's direction.

After compiling and evaluating the data, market research analysts make recommendations to their client or employer on the basis of their findings. They provide a company's management with information needed to make decisions on the promotion, distribution, design, and pricing of products or services. The information also may be used to determine the advisability of adding new lines of merchandise, opening new branches, or otherwise diversifying the company's operations. Market research analysts also might develop advertising brochures and commercials, sales plans, and product promotions such as rebates and giveaways.

*Survey researchers* design and conduct surveys for a variety of clients, such as corporations, government agencies, political candidates, and providers of various services. The surveys collect information that is used for performing research, making fiscal or policy decisions, measuring the effectiveness of those decisions, or improving customer satisfaction. Analysts may conduct opinion research to determine public attitudes on various issues; the research results may help political or business leaders and others assess public support for their electoral prospects or social policies. Like market research analysts, survey researchers may use a variety of mediums to conduct surveys, such as the Internet, personal or telephone interviews, or questionnaires sent through the mail. They also may supervise interviewers who conduct surveys in person or over the telephone.

Survey researchers design surveys in many different formats, depending upon the scope of their research and the method of collection. Interview surveys, for example, are common because they can increase participation rates. Survey researchers may consult with economists, statisticians, market research analysts, or other data users in order to design surveys. They also may present survey results to clients.



*Market and survey researchers often use surveys to assess consumer preferences.*

### Working Conditions

Market and survey researchers generally have structured work schedules. Some often work alone, writing reports, preparing statistical charts, and using computers, but they also may be an integral part of a research team. Market researchers who conduct personal interviews have frequent contact with the public. Most work under pressure of deadlines and tight schedules, which may require overtime. Their routine may be interrupted by special requests for data, as well as by the need to attend meetings or conferences. Travel may be necessary.

### Training, Other Qualifications, and Advancement

A bachelor's degree is the minimum educational requirement for many market and survey research jobs. However, a master's degree may be required, especially for technical positions, and increases opportunities for advancement to more responsible positions. Also, continuing education is important in order to keep current with the latest methods of developing, conducting, and analyzing surveys and other data. Market and survey researchers may earn advanced degrees in business administration, marketing, statistics, communications, or some closely related discipline. Some schools help graduate students find internships or part-time employment in government agencies, consulting firms, financial institutions, or marketing research firms prior to graduation.

In addition to completing courses in business, marketing, and consumer behavior, prospective market and survey researchers should take other liberal arts and social science courses, including economics, psychology, English, and sociology. Because of the importance of quantitative skills to market and survey researchers, courses in mathematics, statistics, sampling theory and survey design, and computer science are extremely helpful. Many corporation and government executives have a strong background in marketing.

A master's degree is usually the minimum educational requirement for a job as a marketing or survey research instructor in junior and community colleges. In most colleges and universities, however, a Ph.D. is necessary for appointment as an instructor. A Ph.D. and extensive publications in academic journals are required for a professorship, tenure, and promotion.

While in college, aspiring market and survey researchers should gain experience gathering and analyzing data, conducting interviews or surveys, and writing reports on their findings. This experience can prove invaluable later in obtaining a full-time position in the field,

because much of the initial work may center on these duties. With experience, market and survey researchers eventually are assigned their own research projects.

Much of the market and survey researcher's time is spent on precise data analysis, so those considering careers in the occupation should be able to pay attention to detail. Patience and persistence are necessary qualities because these workers must spend long hours on independent study and problem solving. At the same time, they must work well with others: often, market and survey researchers oversee interviews of a wide variety of individuals. Communication skills are important, too, because researchers must be able to present their findings both orally and in writing, in a clear, concise manner.

While certification currently is not required for market and survey researchers, the Marketing Research Association (MRA) offers a certification program for professional researchers. Certification is based on education and experience requirements, as well as on continuing education.

### Employment

Market and survey researchers held about 212,000 jobs in 2004, most of which—190,000—were held by market research analysts. Because of the applicability of market research to many industries, market research analysts are employed throughout the economy. The industries that employ the largest number of market research analysts were management of companies and enterprises; management, scientific, and technical consulting services; insurance carriers; credit intermediation and related activities; computer systems design and related services; marketing research and public opinion polling; software publishers; professional and commercial equipment and supplies merchant wholesalers; securities and commodity contracts intermediation and brokerage; and advertising and related services.

Survey researchers held about 22,000 jobs in 2004. Survey researchers were employed mainly by professional, scientific, and technical services firms, especially in market research and public opinion polling; scientific research and development services; and management, scientific, and technical consulting services. State government also provided many jobs for survey researchers.

A number of market and survey researchers combine a full-time job in government, academia, or business with part-time or consulting work in another setting. About nine percent of market and survey researchers are self-employed.

Besides holding the previously mentioned jobs, many market and survey researchers held faculty positions in colleges and universities. Marketing faculties have flexible work schedules and may divide their time among teaching, research, consulting, and administration. (See the statement on teachers—postsecondary elsewhere in the *Handbook*.)

### Job Outlook

Employment of market and survey researchers is expected to grow faster than the average for all occupations through 2014. Many job openings are likely to result from the need to replace experienced workers who transfer to other occupations or who retire or leave the labor force for other reasons.

Job opportunities should be best for those with a master's or Ph.D. degree in marketing or a related field and strong quantitative skills. Bachelor's degree holders may face competition, as many positions, especially the more technical ones, require a master's or higher degree. Among bachelor's degree holders, those with good quantitative skills, including a strong background in mathematics, statistics, survey design, and computer science, will have the best opportunities. Ph.D. degree holders in marketing and related fields should have a range of oppor-

tunities in industry and consulting firms. Like those in many other disciplines, however, Ph.D. holders probably will face keen competition for tenured teaching positions in colleges and universities.

Demand for market research analysts should be strong because of an increasingly competitive economy. Marketing research provides organizations valuable feedback from purchasers, allowing companies to evaluate consumer satisfaction and plan more effectively for the future. As companies seek to expand their market and as consumers become better informed, the need for marketing professionals will increase. In addition, as globalization of the marketplace continues, market researchers will increasingly be utilized to analyze foreign markets and competition for goods and services.

Market research analysts should have the best opportunities in consulting firms and marketing research firms as companies find it more profitable to contract for market research services rather than support their own marketing department. Increasingly, market research analysts not only are collecting and analyzing information, but also are helping clients implement the analysts' ideas and recommendations. Other organizations, including computer systems design companies, software publishers, financial services organizations, health care institutions, advertising firms, and insurance companies, may offer job opportunities for market research analysts. Survey researchers will be needed to meet the growing demand for market and opinion research as an increasingly competitive economy requires businesses to allocate advertising funds more effectively and efficiently.

### Earnings

Median annual earnings of market research analysts in May 2004 were \$56,140. The middle 50 percent earned between \$40,510 and \$79,990. The lowest 10 percent earned less than \$30,890, and the highest 10 percent earned more than \$105,870. Median annual earnings in the industries employing the largest numbers of market research analysts in May 2004 were:

Management of companies and enterprises .....	\$58,440
Computer systems design and related services .....	58,100
Insurance carriers .....	51,030
Other professional, scientific, and technical services .....	50,950
Management, scientific, and technical consulting services .....	49,080

Median annual earnings of survey researchers in May 2004 were \$26,490. The middle 50 percent earned between \$17,920 and \$41,390. The lowest 10 percent earned less than \$15,330, and the highest 10 percent earned more than \$56,740. Median annual earnings of survey researchers in other professional, scientific, and technical services were \$22,880.

### Related Occupations

Market and survey researchers perform research to find out how well the market receives products or services. Such research may include planning, implementing, and analyzing surveys to determine the needs and preferences of people. Other jobs using these skills include economists, psychologists, sociologists, statisticians, and urban and regional planners.

### Sources of Additional Information

For information about careers and certification in market research, contact:

► Marketing Research Association, 110 National Dr., Glastonbury, CT 06033. Internet: <http://www.mra-net.org>

For information about careers in survey research, contact:

## Paralegals and Legal Assistants

(O\*NET 23-2011.00)

### Significant Points

- About 7 out of 10 work for law firms; others work for corporate legal departments and government agencies.
- Most entrants have an associate's degree in paralegal studies, or a bachelor's degree coupled with a certificate in paralegal studies.
- Employment is projected to grow much faster than average, as employers try to reduce costs by hiring paralegals to perform tasks formerly carried out by lawyers.
- Competition for jobs should continue; experienced, formally trained paralegals should have the best employment opportunities.

### Nature of the Work

While lawyers assume ultimate responsibility for legal work, they often delegate many of their tasks to paralegals. In fact, paralegals—also called legal assistants—are continuing to assume a growing range of tasks in the Nation's legal offices and perform many of the same tasks as lawyers. Nevertheless, they are still explicitly prohibited from carrying out duties that are considered to be the practice of law, such as setting legal fees, giving legal advice, and presenting cases in court.

One of a paralegal's most important tasks is helping lawyers prepare for closings, hearings, trials, and corporate meetings. Paralegals investigate the facts of cases and ensure that all relevant information is considered. They also identify appropriate laws, judicial decisions, legal articles, and other materials that are relevant to assigned cases. After they analyze and organize the information, paralegals may prepare written reports that attorneys use in determining how cases should be handled. Should attorneys decide to file lawsuits on behalf of clients, paralegals may help prepare the legal arguments, draft pleadings and motions to be filed with the court, obtain affidavits, and assist attorneys during trials. Paralegals also organize and track files of all important case documents and make them available and easily accessible to attorneys.

In addition to this preparatory work, paralegals perform a number of other vital functions. For example, they help draft contracts, mortgages, separation agreements, and instruments of trust. They also may assist in preparing tax returns and planning estates. Some paralegals coordinate the activities of other law office employees and maintain financial office records. Various additional tasks may differ, depending on the employer.

Paralegals are found in all types of organizations, but most are employed by law firms, corporate legal departments, and various government offices. In these organizations, they can work in many different areas of the law, including litigation, personal injury, corporate law, criminal law, employee benefits, intellectual property, labor law, bankruptcy, immigration, family law, and real estate. As the law has become more complex, paralegals have responded by becoming more specialized. Within specialties, functions often are broken down further so that paralegals may deal with a specific area. For example, paralegals specializing in labor law may concentrate exclusively on employee benefits.

The duties of paralegals also differ widely with the type of organization in which they are employed. Paralegals who work for corporations often assist attorneys with employee contracts, shareholder agreements, stock-option plans, and employee benefit plans. They also may help prepare and file annual financial reports, maintain corporate minutes' record resolutions, and prepare forms to secure loans for the corporation. Paralegals often monitor and review government regulations to ensure that the corporation is aware of new requirements and is operating within the law. Increasingly, experienced paralegals are assuming additional supervisory responsibilities such as overseeing team projects and serving as a communications link between the team and the corporation.

The duties of paralegals who work in the public sector usually vary within each agency. In general, paralegals analyze legal material for internal use, maintain reference files, conduct research for attorneys, and collect and analyze evidence for agency hearings. They may prepare informative or explanatory material on laws, agency regulations, and agency policy for general use by the agency and the public. Paralegals employed in community legal-service projects help the poor, the aged, and others who are in need of legal assistance. They file forms, conduct research, prepare documents, and, when authorized by law, may represent clients at administrative hearings.

Paralegals in small and medium-size law firms usually perform a variety of duties that require a general knowledge of the law. For example, they may research judicial decisions on improper police arrests or help prepare a mortgage contract. Paralegals employed by large law firms, government agencies, and corporations, however, are more likely to specialize in one aspect of the law.

Familiarity with computers use and technical knowledge have become essential to paralegal work. Computer software packages and the Internet are used to search legal literature stored in computer databases and on CD-ROM. In litigation involving many supporting documents, paralegals usually use computer databases to retrieve, organize, and index various materials. Imaging software allows paralegals to scan documents directly into a database, while billing programs help them to track hours billed to clients. Computer software packages also are used to perform tax computations and explore the consequences of various tax strategies for clients.

### Working Conditions

Paralegals employed by corporations and government usually work a standard 40-hour week. Although most paralegals work year round, some are temporarily employed during busy times of the year and then are released when the workload diminishes. Paralegals who work for law firms sometimes work very long hours when they are under pressure to meet deadlines. Some law firms reward such loyalty with bonuses and additional time off.

These workers handle many routine assignments, particularly when they are inexperienced. As they gain experience, paralegals usually assume more varied tasks with additional responsibility. Paralegals do most of their work at desks in offices and law libraries. Occasionally, they travel to gather information and perform other duties.

### Training, Other Qualifications, and Advancement

There are several ways to become a paralegal. The most common is through a community college paralegal program that leads to an associate's degree. The other common method of entry, mainly for those who already have a college degree, is through a program that leads to a certification in paralegal studies. A small number of schools also offer bachelor's and master's degrees in paralegal studies. Some employers train paralegals on the job, hiring college graduates with no legal experience or

promoting experienced legal secretaries. Other entrants have experience in a technical field that is useful to law firms, such as a background in tax preparation for tax and estate practice or in criminal justice, nursing, or health administration for personal injury practice.

An estimated 1,000 colleges and universities, law schools, and proprietary schools offer formal paralegal training programs. Approximately 260 paralegal programs are approved by the American Bar Association (ABA). Although many programs do not require such approval, graduation from an ABA-approved program can enhance one's employment opportunities. The requirements for admission to these programs vary. Some require certain college courses or a bachelor's degree, others accept high school graduates or those with legal experience, and a few schools require standardized tests and personal interviews.

Paralegal programs include 2-year associate degree's programs, 4-year bachelor's degree programs, and certificate programs that can take only a few months to complete. Most certificate programs provide intensive and, in some cases, specialized paralegal training for individuals who already hold college degrees, while associate's and bachelor's degree programs usually combine paralegal training with courses in other academic subjects. The quality of paralegal training programs varies; the better programs usually include job placement services. Programs generally offer courses introducing students to the legal applications of computers, including how to perform legal research on the Internet. Many paralegal training programs also offer an internship in which students gain practical experience by working for several months in a private law firm, the office of a public defender or attorney general, a bank, a corporate legal department, a legal aid organization, or a government agency. Experience gained in internships is an asset when one is seeking a job after graduation. Prospective students should examine the experiences of recent graduates before enrolling in a paralegal program.

Although most employers do not require certification, earning a voluntary certificate from a professional society may offer advantages in the labor market. The National Association of Legal Assistants (NALA), for example, has established standards

for certification requiring various combinations of education and experience. Paralegals who meet these standards are eligible to take a 2-day examination, given three times each year at several regional testing centers. Those who pass this examination may use the Certified Legal Assistant (CLA) designation. The NALA also offers an advanced paralegal certification for those who want to specialize in other areas of the law. In addition, the Paralegal Advanced Competency Exam, administered through the National Federation of Paralegal Associations, offers professional recognition to paralegals with a bachelor's degree and at least 2 years of experience. Those who pass this examination may use the Registered Paralegal (RP) designation.

Paralegals must be able to document and present their findings and opinions to their supervising attorney. They need to understand legal terminology and have good research and investigative skills. Familiarity with the operation and applications of computers in legal research and litigation support also is important. Paralegals should stay informed of new developments in the laws that affect their area of practice. Participation in continuing legal education seminars allows paralegals to maintain and expand their knowledge of the law.

Because paralegals frequently deal with the public, they should be courteous and uphold the ethical standards of the legal profession. The National Association of Legal Assistants, the National Federation of Paralegal Associations, and a few States have established ethical guidelines for paralegals to follow.

Paralegals usually are given more responsibilities and require less supervision as they gain work experience. Experienced paralegals who work in large law firms, corporate legal departments, or government agencies may supervise and delegate assignments to other paralegals and clerical staff. Advancement opportunities also include promotion to managerial and other law-related positions within the firm or corporate legal department. However, some paralegals find it easier to move to another law firm when seeking increased responsibility or advancement.

## Employment

Paralegals and legal assistants held about 224,000 jobs in 2004. Private law firms employed 7 out of 10 paralegals and legal assistants; most of the remainder worked for corporate legal departments and various levels of government. Within the Federal Government, the U.S. Department of Justice is the largest employer, followed by the Social Security Administration and the U.S. Department of the Treasury. A small number of paralegals own their own businesses and work as freelance legal assistants, contracting their services to attorneys or corporate legal departments.

## Job Outlook

Employment for paralegals and legal assistants is projected to grow much faster than the average for all occupations through 2014. Employers are trying to reduce costs and increase the availability and efficiency of legal services by hiring paralegals to perform tasks formerly carried out by lawyers. Besides new jobs created by employment growth, additional job openings will arise as people leave the occupation. Despite projections of rapid employment growth, competition for jobs should continue as many people seek to go into this profession; however, experienced, formally trained paralegals should have the best employment opportunities.

Private law firms will continue to be the largest employers of paralegals, but a growing array of other organizations, such as corporate legal departments, insurance companies, real estate and title insurance firms, and banks hire paralegals. Corporations



*Paralegals prepare written reports that attorneys use in determining how cases should be handled.*

in particular are boosting their in-house legal departments to cut costs. Demand for paralegals also is expected to grow as an expanding population increasingly requires legal services, especially in areas such as intellectual property, health care, international law, elder issues, criminal law, and environmental law. Paralegals who specialize in areas such as real estate, bankruptcy, medical malpractice, and product liability should have ample employment opportunities. The growth of prepaid legal plans also should contribute to the demand for legal services. Paralegal employment is expected to increase as organizations presently employing paralegals assign them a growing range of tasks and as paralegals are increasingly employed in small and medium-size establishments. A growing number of experienced paralegals are expected to establish their own businesses.

Job opportunities for paralegals will expand in the public sector as well. Community legal-service programs, which provide assistance to the poor, elderly, minorities, and middle-income families, will employ additional paralegals to minimize expenses and serve the most people. Federal, State, and local government agencies, consumer organizations, and the courts also should continue to hire paralegals in increasing numbers.

To a limited extent, paralegal jobs are affected by the business cycle. During recessions, demand declines for some discretionary legal services, such as planning estates, drafting wills, and handling real estate transactions. Corporations are less inclined to initiate certain types of litigation when falling sales and profits lead to fiscal belt tightening. As a result, full-time paralegals employed in offices adversely affected by a recession may be laid off or have their work hours reduced. However, during recessions, corporations and individuals are more likely to face other problems that require legal assistance, such as bankruptcies, foreclosures, and divorces. Paralegals, who provide many of the same legal services as lawyers at a lower cost, tend to fare relatively better in difficult economic conditions.

### Earnings

Earnings of paralegals and legal assistants vary greatly. Salaries depend on education, training, experience, the type and size of employer, and the geographic location of the job. In general, paralegals who work for large law firms or in large metropolitan areas earn more than those who work for smaller firms or in less populated regions. In addition to earning a salary, many paralegals receive bonuses. In May 2004, full-time wage and salary paralegals and legal assistants had median annual earnings, including bonuses, of \$39,130. The middle 50 percent earned between \$31,040 and \$49,950. The top 10 percent earned more than \$61,390, while the bottom 10 percent earned less than \$25,360. Median annual earnings in the industries employing the largest numbers of paralegals in May 2004 were as follows:

Federal Government .....	\$59,370
Local government .....	38,260
Legal services .....	37,870
State government .....	34,910

### Related Occupations

Among the other occupations that call for a specialized understanding of the law and the legal system, but do not require the extensive training of a lawyer, are law clerks; title examiners, abstractors, and searchers; claims adjusters, appraisers, examiners, and investigators; and occupational health and safety specialists and technicians.

### Sources of Additional Information

General information on a career as a paralegal can be obtained from:

► Standing Committee on Paralegals, American Bar Association, 321 North Clark St., Chicago, IL 60610. Internet: <http://www.abanet.org/legalservices/paralegals>

For information on the Certified Legal Assistant exam, schools that offer training programs in a specific State, and standards and guidelines for paralegals, contact:

► National Association of Legal Assistants, Inc., 1516 South Boston St., Suite 200, Tulsa, OK 74119. Internet: <http://www.nala.org>

Information on a career as a paralegal, schools that offer training programs, job postings for paralegals, the Paralegal Advanced Competency Exam, and local paralegal associations can be obtained from:

► National Federation of Paralegal Associations, 2517 Eastlake Ave. East, Suite 200, Seattle, WA 98102. Internet: <http://www.paralegals.org>

Information on paralegal training programs, including the pamphlet *How to Choose a Paralegal Education Program*, may be obtained from:

► American Association for Paralegal Education, 19 Mantua Rd., Mt. Royal, NJ 08061. Internet: <http://www.aafpe.org>

Information on obtaining positions as paralegals and legal assistants with the Federal Government is available from the Office of Personnel Management through USAJOBS, the Federal Government's official employment information system. This resource for locating and applying for job opportunities can be accessed through the Internet at <http://www.usajobs.opm.gov> or through an interactive voice response telephone system at (703) 724-1850 or TDD (978) 461-8404. These numbers are not tollfree, and charges may result.

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## Psychologists

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(O\*NET 19-3031.01, 19-3031.02, 19-3031.03, 19-3032.00, 19-3039.99)

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### Significant Points

- About 4 out of 10 psychologists are self-employed, compared with less than 1 out of 10 among all professional workers.
- Most specialists, including clinical and counseling psychologists, need a doctoral degree; school psychologists need an educational specialist degree, and industrial-organizational psychologists need a master's degree.
- Competition for admission to graduate psychology programs is keen.
- Overall employment of psychologists is expected to grow faster than the average for all occupations through 2014.

### Nature of the Work

Psychologists study the human mind and human behavior. Research psychologists investigate the physical, cognitive, emotional, or social aspects of human behavior. Psychologists in health service provider fields provide mental health care in hospitals, clinics, schools, or private settings. Psychologists employed in applied settings, such as business, industry, government, or nonprofits, provide training, conduct research, design systems, and act as advocates for psychology.

Like other social scientists, psychologists formulate hypotheses and collect data to test their validity. Research methods vary with the topic under study. Psychologists sometimes gather information through controlled laboratory experiments or by administering personality,

performance, aptitude, or intelligence tests. Other methods include observation, interviews, questionnaires, clinical studies, and surveys.

Psychologists apply their knowledge to a wide range of endeavors, including health and human services, management, education, law, and sports. In addition to working in a variety of settings, psychologists usually specialize in one of a number of different areas.

*Clinical psychologists*—who constitute the largest specialty—work most often in counseling centers, independent or group practices, hospitals, or clinics. They help mentally and emotionally disturbed clients adjust to life and may assist medical and surgical patients in dealing with illnesses or injuries. Some clinical psychologists work in physical rehabilitation settings, treating patients with spinal cord injuries, chronic pain or illness, stroke, arthritis, and neurological conditions. Others help people deal with times of personal crisis, such as divorce or the death of a loved one.

Clinical psychologists often interview patients and give diagnostic tests. They may provide individual, family, or group psychotherapy and may design and implement behavior modification programs. Some clinical psychologists collaborate with physicians and other specialists to develop and implement treatment and intervention programs that patients can understand and comply with. Other clinical psychologists work in universities and medical schools, where they train graduate students in the delivery of mental health and behavioral medicine services. Some administer community mental health programs.

Areas of specialization within clinical psychology include health psychology, neuropsychology, and geropsychology. *Health psychologists* promote good health through health maintenance counseling programs designed to help people achieve goals, such as stopping smoking or losing weight. *Neuropsychologists* study the relation between the brain and behavior. They often work in stroke and head injury programs. *Geropsychologists* deal with the special problems faced by the elderly. The emergence and growth of these specialties reflects the increasing participation of psychologists in providing direct services to special patient populations.

Often, clinical psychologists will consult with other medical personnel regarding the best treatment for patients, especially treatment that includes medication. Clinical psychologists generally are not permitted to prescribe medication to treat patients; only psychiatrists and other medical doctors may prescribe certain medications. (See the statement on physicians and surgeons elsewhere in the *Handbook*.) However, two States—Louisiana and New Mexico—currently allow clinical psychologists to prescribe medication with some limitations, and similar proposals have been made in other States.

*Counseling psychologists* use various techniques, including interviewing and testing, to advise people on how to deal with problems of everyday living. They work in settings such as university counseling centers, hospitals, and individual or group practices. (See also the statements on counselors and social workers elsewhere in the *Handbook*.)

*School psychologists* work with students in elementary and secondary schools. They collaborate with teachers, parents, and school personnel to create safe, healthy, and supportive learning environments for all students; address students' learning and behavior problems; improve classroom management strategies or parenting skills; counter substance abuse; assess students with learning disabilities and gifted and talented students to help determine the best way to educate them; and improve teaching, learning, and socialization strategies. They also may evaluate the effectiveness of academic programs, prevention programs, behavior management procedures, and other services provided in the school setting.

*Industrial-organizational psychologists* apply psychological principles and research methods to the workplace in the interest of improving productivity and the quality of worklife. They also are involved in research on management and marketing problems. They



*Psychologists who deal directly with patients must be emotionally stable, mature, and able to deal effectively with people.*

screen, train and counsel applicants for jobs, as well as perform organizational development and analysis. An industrial psychologist might work with management to reorganize the work setting in order to improve productivity or quality of life in the workplace. Industrial psychologists frequently act as consultants, brought in by management to solve a particular problem.

*Developmental psychologists* study the physiological, cognitive, and social development that takes place throughout life. Some specialize in behavior during infancy, childhood, and adolescence, or changes that occur during maturity or old age. Developmental psychologists also may study developmental disabilities and their effects. Increasingly, research is developing ways to help elderly people remain independent as long as possible.

*Social psychologists* examine people's interactions with others and with the social environment. They work in organizational consultation, marketing research, systems design, or other applied psychology fields. Prominent areas of study include group behavior, leadership, attitudes, and perception.

*Experimental or research psychologists* work in university and private research centers and in business, nonprofit, and governmental organizations. They study the behavior of both human beings and animals, such as rats, monkeys, and pigeons. Prominent areas of study in experimental research include motivation, thought, attention, learning and memory, sensory and perceptual processes, effects of substance abuse, and genetic and neurological factors affecting behavior.

### **Working Conditions**

A psychologist's subfield and place of employment determine his or her working conditions. Clinical, school, and counseling psychologists in private practice have their own offices and set their own hours. However, they often offer evening and weekend hours to accommodate their clients. Those employed in hospitals, nursing homes, and other health care facilities may work shifts that include evenings and weekends, while those who work in schools and clinics generally work regular hours.

Psychologists employed as faculty by colleges and universities divide their time between teaching and research and also may have

administrative responsibilities; many have part-time consulting practices. Most psychologists in government and industry have structured schedules.

Increasingly, many psychologists are working as part of a team, consulting with other psychologists and professionals. Many experience pressures because of deadlines, tight schedules, and overtime. Their routine may be interrupted frequently. Travel may be required in order to attend conferences or conduct research.

### **Training, Other Qualifications, and Advancement**

A doctoral degree usually is required for employment as an independent licensed clinical or counseling psychologist. Psychologists with a Ph.D. qualify for a wide range of teaching, research, clinical, and counseling positions in universities, health care services, elementary and secondary schools, private industry, and government. Psychologists with a Doctor of Psychology (Psy.D.) degree usually work in clinical positions or in private practices, but they also sometime teach, conduct research, or carry out administrative responsibilities.

A doctoral degree generally requires 5 to 7 years of graduate study. The Ph.D. degree culminates in a dissertation based on original research. Courses in quantitative research methods, which include the use of computer-based analysis, are an integral part of graduate study and are necessary to complete the dissertation. The Psy.D. may be based on practical work and examinations rather than a dissertation. In clinical or counseling psychology, the requirements for the doctoral degree include at least a 1-year internship.

A specialist degree is required in most States for an individual to work as a school psychologist, although a few States still credential school psychologists with master's degrees. A specialist (Ed.S.) degree in school psychology requires a minimum of 3 years of full-time graduate study (at least 60 graduate semester hours) and a 1-year internship. Because their professional practice addresses educational and mental health components of students' development, school psychologists' training includes coursework in both education and psychology.

Persons with a master's degree in psychology may work as industrial-organizational psychologists. They also may work as psychological assistants under the supervision of doctoral-level psychologists and may conduct research or psychological evaluations. A master's degree in psychology requires at least 2 years of full-time graduate study. Requirements usually include practical experience in an applied setting and a master's thesis based on an original research project.

Competition for admission to graduate psychology programs is keen. Some universities require applicants to have an undergraduate major in psychology. Others prefer only coursework in basic psychology with courses in the biological, physical, and social sciences and in statistics and mathematics.

A bachelor's degree in psychology qualifies a person to assist psychologists and other professionals in community mental health centers, vocational rehabilitation offices, and correctional programs. Bachelor's degree holders may work as research or administrative assistants for psychologists. Some work as technicians in related fields, such as marketing research. Many find employment in other areas, such as sales or business management.

In the Federal Government, candidates having at least 24 semester hours in psychology and one course in statistics qualify for entry-level positions. However, competition for these jobs is keen because this is one of the few areas in which one can work as a psychologist without an advanced degree.

The American Psychological Association (APA) presently accredits doctoral training programs in clinical, counseling, and school psychology, as well as accrediting institutions that provide internships for doctoral students in school, clinical, and counseling

psychology. The National Association of School Psychologists, with the assistance of the National Council for Accreditation of Teacher Education, also is involved in the accreditation of advanced degree programs in school psychology.

Psychologists in independent practice or those who offer any type of patient care—including clinical, counseling, and school psychologists—must meet certification or licensing requirements in all States and the District of Columbia. Licensing laws vary by State and by type of position and require licensed or certified psychologists to limit their practice to areas in which they have developed professional competence through training and experience. Clinical and counseling psychologists usually require a doctorate in psychology, the completion of an approved internship, and 1 to 2 years of professional experience. In addition, all States require that applicants pass an examination. Most State licensing boards administer a standardized test, and many supplement that with additional oral or essay questions. Some States require continuing education for renewal of the license.

The National Association of School Psychologists (NASP) awards the Nationally Certified School Psychologist (NCSP) designation, which recognizes professional competency in school psychology at a national, rather than State, level. Currently, 26 States recognize the NCSP and allow those with the certification to transfer credentials from one State to another without taking a new certification exam. In States that recognize the NCSP, the requirements for certification or licensure and those for the NCSP often are the same or similar. Requirements for the NCSP include the completion of 60 graduate semester hours in school psychology; a 1,200-hour internship, 600 hours of which must be completed in a school setting; and a passing score on the National School Psychology Examination.

The American Board of Professional Psychology (ABPP) recognizes professional achievement by awarding specialty certification, primarily in clinical psychology, clinical neuropsychology, and counseling, forensic, industrial-organizational, and school psychology. Candidates for ABPP certification need a doctorate in psychology, postdoctoral training in their specialty, five years of experience, professional endorsements, and a passing grade on an examination.

Aspiring psychologists who are interested in direct patient care must be emotionally stable, mature, and able to deal effectively with people. Sensitivity, compassion, good communication skills, and the ability to lead and inspire others are particularly important qualities for persons wishing to do clinical work and counseling. Research psychologists should be able to do detailed work both independently and as part of a team. Patience and perseverance are vital qualities, because achieving results in the psychological treatment of patients or in research may take a long time.

### **Employment**

Psychologists held about 179,000 jobs in 2004. Educational institutions employed about 1 out of 4 psychologists in positions other than teaching, such as counseling, testing, research, and administration. Almost 2 out of 10 were employed in health care, primarily in offices of mental health practitioners, physicians' offices, outpatient mental health and substance abuse centers, and private hospitals. Government agencies at the State and local levels employed psychologists in public hospitals, clinics, correctional facilities, and other settings.

After several years of experience, some psychologists—usually those with doctoral degrees—enter private practice or set up private research or consulting firms. About 4 out of 10 psychologists were self-employed in 2004, compared with less than 1 out of 10 among all professional workers.

In addition to the previously mentioned jobs, many psychologists held faculty positions at colleges and universities and as high school psychology teachers. (See the statements on teachers—postsecondary and teachers—preschool, kindergarten, elementary, middle, and secondary elsewhere in the *Handbook*.)

### Job Outlook

Employment of psychologists is expected to grow faster than the average for all occupations through 2014, because of increased demand for psychological services in schools, hospitals, social service agencies, mental health centers, substance abuse treatment clinics, consulting firms, and private companies.

Among the specialties in this field, school psychologists—especially those with a specialist degree or higher—may enjoy the best job opportunities. Growing awareness of how students' mental health and behavioral problems, such as bullying, affect learning is increasing demand for school psychologists to offer student counseling and mental health services. Clinical and counseling psychologists will be needed to help people deal with depression and other mental disorders, marriage and family problems, job stress, and addiction. The rise in health care costs associated with unhealthy lifestyles, such as smoking, alcoholism, and obesity, has made prevention and treatment more critical. An increase in the number of employee assistance programs, which help workers deal with personal problems, also should spur job growth in clinical and counseling specialties. Industrial-organizational psychologists will be in demand to help to boost worker productivity and retention rates in a wide range of businesses. Industrial-organizational psychologists will help companies deal with issues such as workplace diversity and antidiscrimination policies. Companies also will use psychologists' expertise in survey design, analysis, and research to develop tools for marketing evaluation and statistical analysis.

Demand should be particularly strong for persons holding doctorates from leading universities in applied specialties—such as counseling, health, and school psychology. Psychologists with extensive training in quantitative research methods and computer science may have a competitive edge over applicants without background.

Master's degree holders in fields other than industrial-organizational psychology will face keen competition for jobs, because of the limited number of positions that require only a master's degree. Master's degree holders may find jobs as psychological assistants or counselors, providing mental health services under the direct supervision of a licensed psychologist. Still others may find jobs involving research and data collection and analysis in universities, government, or private companies.

Opportunities directly related to psychology will be limited for bachelor's degree holders. Some may find jobs as assistants in rehabilitation centers or in other jobs involving data collection and analysis. Those who meet State certification requirements may become high school psychology teachers.

### Earnings

Median annual earnings of wage and salary clinical, counseling, and school psychologists in May 2004 were \$54,950. The middle 50 percent earned between \$41,850 and \$71,880. The lowest 10 percent earned less than \$32,280, and the highest 10 percent earned more than \$92,250. Median annual earnings in the industries employing the largest numbers of clinical, counseling, and school psychologists in May 2004 were:

Offices of other health practitioners.....	\$64,460
Elementary and secondary schools .....	58,360
Outpatient care centers.....	46,850
Individual and family services .....	42,640

Median annual earnings of wage and salary industrial-organizational psychologists in May 2004 were \$71,400. The middle 50 percent earned between \$56,880 and \$93,210. The lowest 10 percent earned less than \$45,620, and the highest 10 percent earned more than \$125,560.

### Related Occupations

Psychologists are trained to conduct research and teach, evaluate, counsel, and advise individuals and groups with special needs. Others who do this kind of work include clergy, counselors, physicians and surgeons, social workers, sociologists, and special education teachers.

### Sources of Additional Information

For information on careers, educational requirements, financial assistance, and licensing in all fields of psychology, contact:

► American Psychological Association, Research Office and Education Directorate, 750 1st St. N.E., Washington, DC 20002-4242. Internet: <http://www.apa.org/students>

For information on careers, educational requirements, certification, and licensing of school psychologists, contact:

► National Association of School Psychologists, 4340 East West Hwy., Suite 402, Bethesda, MD 20814. Internet: <http://www.nasponline.org>

Information about State licensing requirements is available from:

► Association of State and Provincial Psychology Boards, P.O. Box 241245, Montgomery, AL 36124-1245. Internet: <http://www.asppb.org>

Information about psychology specialty certifications is available from:

► American Board of Professional Psychology, Inc., 300 Drayton St., 3rd Floor, Savannah, GA 31401. Internet: <http://www.abpp.org>

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## Social Scientists, Other

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(O\*NET 19-3041.00, 19-3091.01, 19-3091.02, 19-3092.00, 19-3093.00, 19-3094.00)

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### Significant Points

- About half worked for Federal, State, and local governments, mostly for the Federal Government.
- The educational attainment of social scientists is among the highest of all occupations.
- Anthropologists and archaeologists will experience average growth, but slower-than-average employment growth is expected for geographers, historians, political scientists, and sociologists because they enjoy fewer opportunities outside of government and academic settings.
- Competition for jobs will remain keen for all specialties because many of these social scientists compete for jobs with other workers, such as psychologists, statisticians, and market and survey researchers.

### Nature of the Work

The major social science occupations covered in this statement include anthropologists, archaeologists, geographers, historians, political scientists, and sociologists. (Economists, market and survey researchers, psychologists, and urban and regional planners are covered elsewhere in the *Handbook*.)

Social scientists study all aspects of society—from past events and achievements to human behavior and relationships among groups. Their research provides insights that help us understand different ways in which individuals and groups make decisions,

exercise power, and respond to change. Through their studies and analyses, social scientists suggest solutions to social, business, personal, governmental, and environmental problems.

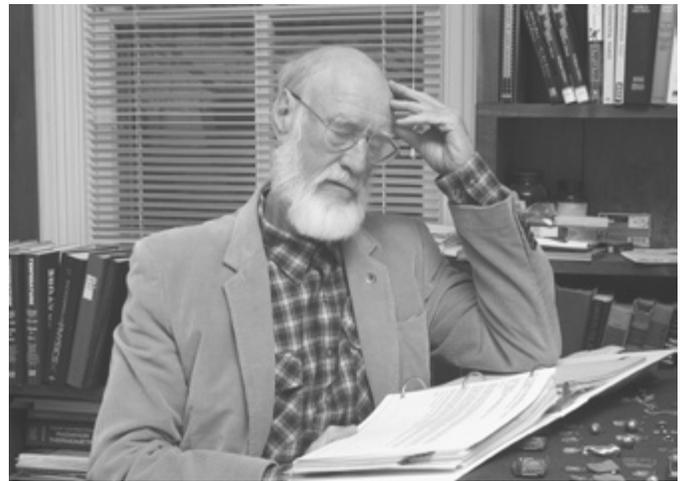
Research is a major activity of many social scientists, who use a variety of methods to assemble facts and construct theories. Applied research usually is designed to produce information that will enable people to make better decisions or manage their affairs more effectively. Collecting information takes many forms, including interviews and questionnaires to gather demographic and opinion data; living and working among the population being studied; performing field investigations; analyzing historical records and documents; experimenting with human or animal subjects in a laboratory; and preparing and interpreting maps and computer graphics. The work of specialists in social science varies greatly, although specialists in one field may find that their research overlaps work being conducted in another discipline.

*Anthropologists* study the origin and the physical, social, and cultural development and behavior of humans. They may examine the way of life, archaeological remains, language, or physical characteristics of people in various parts of the world. Some compare the customs, values, and social patterns of different cultures. Anthropologists usually concentrate in sociocultural anthropology, archaeology, linguistics, or biophysical anthropology. Sociocultural anthropologists study the customs, cultures, and social lives of groups in settings that range from unindustrialized societies to modern urban centers. Linguistic anthropologists investigate the role of, and changes to, language over time in various cultures. Biophysical anthropologists research the evolution of the human body, look for the earliest evidences of human life, and analyze how culture and biology influence one another. Physical anthropologists examine human remains found at archaeological sites in order to understand population demographics and factors that affected these populations, such as nutrition and disease.

*Archaeologists* examine and recover material evidence, such as the ruins of buildings, tools, pottery, and other objects remaining from past human cultures in order to determine the chronology, history, customs, and living habits of earlier civilizations. Most anthropologists and archaeologists specialize in a particular region of the world.

*Geographers* analyze distributions of physical and cultural phenomena on local, regional, continental, and global scales. Economic geographers study the distribution of resources and economic activities. Political geographers are concerned with the relationship of geography to political phenomena, whereas cultural geographers study the geography of cultural phenomena. Physical geographers examine variations in climate, vegetation, soil, and landforms and their implications for human activity. Urban and transportation geographers study cities and metropolitan areas, while regional geographers study the physical, economic, political, and cultural characteristics of regions ranging in size from a congressional district to entire continents. Medical geographers investigate health care delivery systems, epidemiology (the study of the causes and control of epidemics), and the effect of the environment on health. Most geographers use geographic information systems (GIS) technology to assist with their work. For example, they may use GIS to create computerized maps that can track information such as population growth, traffic patterns, environmental hazards, natural resources, and weather patterns, after which they use the information to advise governments on the development of houses, roads, or landfills.

*Historians* research, analyze, and interpret the past. They use many sources of information in their research, including government and institutional records, newspapers and other periodicals, photographs, interviews, films, and unpublished manuscripts such as personal diaries and letters. Historians usually specialize in a country or region, a particular period, or a particular field, such as social, intellectual, cultural, political, or diplomatic history. Biographers



*Social scientists often read and write research articles or reports.*

collect detailed information on individuals. Other historians help study and preserve archival materials, artifacts, and historic buildings and sites.

*Political scientists* study the origin, development, and operation of political systems and public policy. They conduct research on a wide range of subjects, such as relations between the United States and other countries, the institutions and political life of nations, the politics of small towns or a major metropolis, and the decisions of the U.S. Supreme Court. Studying topics such as public opinion, political decision making, ideology, and public policy, they analyze the structure and operation of governments, as well as various political entities. Depending on the topic, a political scientist might conduct a public-opinion survey, analyze election results or public documents, or interview public officials.

*Sociologists* study society and social behavior by examining the groups and social institutions people form, as well as various social, religious, political, and business organizations. They also study the behavior of, and interaction among, groups, trace their origin and growth, and analyze the influence of group activities on individual members. Sociologists are concerned with the characteristics of social groups, organizations, and institutions; the ways individuals are affected by each other and by the groups to which they belong; and the effect of social traits such as gender, age, or race on a person's daily life. The results of sociological research aid educators, lawmakers, administrators, and others who are interested in resolving social problems and formulating public policy.

Most sociologists work in one or more specialties, such as social organization, stratification, and mobility; racial and ethnic relations; education; the family; social psychology; urban, rural, political, and comparative sociology; gender relations; demography; gerontology; criminology; and sociological practice.

### **Working Conditions**

Most social scientists have regular hours. Generally working behind a desk, either alone or in collaboration with other social scientists, they read and write research articles or reports. Many experience the pressures of writing and publishing, as well as those associated with deadlines and tight schedules. Sometimes they must work overtime, for which they usually are not compensated. Social scientists often work as an integral part of a research team, among whose members good communications skills are important. Travel may be necessary to collect information or attend meetings. Social scientists on foreign assignment must adjust to unfamiliar cultures, climates, and languages.

Some social scientists do fieldwork. For example, anthropologists, archaeologists, and geographers may travel to remote areas, live among the people they study, learn their languages, and stay for long periods at the site of their investigations. They may work under rugged conditions, and their work may involve strenuous physical exertion.

Social scientists employed by colleges and universities usually have flexible work schedules, often dividing their time among teaching, research, writing, consulting, and administrative responsibilities.

### **Training, Other Qualifications, and Advancement**

The educational attainment of social scientists is among the highest of all occupations. The Ph.D. or an equivalent degree is a minimum requirement for most positions in colleges and universities and is important for advancement to many top-level nonacademic research and administrative posts. Graduates with master's degrees in applied specialties usually have better opportunities outside of colleges and universities, although the situation varies by field. Graduates with a master's degree in a social science may qualify for teaching positions in community colleges. Bachelor's degree holders have limited opportunities and, in most social science occupations, do not qualify for "professional" positions. The bachelor's degree does, however, provide a suitable background for many different kinds of entry-level jobs, such as research assistant, administrative aide, or management or sales trainee. With the addition of sufficient education courses, social science graduates also can qualify for teaching positions in secondary and elementary schools.

Training in statistics and mathematics is essential for many social scientists. Mathematical and quantitative research methods increasingly are being used in geography, political science, and other fields. The ability to utilize computers for research purposes is mandatory in most disciplines. Most geographers—and increasing numbers of archaeologists—also will need to be familiar with GIS technology.

Many social science students find that internships or field experience is beneficial. Numerous local museums, historical societies, government agencies, and other organizations offer internships or volunteer research opportunities. Archaeological field schools instruct future anthropologists, archaeologists, and historians in how to excavate, record, and interpret historical sites.

Depending on their jobs, social scientists may need a wide range of personal characteristics. Intellectual curiosity and creativity are fundamental personal traits, because social scientists constantly seek new information about people, things, and ideas. The ability to think logically and methodically is important to a political scientist comparing, for example, the merits of various forms of government. Objectivity, having an open mind, and systematic work habits are important in all kinds of social science research. Perseverance is essential for an anthropologist, who might have to spend years studying artifacts from an ancient civilization before making a final analysis and interpretation. Excellent written and oral communication skills also are necessary for all these professionals.

### **Employment**

Social scientists held about 18,000 jobs in 2004. Many worked as researchers, administrators, and counselors for a wide range of employers. About half worked for Federal, State, and local governments, mostly in the Federal Government. Other employers included scientific research and development services; management, scientific, and technical consulting services; business, professional, labor, political, and similar organizations; and architectural, engineering, and related firms.

Many individuals with training in a social science discipline teach in colleges and universities and in secondary and elementary schools.

(For more information, see teachers—postsecondary and teachers—preschool, kindergarten, elementary, middle, and secondary elsewhere in the *Handbook*.) The proportion of social scientists who teach varies by specialty: for example, the academic world usually is a more important source of jobs for graduates in history than for graduates in most other social science fields.

### **Job Outlook**

Overall employment of social scientists is expected to grow more slowly than the average for all occupations through 2014. However, projected growth rates vary by specialty. Anthropologists and archaeologists will experience average employment growth. Employment of geographers, historians, political scientists, and sociologists will grow more slowly than average, mainly because these workers enjoy fewer opportunities outside of government and academic settings.

Competition will remain keen for social science positions. Many jobs in policy, research, or marketing for which social scientists qualify are not advertised exclusively as social scientist positions. Because of the wide range of skills and knowledge possessed by the social scientists discussed in this *Handbook* statement, many compete for jobs with other workers, such as market and survey researchers, psychologists, engineers, urban and regional planners, and statisticians.

A few social scientists will find opportunities as university faculty, although competition for these jobs also will remain keen. Usually, there are more graduates than available faculty positions, although retirements among faculty are expected to rise in the next few years. The growing importance and popularity of social science subjects in secondary schools is strengthening the demand for social science teachers at that level.

Anthropologists and archaeologists will see the majority of their employment growth in the management, scientific, and technical consulting services industry. Anthropologists who work as consultants often apply anthropological knowledge and methods to problems ranging from economic development issues to forensics. Also, as construction projects increase, archaeologists will be needed to perform preliminary excavations in order to preserve historical sites and artifacts.

Geographers will have opportunities to utilize their skills to advise government, real estate developers, utilities, and telecommunications firms on where to build new roads, buildings, power plants, and cable lines. Geographers also will advise on environmental matters, such as where to build a landfill or preserve wetland habitats. Geographers with a background in GIS will find numerous job opportunities applying GIS technology in nontraditional areas, such as emergency assistance, where GIS can track locations of ambulances, police, and fire rescue units and their proximity to the emergency. Workers in these jobs may not necessarily be called "geographers", but instead may be referred to by a different title, such as "GIS analyst" or "GIS specialist." GIS technology also will be utilized in areas of growing importance, such as homeland security and defense.

Historians, political scientists, and sociologists will find jobs in policy or research. Historians may find opportunities with historic preservation societies as public interest in preserving and restoring historical sites increases. Political scientists will be able to utilize their knowledge of political institutions to further the interests of nonprofit, political lobbying, and social organizations. Sociologists may find work conducting policy research for consulting firms and nonprofit organizations, and their knowledge of society and social behavior may be used by a variety of companies in product development, marketing, and advertising. Job growth will be very slow in the Federal Government, a key employer of social scientists.

## Earnings

In May 2004, anthropologists and archaeologists had median annual earnings of \$43,890; geographers, \$58,970; historians, \$44,490; political scientists, \$86,750; and sociologists, \$57,870.

In the Federal Government, social scientists with a bachelor's degree and no experience could start at a yearly salary of \$24,677 or \$30,567 in 2005, depending on their college records. Those with a master's degree could start at \$37,390, and those with a Ph.D. degree could begin at \$45,239, while some individuals with experience and an advanced degree could start at \$54,221. Beginning salaries were slightly higher in selected areas of the country where the prevailing local pay level was higher.

## Related Occupations

Social scientists' duties and training outlined in this statement are similar to those of other occupations covered elsewhere in the *Handbook*, including other social science occupations: economists, market and survey researchers, psychologists, and urban and regional planners. Many social scientists conduct surveys, study social problems, teach, and work in museums, performing tasks similar to those of statisticians; counselors; social workers; teachers—postsecondary; teachers—pre-school, kindergarten, elementary, middle, and secondary; and archivists, curators, and museum technicians.

Political scientists are concerned with the function of government, including the legal system, as are lawyers; paralegals and legal assistants; and judges, magistrates, and other judicial workers. Many political scientists analyze and report on current events, much as do news analysts, reporters, and correspondents.

Along with conservation scientists and foresters, atmospheric scientists, and environmental scientists and hydrologists, geographers are concerned with the earth's environment and natural resources. Geographers also use GIS computer technology to make maps. Other occupations with similar duties are surveyors, cartographers, photogrammetrists, and surveying technicians; computer systems analysts; and computer scientists and database administrators.

## Sources of Additional Information

Detailed information about economists, market and survey researchers, psychologists, and urban and regional planners is presented elsewhere in the *Handbook*.

For information about careers in anthropology, contact:

➤ American Anthropological Association, 2200 Wilson Blvd., Suite 600, Arlington, VA 22201. Internet: <http://www.aaanet.org>

For information about careers in archaeology, contact:

➤ Society for American Archaeology, 900 2nd St. N.E., Suite 12, Washington, DC 20002-3560. Internet: <http://www.saa.org>

➤ Archaeological Institute of America, 656 Beacon St., 6th Floor, Boston, MA 02215-2006. Internet: <http://www.archaeological.org>

For information about careers in geography, contact:

➤ Association of American Geographers, 1710 16th St. N.W., Washington, DC 20009-3198. Internet: <http://www.aag.org>

Information on careers for historians is available from:

➤ American Historical Association, 400 A St. S.E., Washington, DC 20003-3889. Internet: <http://www.historians.org>

For information about careers in political science, contact:

➤ American Political Science Association, 1527 New Hampshire Ave. N.W., Washington, DC 20036-1206. Internet: <http://www.apsanet.org>

➤ National Association of Schools of Public Affairs and Administration, 1120 G St. N.W., Suite 730, Washington, DC 20005-3869. Internet: <http://www.naspaa.org>

Information about careers in sociology is available from:

➤ American Sociological Association, 1307 New York Ave. N.W., Suite 700, Washington, DC 20005-4712. Internet: <http://www.asanet.org>

# Urban and Regional Planners

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## Significant Points

- Local governments employ 7 out of 10 urban and regional planners.
- Most entry-level jobs require a master's degree; bachelor's degree holders may find some entry-level positions, but advancement opportunities are limited.
- Most new jobs will be in affluent, rapidly growing urban and suburban communities.

## Nature of the Work

Planners develop long- and short-term plans to use land for the growth and revitalization of urban, suburban, and rural communities, while helping local officials make decisions concerning social, economic, and environmental problems. Because local governments employ the majority of urban and regional planners, they often are referred to as community, regional, or city planners.

Planners promote the best use of a community's land and resources for residential, commercial, institutional, and recreational purposes. Planners may be involved in various other activities, including making decisions relating to establishing alternative public transportation systems, developing resources, and protecting ecologically sensitive regions. Urban and regional planners address issues such as traffic congestion, air pollution, and the effects of growth and change on a community. They may formulate plans relating to the construction of new school buildings, public housing, or other kinds of infrastructure. Some planners are involved in environmental issues ranging from pollution control to wetland preservation, forest conservation, and the location of new landfills. Planners also may be involved in drafting legislation on environmental, social, and economic issues, such as sheltering the homeless, planning a new park, or meeting the demand for new correctional facilities.

Planners examine proposed community facilities, such as schools, to be sure that these facilities will meet the changing demands placed upon them over time. They keep abreast of economic and legal issues involved in zoning codes, building codes, and environmental regulations. They ensure that builders and developers follow these codes and regulations. Planners also deal with land-use issues created by population movements. For example, as suburban growth and economic development create more new jobs outside cities, the need for public transportation that enables workers to get to those jobs increases. In response, planners develop transportation models and explain their details to planning boards and the general public.

Before preparing plans for community development, planners report on the current use of land for residential, business, and community purposes. Their reports include information on the location and capacity of streets, highways, airports, water and sewer lines, schools, libraries, and cultural and recreational sites. They also provide data on the types of industries in the community, the characteristics of the population, and employment and economic trends. Using this information, along with input from citizens' advisory committees, planners design the layout of land uses for buildings and other facilities, such as subway lines and stations. Planners prepare reports showing how their programs can be carried out and what they will cost.

Planners use computers to record and analyze information and to prepare reports and recommendations for government executives and others. Computer databases, spreadsheets, and analytical techniques are utilized to project program costs and forecast future trends in employment, housing, transportation, or population. Computerized geographic information systems enable planners to map land areas, to overlay maps with geographic variables such as population density, and to combine or manipulate geographic information to produce alternative plans for land use or development.

Urban and regional planners often confer with land developers, civic leaders, and public officials and may function as mediators in community disputes, presenting alternatives that are acceptable to opposing parties. Planners may prepare material for community relations programs, speak at civic meetings, and appear before legislative committees and elected officials to explain and defend their proposals.

In large organizations, planners usually specialize in a single area, such as transportation, demography, housing, historic preservation, urban design, environmental and regulatory issues, or economic development. In small organizations, planners do various kinds of planning.

### **Working Conditions**

Urban and regional planners often travel to inspect the features of land under consideration for development or regulation, including its current use and the types of structures on it. Some local government planners involved in site development inspections spend most of their time in the field. Although most planners have a scheduled 40-hour workweek, they frequently attend evening or weekend meetings or public hearings with citizens' groups. Planners may experience the pressure of deadlines and tight work schedules, as well as political pressure generated by interest groups affected by proposals related to urban development and land use.

### **Training, Other Qualifications, and Advancement**

For jobs as urban and regional planners, employers prefer workers who have advanced training. Most entry-level jobs in Federal, State, and local government agencies require a master's degree from an accredited program in urban or regional planning or a master's degree in a related field, such as urban design or geography. A bachelor's degree from an accredited planning program, coupled with a master's degree in architecture, landscape architecture, or civil engineering, is good preparation for entry-level planning jobs in various areas, including urban design, transportation, and the environment. A master's degree from an accredited planning program provides the best training for a wide range of planning fields. Although graduates from one of the limited number of accredited bachelor's degree programs qualify for some entry-level positions, their advancement opportunities often are limited, unless they acquire an advanced degree.

Courses in related disciplines, such as architecture, law, earth sciences, demography, economics, finance, health administration, geographic information systems, and management, are highly recommended. Because familiarity with computer models and statistical techniques is important, courses in statistics and computer science also are recommended.

In 2005, 68 colleges and universities offered an accredited master's degree program, and 15 offered an accredited bachelor's degree program, in urban or regional planning. Accreditation for these programs is from the Planning Accreditation Board, which consists of representatives of the American Institute of Certified Planners, the

American Planning Association, and the Association of Collegiate Schools of Planning. Most graduate programs in planning require a minimum of 2 years of study.

Specializations most commonly offered by planning schools are environmental planning, land use and comprehensive planning, economic development, housing, historic preservation, and social planning. Other popular offerings include community development, transportation, and urban design. Graduate students spend considerable time in studios, workshops, and laboratory courses, learning to analyze and solve planning problems. They often are required to work in a planning office part time or during the summer. Local government planning offices frequently offer students internships, providing experience that proves invaluable in obtaining a full-time planning position after graduation.

The American Institute of Certified Planners, a professional institute within the American Planning Association, grants certification to individuals who have the appropriate combination of education and professional experience and who pass an examination. Certification may be helpful for promotion.

Planners must be able to think in terms of spatial relationships and visualize the effects of their plans and designs. They should be flexible and be able to reconcile different viewpoints and make constructive policy recommendations. The ability to communicate effectively, both orally and in writing, is necessary for anyone interested in this field.

After a few years of experience, planners may advance to assignments requiring a high degree of independent judgment, such as designing the physical layout of a large development or recommending policy and budget options. Some public-sector planners are promoted to community planning director and spend a great deal of time meeting with officials, speaking to civic groups, and supervising a staff. Further advancement occurs through a transfer to a larger jurisdiction with more complex problems and greater responsibilities or into related occupations, such as director of community or economic development.

### **Employment**

Urban and regional planners held about 32,000 jobs in 2004. About 7 out of 10 were employed by local governments. Companies involved with architectural, engineering, and related services, as well as management, scientific, and technical consulting services, employ an increasing proportion of planners in the private sector. Others are employed in State government agencies dealing with housing,



*Urban and regional planners develop plans to use land for the growth and revitalization of communities.*

transportation, or environmental protection, and a small number work for the Federal Government.

### **Job Outlook**

Employment of urban and regional planners is expected to grow about as fast as the average for all occupations through 2014. Employment growth will be driven by the need for State and local governments to provide public services such as regulation of commercial development, the environment, transportation, housing, and land use and development for an expanding population. Nongovernmental initiatives dealing with historic preservation and redevelopment will provide additional openings. Some job openings also will arise from the need to replace experienced planners who transfer to other occupations, retire, or leave the labor force for other reasons. Graduates with a master's degree from an accredited program should have an advantage in the job market.

Most new jobs for urban and regional planners will be in local government, as planners will be needed to address an array of problems associated with population growth, especially in affluent, rapidly expanding communities. For example, new housing developments require roads, sewer systems, fire stations, schools, libraries, and recreation facilities that must be planned for in the midst of a consideration of budgetary constraints. Small-town chambers of commerce, economic development authorities, and tourism bureaus may hire planners, preferably with some background in marketing and public relations.

The fastest job growth for urban and regional planners will occur in the private sector, primarily in professional, scientific, and technical services. For example, planners may be employed by these firms to help design security measures for a building that meet a desired security level, but that also are subtle and blend in with the surrounding area. However, because the private sector employs fewer than 2 out of 10 urban and regional planners, not as many new jobs will be created in the private sector as in government.

### **Earnings**

Median annual earnings of urban and regional planners were \$53,450 in May 2004. The middle 50 percent earned between \$41,950 and \$67,530. The lowest 10 percent earned less than \$33,840, and the highest 10 percent earned more than \$82,610. Median annual earnings in local government, the industry employing the largest number of urban and regional planners, were \$52,520.

### **Related Occupations**

Urban and regional planners develop plans for the growth of urban, suburban, and rural communities. Others whose work is similar include architects, civil engineers, environmental engineers, landscape architects, and geographers.

### **Sources of Additional Information**

Information on careers, salaries, and certification in urban and regional planning is available from:

► American Planning Association, 1776 Massachusetts Ave. N.W., Washington, DC 20036-1904. Internet: <http://www.planning.org>

Information on accredited urban and regional planning programs is available from:

► Association of Collegiate Schools of Planning, 6311 Mallard Trace, Tallahassee, FL 32312. Internet: <http://www.acsp.org>