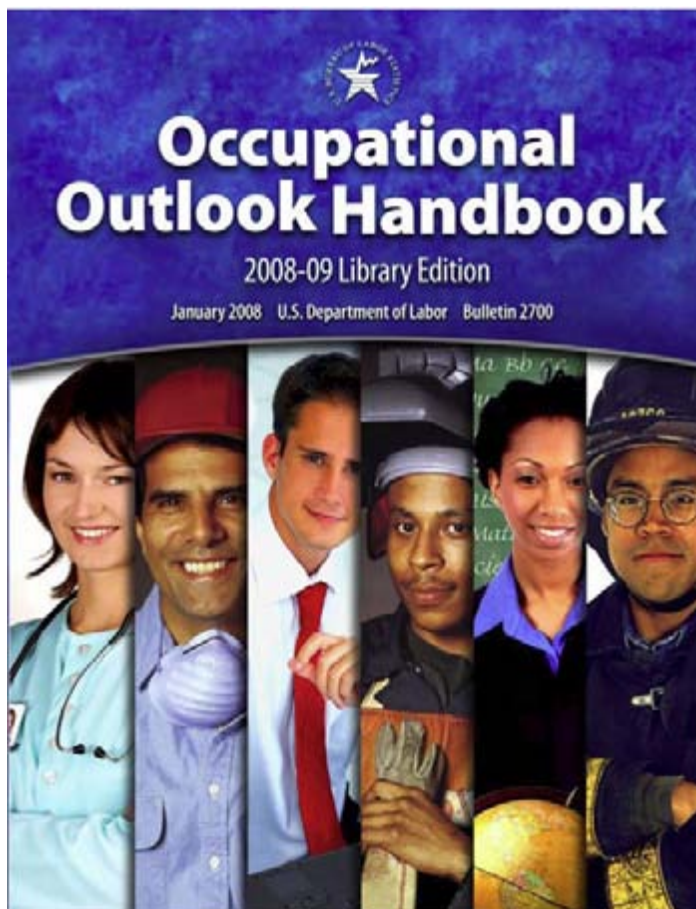


Legal and Social Science Occupations



Reprinted from the
Occupational Outlook Handbook, 2008-09 Edition

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

Archivists, Curators, and Museum Technicians

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

Significant Points

- Most worked in museums, historical sites, and similar venues; in educational institutions; or in Federal, State, or local government.
- A graduate degree and related work experience are required for most positions; museum technicians may enter with a bachelor's degree.
- Keen competition is expected for most jobs because qualified applicants generally outnumber job openings.

Nature of the Work

Archivists, curators, and museum technicians work for museums, governments, zoos, colleges and universities, corporations, and other institutions that require experts to preserve important records and artifacts. These workers preserve important objects and documents, including works of art, transcripts of meetings, photographs, coins and stamps, living and preserved plants and animals, and historic objects, including, for example, turn-of-the-century immigration records, buildings, and sites.

Archivists and curators plan and oversee the arrangement, cataloguing, and exhibition of collections and, along with technicians and conservators, maintain collections. They acquire and preserve important documents and other valuable items for permanent storage or display. They also describe, catalogue, and analyze, valuable objects for the benefit of researchers and the public.

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, and electronic data files in a wide variety of formats, as well as more traditional paper records, letters, and documents.

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, computer disk, or DVD. They also may be copied onto some other format to protect the original and to make the records more ac-

cessible 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 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 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 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. In addition to their conservation work, conservators participate in outreach programs, research topics in their area of specialty, and write articles for scholarly journals.

Museum technicians assist curators by performing various preparatory and maintenance tasks on museum items. They also answer public inquiries and assist curators and outside scholars in using collections. Archives technicians help archivists organize, maintain, and provide access to historical documentary materials.



Keen competition is expected for most jobs because qualified applicants generally outnumber job openings.

Work environment. 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. Conservators work in conservation laboratories. The size of the objects in the collection they are working with determines the amount of effort involved in lifting, reaching, and moving objects.

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. Museum technicians often start work with a bachelor's degree. While completing their formal education, many archivists and curators work in archives or museums to gain "hands-on" experience.

Education and training. 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. Many colleges and universities offer courses or practical training in archival techniques as part of their history, library science, or other curriculum. 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.

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 (museology) 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. 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. For some positions, an internship of full-time museum work supplemented by courses in museum practices is needed.

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. 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.

Certification and other qualifications. The Academy of Certified Archivists offers voluntary certification for archivists. The designation "Certified Archivist" can be 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 skills 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

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Archivists, curators, and museum technicians	25-4010	27,000	33,000	5,000	18
Archivists	25-4011	6,400	7,400	900	14
Curators	25-4012	10,000	13,000	2,400	23
Museum Technicians and Conservators.....	25-4013	11,000	12,000	1,700	16

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

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

Curatorial positions often require knowledge in a number of fields. For historic and artistic conservation, courses in chemistry, physics, and art are desirable. 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.

Advancement. Continuing education is available through meetings, conferences, and workshops sponsored by archival, historical, and museum associations. Some larger organizations, such as the National Archives in Washington, D.C., offer such training in-house.

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.

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.

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.

Employment

Archivists, curators, and museum technicians held about 27,000 jobs in 2006. About 38 percent were employed in museums, historical sites, and similar institutions, and 18 percent worked for State and private educational institutions, mainly college and university libraries. Nearly 31 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. Depart-

ment 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

Faster than average employment growth is expected through 2016. Keen competition is expected for most jobs as archivists, curators, and museum technicians because qualified applicants generally outnumber job openings.

Employment change. Employment of archivists, curators, and museum technicians is expected to increase 18 percent over the 2006-16 decade, faster than the average for all occupations. Jobs for archivists are expected to increase as public and private organizations require organization of and access to increasing volumes of records and information. Public interest in science, art, history, and technology will continue, creating opportunities for curators, conservators, and museum technicians. Museum attendance has held steady in recent years, many museums are financially healthy, and many have pursued building and renovation projects.

There has been an increase in self-employment among conservators, as many museums move toward hiring these workers on contract rather than keeping them permanently on staff. This trend is expected to continue.

Demand for archivists who specialize in electronic records and records management will grow more rapidly than the demand for archivists who specialize in older media formats.

Job prospects. 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. Opportunities for

those who manage electronic records are expected to be better than for those who specialize in older media formats.

Curator jobs, in particular, are attractive to many people, and many applicants have the necessary training and knowledge of the subject. But because there are relatively few openings, 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.

Conservators also can expect competition for jobs. Competition is stiff for the limited number of openings in conservation graduate 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.

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 number of archivists and curators who move to other occupations is relatively low, the need to replace workers who retire will create some additional job openings.

Earnings

Median annual earnings of archivists in May 2006 were \$40,730. The middle 50 percent earned between \$30,610 and \$53,990. The lowest 10 percent earned less than \$23,890, and the highest 10 percent earned more than \$73,060. Median annual earnings of curators in May 2006 were \$46,300. The middle 50 percent earned between \$34,410 and \$61,740. The lowest 10 percent earned less than \$26,320, and the highest 10 percent earned more than \$80,030. Median annual earnings of museum technicians and conservators in May 2006 were \$34,340. The middle 50 percent earned between \$26,360 and \$46,120. The lowest 10 percent earned less than \$20,600, and the highest 10 percent earned more than \$61,270.

In 2007, the average annual salary for archivists in the Federal Government was \$79,199; for museum curators, \$80,780; for museum specialists and technicians, \$58,855; and for archives technicians, \$44,547.

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-faic.org>

For information about archivists and archivist certification, contact:

► Academy of Certified Archivists, 90 State St., Suite 1009, Albany, NY 12207. Internet:

<http://www.certifiedarchivists.org>

For information about government archivists, contact:

► National Association of Government Archivists and Records Administrators, 90 State St., Suite 1009, 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 toll free, and charges may result.

Court Reporters

(O*NET 23-2091.00)

Significant Points

- Job prospects are expected to be excellent, especially for those with certification.
- Demand for real-time broadcast captioning and translating will spur employment growth.
- The amount of training required to become a court reporter varies by specialization; licensure requirements vary by State.

Nature of the Work

Court reporters usually create verbatim transcripts of speeches, conversations, legal proceedings, meetings, and other events. Sometimes written accounts of spoken words are necessary for correspondence, records, or legal proof, and court reporters provide those accounts. They 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 provide 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 once 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 (CAT). In real-time court reporting, the stenotype machine is linked to computers for real-time captioning, often of television programs. As the reporter keys in the symbols, the spoken word instantly appear as text on the screen.

Another method of court reporting is electronic reporting. This method uses 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 written transcript of the recorded proceeding.

Yet another method of court reporting is 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, and prepare transcripts afterwards.

Court reporters are responsible for a number of duties both before and after transcribing events. Stenographic or voice writing reporters must create and maintain the computer dictionary that they use to translate their keystroke codes 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, stenographic reporters must edit the computer-generated translation for correct grammar. All reporters are responsible for accurate identification of proper names and places. Electronic reporters ensure that the record or testimony is discernible. Reporters usually prepare written transcripts, 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, voice files, commonly referred to as “stenograms”, or audio recordings in paper or digital format.

Although many court reporters record official proceedings in the courtroom, others work outside the courts. For example, court reporters—called webcasters—capture sales meetings, press conferences, product introductions, and technical training seminars and instantly transmit them to all parties involved via computers. As participants speak into telephones or microphones, the words appear on all of the participants’ computer monitors simultaneously. 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 broadcast

captioners. They work for television networks or cable stations, captioning news, emergency broadcasts, sporting events, and other programming.

A version of the captioning process that allows reporters to provide more personalized services for deaf and hard-of-hearing people is Communication Access Real-time Translation (CART). CART reporters often work with hard-of-hearing students and people who are learning English as a second language, captioning high school and college classes and providing transcripts at the end of the sessions. CART reporters also accompany deaf clients to events, including conventions, doctor appointments, or wherever communication access is needed. CART providers increasingly furnish this service remotely, as an Internet or phone connection allows for immediate communication access regardless of location. With CART and broadcast captioning, the level of understanding gained by a person with hearing loss depends entirely on the skill of the court reporter. 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.

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.

Work environment. The majority of court reporters work in comfortable settings, such as offices of attorneys, courtrooms, legislatures, and conventions. An increasing number of court



Stenographic or voice writing reporters create and maintain the computer dictionary that they use to translate their keystroke codes or voice files into written text.

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, and they often work additional hours at home preparing transcripts. 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 by specialization. Licensure requirements vary by State.

Education and training. 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 novice voice writer, although it takes at least two years to become proficient at realtime voice writing. Electronic reporters and transcribers learn their skills on the job. The average length of time it takes to become a realtime stenotypist is 33 months. Training is offered by about 130 postsecondary vocational and technical schools and colleges. The National Court Reporters Association (NCRA) has certified about 70 programs, all of which offer courses in stenotype computer-aided transcription and real-time reporting. NCRA-certified programs require students to capture a minimum of 225 words per minute, a requirement for Federal Government employment as well.

Electronic court reporters use audio-capture technology and, therefore, usually learn their skills on the job. Students read manuals, review them with their trainers, and observe skilled electronic transcribers perform procedures. Court electronic transcribers generally obtain initial technical training from a vendor when it is placed in service, with further court-specific training provided on the job. If working for a private company or organization, hands-on training occurs under direct supervision of an established practitioner or firm.

Licensure. 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), 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. Candidates for the first certification—the CVR—must pass a written test of spelling, punctuation, vocabulary, legal and medical terminology and three 5-minute dictation and transcription examinations that test for speed, accuracy, and silence. The second certification, the CM, requires additional levels of speed, knowledge, and accuracy. The RVR certification measures the candidate's skill at real-time transcription, judicial reporting, CART provision, and captioning, including Webcasting. 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.

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.

Other qualifications. In addition to possessing speed and accuracy, court reporters must have excellent listening skills and hearing, good English grammar and vocabulary, and punctuation skills. 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. Voice writers must learn to listen and speak simultaneously and very quickly and quietly, while also identifying speakers and describing peripheral activities in the courtroom or deposition room.

Certification and advancement. Certifications can help court reporters get jobs and advance in their careers. Several associations offer certifications for different types of reporters.

The National Court Reporters Association 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 court reporter may obtain additional certifications that demonstrate higher levels of experience and competency, such as Registered Merit Reporter (RMR) or Registered Diplomate Reporter (RDR). The NCRA also offers the designations Certified Realtime Reporter (CRR), Certified Broadcast Captioner (CBC), and Certified CART Provider (CCP), designed primarily for those who caption media programs or assist people who are deaf.

With experience and education, court reporters can also receive certification in administrative and management, consulting, or teaching positions.

The United States Court Reporters Association offers another voluntary certification designation, the Federal Certified Realtime Reporter (FCRR), for court reporters working in Federal courts. The exam is designed to test the basic real-time skills of Federal court reporters and is recognized by the Administrative Office for the United States District Courts for purposes of real-time certification.

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.

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Court reporters	23-2091	19,000	24,000	4,700	25

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

Employment

Court reporters held about 19,000 jobs in 2006. More than half 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 were employed by court reporting agencies. Around 8 percent of court reporters were self-employed.

Job Outlook

Employment is projected to grow much faster than the average, reflecting the demand for real-time broadcast captioning and translating. Job opportunities should be excellent, especially for those with certification.

Employment change. Employment of court reporters is projected to grow 25 percent, much faster than the average for all occupations between 2006 and 2016. Demand for court reporter services will be spurred by the continuing need for accurate transcription of proceedings in courts and in pretrial depositions, by the growing need to create captions for live television, and by the need to provide other real-time broadcast captioning and translating services for the deaf and hard-of-hearing.

Increasing numbers of civil and criminal cases are expected to create new jobs for court reporters, but budget constraints are expected to limit the ability of Federal, State, and local courts to expand, and thereby also limit the demand for traditional court reporting services in courtrooms and other legal venues. Further, because of the difficulty in attracting court reporters 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, because courts use electronic reporters and transcribers only in a limited capacity traditional stenographic 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.

Voice writers have become more widely accepted as the accuracy of speech recognition technology improves. Still, many courts allow only stenotypists to perform court reporting duties.

In addition, more court reporters will be needed to caption outside of legal proceedings. Not only is there Federal legislation mandating that all new television programming be captioned for the deaf and hard-of-hearing, all new Spanish-language programming likewise must be captioned by 2010. 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. These factors are expected to continue to increase the demand for court reporters who provide CART services. Although these

services forgo transcripts and differ from traditional court reporting, they require the same skills that court reporters learn in their training.

Job prospects. Job opportunities for court reporters are expected to be excellent as job openings continue to outnumber jobseekers in some areas. Court reporters with certification and those who choose to specialize in providing CART, broadcast captioning, and or webcasting services should have the best job opportunities. The favorable job market reflects the fact that fewer people are entering this profession, particularly as stenographic typists.

Earnings

Wage and salary court reporters had median annual earnings of \$45,610 in May 2006. The middle 50 percent earned between \$33,160 and \$61,530. The lowest paid 10 percent earned less than \$23,430, and the highest paid 10 percent earned more than \$77,770. Median annual earnings in May 2006 were \$45,080 for court reporters working in local government and \$41,720 for those working in business support services.

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. Captioners receive a salary and benefits if they work as employees of a captioning company; Captioners working as independent contractors are paid by the hour.

Related Occupations

Workers in several other occupations also 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:

➤ American Association of Electronic Reporters and Transcribers, 23812 Rock Circle, Bothell, WA 98021.

Internet: <http://www.aaert.org>

➤ National Court Reporters Association, 8224 Old Courthouse Rd., Vienna, VA 22182.

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

- National Verbatim Reporters Association, 207 Third Ave., Hattiesburg, MS 39401. Internet: <http://www.nvra.org>
- United States Court Reporters Association, 4731 N. Western Ave., Chicago, IL 60625-2012. Internet: <http://www.uscra.org>

Economists

(O*NET 19-3011.00)

Significant Points

- Slower than average job growth is expected as firms increasingly employ workers with titles that reflect specialized duties rather than the general title of economist.
- Job seekers with a background in economics should have opportunities in various 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 resources, such as land, labor, raw materials, and machinery, to produce goods and services. They may conduct research, collect and analyze data, monitor economic trends, or develop forecasts. Economists research a wide variety of issues including energy costs, inflation, interest rates, exchange rates, business cycles, taxes, and employment levels, among others.

Economists develop methods 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 also 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 intended for managers and others who do not have a background in economics. Some economists also perform economic analysis for the media.

Many economists specialize in a particular area of economics, although general knowledge of basic economic principles is essential. *Microeconomists* study the supply and demand decisions of individuals and firms, such as how profits can be maximized and the quantity of a good or service that 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 antitrust 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. Doing similar

work as 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 apply mathematical techniques such as calculus, game theory, and regression analysis to their research. With these techniques, they formulate economic models that help explain economic relationships and that can be used to develop forecasts about 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 apply these areas of economics to health, education, agriculture, urban and regional economics, law, history, energy, the environment, or other issues. Most economists are concerned with practical applications of economic policy. 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 how the new laws will affect the corporation. 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 is considering expanding.

Economists working in economic consulting or research firms sometimes perform the same tasks as economists working for corporations. However, economists in consulting firms also perform much of the macroeconomic analysis and forecasting conducted in the United States. These economists collect data on various economic 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 about 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, and 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 to estimate the effects of specific changes in legislation or public policy.



Economists spend much of their time conducting research and writing reports.

Government economists advise policy makers in areas such as the deregulation of industries, the effects of changes to Social Security, the effects of tax cuts on the budget deficit, and the effectiveness of imposing tariffs on imported goods. 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.

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

Training, Other Qualifications, and Advancement

Some entry-level positions for economists are available to those with a bachelor's degree, but higher degrees are required for many positions. Prospective economists need good quantitative skills.

Education and training. A master's or Ph.D. degree in economics is required for many private sector economist jobs and for advancement to more responsible positions. 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.

Economics includes numerous specialties at the graduate level, such as econometrics, international economics, and labor economics. Students should select graduate schools that are strong in the specialties that interest them. Some schools help graduate students find internships or part-time employment in government agencies, economic consulting or research firms, or financial institutions before graduation.

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, sta-

tistics, econometrics, sampling theory and survey design, and computer science are extremely helpful.

Whether working in government, industry, research organizations, or consulting firms, economists with a bachelor's degree usually qualify for 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. A Ph.D. is necessary for top economist positions in many organizations. Also, many corporation and government executives have a strong background in economics.

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.

Other qualifications. Those considering careers as economists should be able to pay attention to details because much time is spent on precise data analysis. Candidates also should have strong computer and quantitative skills and be able to perform complex research. 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.

Advancement. With experience or an advanced degree, economists may advance into positions of greater responsibility, including administration and independent research.

Many people with an economics background become teachers. (See the statement on teachers—postsecondary elsewhere in the *Handbook*.) 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.

Employment

Economists held about 15,000 jobs in 2006. Government employed 52 percent of economists, in a wide range of agencies, with 32 percent in Federal Government and 20 percent in State and local government. 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. These workers are counted as postsecondary teachers, not economists.

Job Outlook

Employment of economists is expected to grow about as fast as the average for all occupations. The demand for workers who have knowledge and skill in economics is projected to grow faster, but these workers are often in occupations other than economist. Job prospects will be best for those with graduate degrees in economics.

Employment change. Employment of economists is expected to grow seven percent from 2006 to 2016, about as fast as the average for all occupations. Demand for economic analysis should grow, but the increase in the number of economist jobs will be tempered as firms hire workers for more specialized jobs with specialized titles. Many workers with economic backgrounds will work in related occupations with more specific job titles, such as financial analyst, market analyst, public policy consultant, researcher or research assistant, and purchasing manager. Overall employment growth also will be slowed because of the relatively high number of economists employed in slow growing or declining government sectors. Employment in Federal government agencies is expected to decrease, and employment in State and local government is expected to grow more slowly than employment in the private sector.

Employment growth should be 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.

Job prospects. In addition to job openings from growth, the need to replace experienced workers who transfer to other occupations or who retire or leave the labor force for other reasons will create openings for economists.

Individuals with a background in economics should have opportunities in various occupations. As indicated earlier, 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 purchasing manager.

People who have a master’s or Ph.D. degree in economics, 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, some economists leave the occupation to become professors, but competition for tenured teaching positions is expected to be keen.

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 that can use their economic knowledge. Many graduates with bachelor’s degrees will find jobs in industry and business as management or sales trainees. Bachelor’s degree holders with good quantitative skills and a strong background in mathematics, statistics, survey design, and computer science also may be hired 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 \$77,010 in May 2006. The middle 50 percent earned between \$55,740 and \$103,500. The lowest 10 percent earned less than \$42,280, and the highest 10 percent earned more than \$136,550.

In the Federal Government, the starting salary for economists having a bachelor’s degree was \$35,752 in 2007. Those having a master’s degree could qualify for positions with an annual salary of \$43,731. Those with a Ph.D. could begin at \$52,912, and some individuals with experience and an advanced degree could start at \$63,417. Starting salaries were higher in selected geographical areas where the prevailing local pay was higher. The average annual salary for economists employed by the Federal Government was \$94,098 a year in 2007.

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; cost estimators; financial analysts and personal financial advisors; financial managers; insurance underwriters; loan officers; and purchasing managers, buyers, and purchasing agents. Economists also rely heavily on quantitative analysis, as do mathematicians, statisticians, and operations research analysts. Other occupations involved in market re-

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Economists.....	19-3011	15,000	16,000	1,100	7

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

search and data collection are management analysts and market and survey researchers. Economists also study consumer behavior, similar to the work of sociologists.

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 toll free, and charges may result. For advice on how to find and apply for Federal jobs, see the Occupational Outlook Quarterly article "How to get a job in the Federal Government," online at: <http://www.bls.gov/pub/ooq/2004/summer/art01.pdf>

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 have law degrees, and some are elected.
- Overall employment is projected to grow more slowly than 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. 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 their clients. 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 how the trial will proceed.

Judges often hold pretrial hearings for cases. They listen to allegations and determine whether the evidence presented mer-

its a trial. In criminal cases, judges may decide that people charged with crimes should be held in jail pending trial, or they may set conditions for their release. In civil cases, judges and magistrates 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 on the guilty; in civil cases, the judge awards relief—such as compensation for damages—to the winning parties to the lawsuit.

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 overrule decisions if they determine that legal errors were made in a case or if legal 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—the people who bring the case or who are on trial. Instead, they usually base their decisions on the lower court's records and on lawyers' written and oral arguments.

Many State court judges only hear 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 these judges, but some States allow them to handle cases involving domestic relations, probate, contracts, and other selected areas of the law.

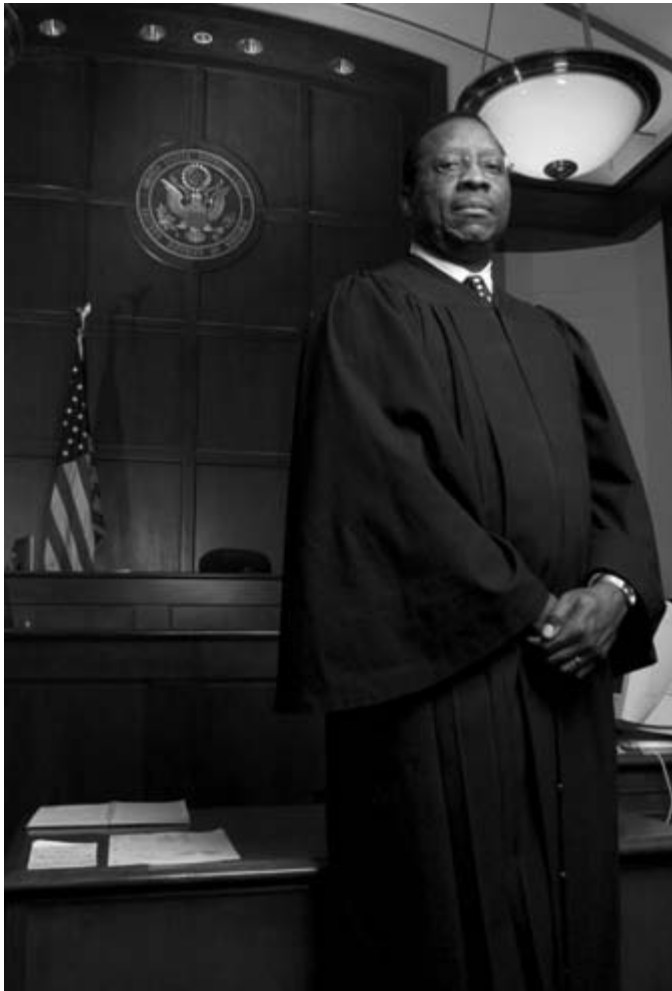
Administrative law judges, sometimes called *hearing officers* or *adjudicators*, are employed by government agencies to make determinations for administrative agencies. These judges make decisions, for example, on a person's eligibility for various Social Security or workers' compensation benefits,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

Some people work as arbitrators, mediators, or conciliators instead of as judges or magistrates. They assist with alternative dispute resolution—processes used to settle disputes outside of court. All hearings are private and confidential, and the processes are less formal than a court trial. If no settlement is reached, 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 nonbinding 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 people 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.

Mediators are neutral parties who help people to resolve their disputes outside of court. People often use mediators when they 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 share the cost of mediation. However, many mediators volunteer their services, or they may be court staff. Courts ask that mediators provide their services at the lowest possible rate and that parties split the cost.



Judges preside over cases concerning every aspect of society, from traffic offenses to disputes over the management of professional sports.

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.

Work environment. 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. Arbitrators, mediators, and conciliators often travel to a site chosen for negotiations, but some work from their home. Arbitrators, mediators, and conciliators usually work a standard 35- to 40-hour week. However, longer hours might be necessary when contract agreements are being prepared and negotiated.

Training, Other Qualifications, and Advancement

A bachelor's degree and work experience usually constitute the minimum requirements for judges and magistrates, but most workers have law degrees, and some are elected. Training requirements for arbitrators, mediators, and conciliators vary.

Education and training. Most judges have first been lawyers. In fact, Federal and State judges usually are required to be lawyers, which means that they have attended law school and passed an examination. 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.

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. More than half of all States, as well as Puerto Rico, require judges to take continuing education courses while serving on the bench.

Training for arbitrators, mediators, and conciliators is available through independent mediation programs, national and local mediation membership organizations, and postsecondary schools. To practice in State-funded or court-funded mediation programs, mediators usually must meet specific training or experience standards, which vary by State and court. Most mediators complete a 40-hour basic course and a 20-hour advanced training course. Some people receive training by volunteering at a community mediation center or co-mediating cases with an experienced mediator. Others go on to complete an advanced degree or certificate program in conflict resolution at a college or university. Degrees in public policy, law, and related fields

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Judges, magistrates, and other judicial workers.....	23-1020	51,000	53,000	2,300	4
Administrative law judges, adjudicators, and hearing officers	23-1021	15,000	15,000	0	0
Arbitrators, mediators, and conciliators.....	23-1022	8,500	9,400	900	11
Judges, magistrate judges, and magistrates.....	23-1023	27,000	29,000	1,400	5

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

also provide good background for prospective arbitrators, mediators, and conciliators.

Licensure. There are no national credentials or licensure requirements for arbitrators, mediators, and conciliators. In fact, State regulatory requirements vary widely. Some States require arbitrators to be experienced lawyers. Some States “license” mediators while other States “register” or “certify.” Currently, only four States—Florida, New Hampshire, Texas, and Virginia—have certification programs. Increasingly, credentialing programs are being offered through professional organizations. For example, the American Arbitration Association requires mediators listed on its mediation panel to complete their training course, receive recommendations from the trainers, and complete an apprenticeship.

Other qualifications. Judges and magistrates must be appointed or elected. That often takes political support. 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.

Advancement. Some judicial workers move to higher courts or courts with broader jurisdiction. Advancement for alternative dispute workers includes taking on more complex cases or starting a business.

Employment

Judges, magistrates, and other judicial workers held 51,000 jobs in 2006. Judges, magistrates, and magistrate judges held 27,000 jobs, all in State and local governments. Administrative law judges, adjudicators, and hearing officers held 15,000 jobs, with 59 percent in State governments, 22 percent in the Federal Government, and 19 percent in local governments. Arbitrators, mediators, and conciliators held another 8,500 jobs. Approximately 29 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 is projected to grow more slowly than average, but varies by specialty. Judges and magistrates are expected encounter competition for jobs because of the prestige associated with serving on the bench.

Employment change. Overall employment of judges, magistrates, and other judicial workers is expected to grow 4 percent over the 2006-16 projection decade, slower than the average for all occupations. Budgetary pressures at all levels of government are expected to hold down the hiring of judges, despite rising caseloads, particularly in Federal courts. However, the continued need to cope with crime and settle disputes, as well as the public’s willingness to go to court to settle disputes, should spur demand for judges. Also, economic growth is expected to lead to more business contracts and transactions and, thus, more legal disputes.

Demographic shifts in the population will also spur demand for judges. For instance, the number of immigrants migrating to the U.S. will continue to rise, thereby increasing the demand for judges to handle the complex issues of immigrant legal status. Demand for judges will also increase because as the American population ages, the courts are expected to reform guardianship policies and practices and develop new strategies to address elder abuse. Both the quantity and the complexity of judges’ work have increased because of developments in information technology, medical science, electronic commerce, and globalization.

Employment of arbitrators, mediators, and conciliators is expected to grow about as fast as the average for all occupations through 2016. 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. Demand also will continue to increase for arbitrators, mediators, and conciliators as all jurisdictions now have some type of alternative dispute resolution program. Some jurisdictions have programs requiring disputants to meet with a mediator, in certain circumstances, such as when attempting to resolve child custody issues.

Job prospects. The prestige associated with serving on the bench will ensure continued competition for judge and magistrate positions. However, a growing number of candidates choose to forgo the bench and work in the private sector, where pay may be significantly higher. This movement may lessen the competition somewhat. 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.

Earnings

Judges, magistrate judges, and magistrates had median annual earnings of \$101,690 in May 2006. The middle 50 percent earned between \$53,920 and \$135,010. The top 10 percent earned more than \$145,600, while the bottom 10 percent earned less than \$29,540. Median annual earnings in the industries employing the largest numbers of judges, magistrate judges, and magistrates in May 2006 were \$117,760 in State government and \$74,630 in local government. Administrative law judges, adjudicators, and hearing officers earned a median of \$72,600, and arbitrators, mediators, and conciliators earned a median of \$49,490.

In the Federal court system, the Chief Justice of the U.S. Supreme Court earned \$212,100 in 2006, and the Associate Justices earned \$203,000. Federal court of appeals judges earned \$175,100 a year, while district court judges had salaries of \$165,200, 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 judges, had salaries of \$151,984.

According to a 2006 survey by the National Center for State Courts, salaries of chief justices of State high courts averaged \$142,264 and ranged from \$102,466 to \$200,613. Annual salaries of associate justices of the State highest courts averaged \$136,810 and ranged from \$100,884 to \$184,300. Salaries of State intermediate appellate court judges averaged \$132,102 and ranged from \$101,612 to \$172,452. Salaries of State judges of general jurisdiction trial courts averaged \$122,559 and ranged from \$94,093 to \$168,100.

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.ncsconline.org>

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

➤ American Arbitration Association, 1633 Broadway, Floor 10, New York, NY 10019. Internet: <http://www.adr.org>

Information on Federal judges can be found at:

➤ Administrative Office of the United States Courts, One Columbus Circle, NE., Washington, DC 20544.

Internet: <http://www.uscourts.gov>

Lawyers

(O*NET 23-1011.00)

Significant Points

- About 27 percent of lawyers are self-employed, either as partners in law firms or in solo practices.
- Formal requirements to become a lawyer usually 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.
- Competition for job openings should be keen because of the large number of students graduating from law school each year.

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 system, linking it to society in numerous ways. 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 about 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 clients.

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, elder, or environmental 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 and other Federal and State agencies. These

lawyers help clients prepare and file for licenses and applications for approval before certain activities may occur. 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. Other lawyers advise insurance companies about the legality of insurance transactions, guiding the company in writing insurance policies to conform to 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 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—concentrating on particular causes and choosing cases that might have an impact on the way law is applied. 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. Some work for State attorneys general, prosecutors, and public defenders in criminal courts. 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.

Lawyers increasingly use various forms of technology to perform more efficiently. Although all lawyers continue to use law libraries to prepare cases, most 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 must be geographically mobile and able to reach their clients in a timely matter, so they might use electronic filing, web and videoconferencing, and voice-recognition technology to share information more effectively.

Work environment. 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. They may also face particularly heavy pressure when a case is being tried. Preparation for court includes understanding the latest laws and judicial decisions.

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; of those who work full time, about 37 percent work 50 hours or more per week.

Training, Other Qualifications, and Advancement

Formal requirements to become a lawyer usually 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. Federal courts and agencies set their own qualifications for those practicing before or in them.

Education and training. Becoming a lawyer 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.

Although there is no recommended “prelaw” undergraduate 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 law. 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 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 American Bar Association require applicants to take the LSAT. As of 2006, there were 195 ABA-accredited law schools; others were approved by State authorities only. Nearly all law schools require applicants to



Lawyers use law libraries and other sources, such as the Internet and legal databases, to prepare cases.

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. The Law School Admission Council administers both this service and the LSAT. Competition for admission to many law schools—especially the most prestigious ones—is usually 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 choose specialized courses in fields such as tax, labor, or corporate law. Law students often gain practical experience by participating in school-sponsored legal clinics; 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 journals.

A number of law schools have clinical programs in which students gain legal experience through practice trials and projects under the supervision of lawyers and law school faculty. Law school clinical programs might include work in legal aid offices, for example, or on 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. Law school graduates receive the degree of *juris doctor* (J.D.), a first professional degree.

Advanced law degrees may be desirable 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 business administration or public administration.

After graduation, lawyers must keep informed about legal and nonlegal developments that affect their practices. In 2006, 43 States and jurisdictions required lawyers to participate in mandatory continuing legal education. Many law schools and State and local bar associations provide continuing education courses that help lawyers stay abreast of recent developments. Some States allow continuing education credits to be obtained through participation in seminars on the Internet.

Licensure. 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 another 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 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. 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.

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 their 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 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.

In 2007, 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.

Other qualifications. 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.

Advancement. Most beginning lawyers start in salaried positions. Newly hired attorneys usually start as associates and work with more experienced lawyers or judges. After several years, some lawyers are admitted to partnership in their firm, which means they are partial owners of the 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 761,000 jobs in 2006. Approximately 27 percent of lawyers were self-employed, practicing either as partners in law firms or in solo practices. Most salaried lawyers held positions in government, in law firms or other corporations,

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Lawyers.....	23-1011	761,000	844,000	84,000	11

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

or in nonprofit organizations. Most government-employed lawyers worked at the local level. In the Federal Government, lawyers worked for many different agencies but were concentrated in the Departments of Justice, Treasury, and Defense. Many salaried lawyers working outside of government were employed as house counsel by public utilities, banks, insurance companies, real estate agencies, manufacturing firms, and other business firms and nonprofit organizations. Some also had part-time independent practices, while others worked part time as lawyers and full time in another occupation.

A relatively small number of trained attorneys work in law schools, and are not included in the employment estimate for lawyers. 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.)

Job Outlook

Average employment growth is projected, but job competition is expected to be keen.

Employment change. Employment of lawyers is expected to grow 11 percent during the 2006-16 decade, about as fast as the average for all occupations. The growth in the population and in the level of business activity is expected create more legal transactions, civil disputes, and criminal cases. 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 constrained as businesses 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.

Job 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. 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 grow 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.

Job prospects. 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 less traditional 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 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. This service allows companies to hire lawyers on an “as-needed” basis and permits beginning lawyers to develop practical skills.

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 increasingly seek graduates who have advanced law degrees and experience in a specialty, such as tax, patent, or admiralty law.

Job opportunities often 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 restrict their budgets. 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.

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 than in big cities, and new lawyers may find it easier to establish a reputation among potential clients.

Earnings

In May 2006, the median annual earnings of all wage-and-salaried lawyers were \$102,470. The middle half of the occupation earned between \$69,910 and \$145,600. Median annual earn-

ings in the industries employing the largest numbers of lawyers in May 2006 were:

Management of companies and enterprises	\$128,610
Federal Government.....	119,240
Legal services.....	108,100
Local government	78,810
State government.....	75,840

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.

Median salaries of lawyers 9 months after graduation from law school in 2005 varied by type of work, as indicated in table 1.

All graduates	\$60,000
Type of work	
Private practice.....	\$85,000
Business	60,000
Government.....	46,158
Academic/judicial clerkships	45,000

Source: National Association of Law Placement

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 toll free, and charges may result. For advice on how to find and apply for Federal jobs, see the Occupational Outlook Quarterly article “How to get a job in the Federal Government,” online at:

<http://www.bls.gov/opub/ooq/2004/summer/art01.pdf>.

The requirements for admission to the bar in a particular State or other jurisdiction 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.

Market and Survey Researchers

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

Significant Points

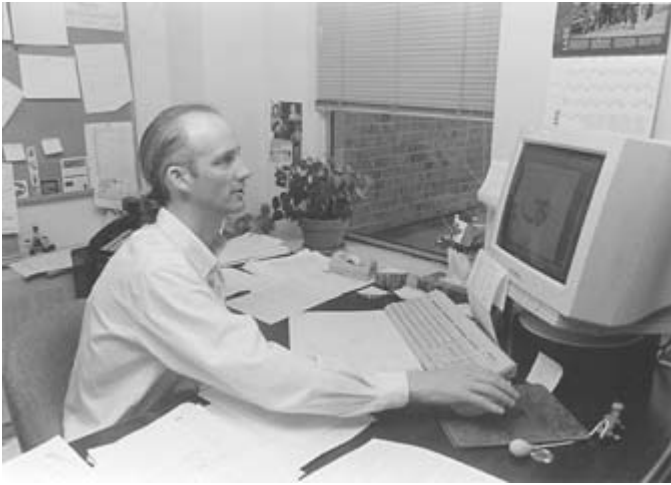
- Market and survey researchers need at least a bachelor’s degree.
- Continuing education and keeping current with the latest methods of developing, conducting, and analyzing surveys and other data is important for advancement.
- Employment is expected to grow faster than average.
- Job opportunities should be best for those with a master’s or Ph.D. degree in marketing or a related field and with strong quantitative skills.

Nature of the Work

Market and survey researchers gather information about what people think. *Market*, or *marketing*, *research analysts* help companies understand what types of products people want and at what price. They also help companies market their products to the people most likely to buy them. 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 surveys to assess consumer preferences through Internet, telephone, or mail responses. 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. 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 branches of the company in a new location, 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.



Market and survey researchers conduct research and design surveys.

Survey researchers also gather information about people and their opinions, but these workers focus exclusively on designing and conducting surveys. They work for a variety of clients, such as corporations, government agencies, political candidates, and providers of various services. The surveys collect information that is used in 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 to measure 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.

Work environment. Market and survey researchers generally 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. 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. Travel may be necessary.

Training, Other Qualifications, and Advancement

A bachelor's degree is usually sufficient for entry-level market and survey research positions. Higher degrees may be required for some positions, however. Continuing education and keeping current with the latest methods of developing, conducting, and analyzing surveys and other data also is important for advancement.

Education and training. 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.

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. Market and survey researchers often earn advanced degrees in business administration, marketing, statistics, communications, or other closely related disciplines.

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. 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.

Other qualifications. Market and survey researchers spend a lot of time performing precise data analysis, so those considering careers in the occupation should be able to pay attention to detail. Patience and persistence are also 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 the interviewing of a wide variety of individuals. Communication skills are important, too, because researchers must be able to present their findings well both orally and in writing.

Certification and advancement. The Marketing Research Association (MRA) offers a certification program for professional researchers who wish to demonstrate their expertise. Certification is based on education and experience and requires ongoing continuing education.

Researchers and analysts often begin by assisting others. With experience, market and survey analysts are eventually assigned their own research projects. Continuing education and advanced degrees will be helpful to those looking to advance to more responsible positions in this occupation. It also is important to keep current with the latest methods of developing, conducting, and analyzing surveys and other data.

Some people with expertise in marketing or survey research choose to teach others these skills. (See the statement on teachers—postsecondary elsewhere in the *Handbook*.) A master's degree usually is 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 professorship, tenure, and promotion. Others advance to supervisory or managerial positions. Many corporation and government executives have a strong background in marketing.

Employment

Market and survey researchers held about 261,000 jobs in 2006, most of which—234,000—were held by market research ana-

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Market and survey researchers.....	19-3020	261,000	313,000	51,000	20
Market research analysts.....	19-3021	234,000	281,000	47,000	20
Survey researchers	19-3022	27,000	31,000	4,300	16

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

lysts. 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; computer systems design and related services; and other professional, scientific, and technical services—which includes marketing research and public opinion polling.

Survey researchers held about 27,000 jobs in 2006. Survey researchers were employed primarily by firms in other professional, scientific, and technical services—which include market research and public opinion polling; scientific research and development services; and management, scientific, and technical consulting services. Colleges, universities, and professional schools 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 consulting work in another setting. About seven percent of market and survey researchers are self-employed.

Besides holding the previously mentioned jobs, many people who do market and survey research work held faculty positions in colleges and universities. These workers are counted as post-secondary teachers rather than market and survey researchers.

Job Outlook

Employment growth of market and survey researchers is projected to be faster than average. Bachelor’s degree holders may face competition for employment in these occupations. Job opportunities should be best for jobseekers with a master’s or Ph.D. degree in marketing or a related field and with strong quantitative skills.

Employment change. Employment of market and survey researchers is projected to grow 20 percent from 2006 to 2016, faster than the average for all occupations. As companies seek to expand their market and as consumers become better informed, the need for marketing professionals will increase. In addition, globalization of the marketplace creates a need for more market and survey researchers to analyze foreign markets and competition.

Marketing research provides organizations valuable feedback from purchasers, allowing companies to evaluate consumer satisfaction and plan more effectively for the future. Survey researchers also 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.

Job prospects. Bachelor’s degree holders may face competition for jobs, as many positions, especially the more technical

ones, require a master’s or doctorate 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. Job opportunities should be best for jobseekers with a master’s or Ph.D. degree in marketing or a related field and with strong quantitative skills. Ph.D. holders in marketing and related fields should have a range of opportunities in many industries, especially in 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.

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. However, other organizations, including computer systems design companies, software publishers, financial services organizations, health care institutions, advertising firms, and insurance companies, may also offer job opportunities for market research analysts. Increasingly, market research analysts not only collect and analyze information, but also help clients implement analysts’ ideas and recommendations.

There will be fewer job opportunities for survey researchers since it is a relatively smaller occupation. The best prospects will come from growth in the market research and public opinion polling industry, which employs many survey researchers.

Earnings

Median annual earnings of market research analysts in May 2006 were \$58,820. The middle 50 percent earned between \$42,190 and \$84,070. The lowest 10 percent earned less than \$32,250, and the highest 10 percent earned more than \$112,510. Median annual earnings in the industries employing the largest numbers of market research analysts in May 2006 were:

Computer systems design and related services.....	\$76,220
Management of companies and enterprises	62,680
Other professional, scientific, and technical services	57,520
Management, scientific, and technical consulting services.....	54,040
Insurance carriers	53,430

Median annual earnings of survey researchers in May 2006 were \$33,360. The middle 50 percent earned between \$22,150 and \$50,960. The lowest 10 percent earned less than \$16,720, and the highest 10 percent earned more than \$73,630. Median annual earnings of survey researchers in other professional, scientific, and technical services were \$27,440.

Related Occupations

Market and survey researchers perform research to find out how well the market will receive products, services, and ideas. 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, operations research analysts, management analysts, and urban and regional planners. Market and survey researchers often work closely with advertising, marketing, promotions, public relations, and sales managers. When analyzing data, market and survey researchers must use quantitative skills similar to those of mathematicians, cost estimators, and actuaries. Also, market and survey researchers often are concerned with public opinion, as are public relations specialists.

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:

► Council of American Survey Research Organizations, 170 North Country Rd., Suite 4, Port Jefferson, NY 11777. Internet: <http://www.casro.org>

Paralegals and Legal Assistants

(O*NET 23-2011.00)

Significant Points

- Most entrants have an associate degree in paralegal studies, or a bachelor's degree coupled with a certificate in paralegal studies.
- About 7 out of 10 work for law firms; others work for corporate legal departments and government agencies.
- Employment is projected to grow much faster than average, as employers try to reduce costs by hiring paralegals to perform tasks once done 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 legal offices and perform many of the same tasks as lawyers. Nevertheless, they are explicitly prohibited from carrying out duties 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 might 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. If 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 functions. For example, they help draft contracts, mortgages, and separation agreements. They also may assist in preparing tax returns, establishing trust funds, and planning estates. Some paralegals coordinate the activities of other law office employees and maintain financial office records.

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.

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 becomes more complex, paralegals become more specialized. Within specialties, functions are often broken down further. For example, paralegals specializing in labor law may concentrate exclusively on employee benefits. In small and medium-size law firms, duties are often more general.

The tasks of paralegals differ widely according to the type of organization for which they work. A corporate paralegal often assists 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. Corporate 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 corporate paralegals or paralegal managers are assuming additional supervisory responsibilities such as overseeing team projects.

The duties of paralegals who work in the public sector usually vary by agency. In general, litigation 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.

Work environment. Paralegals 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 in offices and law libraries. Occasionally, they travel to gather information and perform other duties.

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 released. Paralegals who work for law firms sometimes work very long hours when under pressure to meet deadlines.

Training, Other Qualifications, and Advancement

Most entrants have an associate degree in paralegal studies, or a bachelor's degree coupled with a certificate in paralegal studies. Some employers train paralegals on the job.

Education and training. There are several ways to become a paralegal. The most common is through a community college paralegal program that leads to an associate degree. Another common method of entry, mainly for those who already have a college degree, is earning a certificate in paralegal studies. A small number of schools offer a bachelor's and master's degree in paralegal studies. Finally, some employers train paralegals on the job.

Associate and bachelor's degree programs usually combine paralegal training with courses in other academic subjects. Certificate programs vary significantly, with some only taking a few months to complete. Most certificate programs provide intensive paralegal training for individuals who already hold college degrees.

About 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 employers do not require such approval, graduation from an ABA-approved program can enhance employment opportunities. Admission



In addition to investigating the facts of cases, paralegals identify relevant laws, judicial decisions, legal articles, and other materials.

requirements vary. Some require certain college courses or a bachelor's degree, while others accept high school graduates or those with legal experience. A few schools require standardized tests and personal interviews.

The quality of paralegal training programs varies; some programs may include job placement services. If possible, prospective students should examine the experiences of recent graduates before enrolling in a paralegal program. Any training program usually includes courses in legal research and the legal applications of computers. 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 corporate legal department, a legal aid organization, a bank, or a government agency. Internship experience is an asset when one is seeking a job after graduation.

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 or criminal justice. Nursing or health administration experience is valuable in personal injury law practices.

Certification and other qualifications. Although most employers do not require certification, earning a voluntary certification 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. Those who pass the exam may use the Certified Legal Assistant (CLA) or Certified Paralegal (CP) credential. The NALA also offers the Advanced Paralegal Certification for experienced paralegals who want to specialize. The Advanced Paralegal Certification program is a curriculum based program offered on the Internet.

The American Alliance of Paralegals, Inc. offers the American Alliance Certified Paralegal (AACP) credential, a voluntary certification program. Paralegals seeking the AACP certification must possess at least five years of paralegal experience and meet one of the three educational criteria. Certification must be renewed every two years, including the completion 18 hours of continuing education.

In addition, the National Federation of Paralegal Association offers the Registered Paralegal (RP) designation to paralegals with a bachelor's degree and at least 2 years of experience who pass an exam. To maintain the credential, workers must complete 12 hours of continuing education every 2 years. The National Association for Legal Professionals offers the Professional Paralegal (PP) certification to those who pass a four-part exam. Recertification requires 75 hours of continuing education.

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. Participa-

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Paralegals and legal assistants.....	23-2011	238,000	291,000	53,000	22

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

tion in continuing legal education seminars allows paralegals to maintain and expand their knowledge of the law. In fact, all paralegals in California must complete 4 hours of mandatory continuing education in either general law or in a specialized area of 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.

Advancement. 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 238,000 jobs in 2006. 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

Despite projected rapid employment growth, competition for jobs is expected to continue as many people seek to go into this profession; experienced, formally trained paralegals should have the best employment opportunities.

Employment change. Employment of paralegals and legal assistants is projected to grow 22 percent between 2006 and 2016, much faster than the average for all occupations. Employers are trying to reduce costs and increase the availability and efficiency of legal services by hiring paralegals to perform tasks once done by lawyers. Paralegals are performing a wider variety of duties, making them more useful to businesses.

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. The

growth of prepaid legal plans also should contribute to the demand for legal services.

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 also hire paralegals. Corporations in particular are expected to increase their in-house legal departments to cut costs. In part because of the range of tasks they can perform, paralegals are also increasingly employed in small and medium-size establishments of all types.

Job prospects. In addition to new jobs created by employment growth, more job openings will arise as people leave the occupation. There will be demand for paralegals who specialize in areas such as real estate, bankruptcy, medical malpractice, and product liability. 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. Job opportunities also are expected in Federal, State, and local government agencies, consumer organizations, and the courts. However, this occupation attracts many applicants, creating competition for jobs. Experienced, formally trained paralegals should have the best job prospects.

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 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 May 2006, full-time wage-and-salary paralegals and legal assistants had median annual earnings, including bonuses, of \$43,040. The middle 50 percent earned between \$33,920 and \$54,690. The top 10 percent earned more than \$67,540, and the bottom 10 percent earned less than \$27,450. Median annual earnings in the industries employing the largest numbers of paralegals were:

Federal Government.....	\$56,080
Management of companies and enterprises	52,220
Local government	42,170
Legal services.....	41,460
State government.....	38,020

In addition to earning a salary, many paralegals receive bonuses, in part, to compensate them for sometimes having to work long hours. Paralegals also receive vacation, paid sick leave, a 401 savings plan, life insurance, personal paid time off, dental insurance, and reimbursement for continuing legal education.

Related Occupations

Among the other occupations that call for a specialized understanding of the law 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 the Paralegal Advanced Competency Exam, paralegal careers, paralegal training programs, job postings, and local associations is available from:

➤ National Federation of Paralegal Associations, PO Box 2016, Edmonds, WA 98020. 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 paralegal careers, certification, and job postings is available from:

➤ American Alliance of Paralegals, Inc., 16815 East Shea Boulevard, Suite 110, No. 101, Fountain Hills, Arizona, 85268.

Internet: <http://www.aapipara.org>

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

➤ NALS, 314 E. 3rd St., Suite 210, Tulsa, OK 74120.

Internet: <http://www.nals.org>

Information on obtaining positions as a paralegal or legal assistant 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 toll free, and charges may result. For advice on how to find and apply for Federal jobs, see the Occupational Outlook Quarterly article “How to get a job in the Federal Government,” online at:

<http://www.bls.gov/opub/ooq/2004/summer/art01.pdf>

Psychologists

(O*NET 19-3031.00, 19-3031.01, 19-3031.02, 19-3031.03, 19-3032.00, 19-3039.99)

Significant Points

- About 34 percent of psychologists are self-employed, compared with only 8 percent of all workers.
- Competition for admission to graduate psychology programs is keen.
- Overall employment of psychologists is expected to grow faster than average.
- Job prospects should be the best for people who have a doctoral degree in an applied specialty, such as counseling or health, and those with a specialist or doctoral degree in school psychology.

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 fields provide mental health care in hospitals, clinics, schools, or private settings. Psychologists employed in applied settings, such as business, industry, government, or non-profit organizations, provide training, conduct research, design organizational 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. They 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 distressed 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, or neurological conditions. Others help people deal with 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* study how biological, psychological, and social factors affect health and illness. They promote healthy living and disease prevention through counseling, and they focus on how patients adjust to illnesses and treatments and view their quality of life. *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 direct services to special patient populations.

Often, clinical psychologists 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 most medications. (See the statement on physicians and surgeons elsewhere in the *Handbook*.) However, two States—Louisiana and New Mexico—currently allow appropriately trained clinical psychologists to prescribe medication with some limitations.

Counseling psychologists use various techniques, including interviewing and testing, to advise people on how to deal with problems of everyday living, including career or work problems and problems faced in different stages of life. 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 early childhood and elementary and secondary schools. They collaborate with teachers, parents, and school personnel to create safe, healthy, and supportive learning environments for all students. School psychologists address students' learning and behavioral problems, suggest improvements to classroom management strategies or parenting techniques, and evaluate students with disabilities and gifted and talented students to help determine the best way to educate them.

They improve teaching, learning, and socialization strategies based on their understanding of the psychology of learning environments. 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 screen, train, and counsel applicants for jobs,



Psychologists interact with people daily, and need good communication and personal skills.

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.

Work environment. Psychologists' work environments vary by subfield and place of employment. For example, clinical, school, and counseling psychologists in private practice frequently have their own offices and set their own hours. However, they usually 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 eve-

nings and weekends, and those who work in schools and clinics generally work regular daytime hours. Most psychologists in government and industry have structured schedules.

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.

Increasingly, many psychologists work 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 master's or doctoral degree, and a license, are required for most psychologists.

Education and training. A doctoral degree usually is required for independent practice as a psychologist. Psychologists with a Ph.D. or Doctor of Psychology (Psy.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 doctoral degree often work in clinical positions or in private practices, but they also sometimes teach, conduct research, or carry out administrative responsibilities.

A doctoral degree generally requires 5 to 7 years of graduate study, culminating 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. degree may be based on practical work and examinations rather than a dissertation. In clinical, counseling, and school psychology, the requirements for the doctoral degree include at least a 1-year internship.

A specialist degree or its equivalent 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 full-time internship. Because their professional practice addresses educational and mental health components of students' development, school psychologists' training includes coursework in both education and psychology.

People 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 additional 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 also 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, service, 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 ways 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 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, helps to approve advanced degree programs in school psychology.

Licensure. 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 need a doctorate in psychology, 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, 29 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.

Other qualifications. 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 people 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,

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Psychologists.....	19-3030	166,000	191,000	25,000	15
Clinical, counseling, and school psychologists.....	19-3031	152,000	176,000	24,000	16
Industrial-organizational psychologists	19-3032	1,900	2,400	400	21
Psychologists, all other	19-3039	12,000	13,000	900	8

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

because achieving results in the psychological treatment of patients or in research may take a long time.

Certification and advancement. The American Board of Professional Psychology (ABPP) recognizes professional achievement by awarding specialty certification in 13 different areas. Candidates for ABPP certification need a doctorate in psychology, postdoctoral training in their specialty, several years of experience, professional endorsements, and are required to pass the specialty board examination.

Psychologists can improve their advancement opportunities by earning an advanced degree and by participation in continuing education. Many psychologists opt to start their own practice after gaining experience working in the field.

Employment

Psychologists held about 166,000 jobs in 2006. Educational institutions employed about 29 percent of psychologists in positions other than teaching, such as counseling, testing, research, and administration. About 21 percent were employed in health care, primarily in offices of mental health practitioners, hospitals, physicians’ offices, and outpatient mental health and substance abuse centers. Government agencies at the State and local levels employed psychologists in correctional facilities, law enforcement, 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 34 percent of psychologists were self-employed in 2006, compared with only 8 percent of 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

Faster-than-average employment growth is expected for psychologists. Job prospects should be the best for people who have a doctoral degree from a leading university in an applied specialty, such as counseling or health, and those with a specialist or doctoral degree in school psychology. Master’s degree holders in fields other than industrial-organizational psychology will face keen competition. Opportunities will be limited for bachelor’s degree holders.

Employment change. Employment of psychologists is expected to grow 15 percent from 2006 to 2016, faster than the average for all occupations. Employment will grow because of increased demand for psychological services in schools, hospi-

tals, social service agencies, mental health centers, substance abuse treatment clinics, consulting firms, and private companies.

Employment growth will vary by specialty. Growing awareness of how students’ mental health and behavioral problems, such as bullying, affect learning will increase demand for school psychologists to offer student counseling and mental health services.

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 lead to employment growth for clinical and counseling specialties. Clinical and counseling psychologists also will be needed to help people deal with depression and other mental disorders, marriage and family problems, job stress, and addiction. The growing number of elderly will increase the demand for psychologists trained in geropsychology to help people deal with the mental and physical changes that occur as individuals grow older. There also will be increased need for psychologists to work with returning veterans.

Industrial-organizational psychologists also 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.

Job prospects. Job prospects should be the best for people who have a doctoral degree from a leading university in an applied specialty, such as counseling or health, and those with a specialist or doctoral degree in school psychology. Psychologists with extensive training in quantitative research methods and computer science may have a competitive edge over applicants without such 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 collec-

tion 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 2006 were \$59,440. The middle 50 percent earned between \$45,300 and \$77,750. The lowest 10 percent earned less than \$35,280, and the highest 10 percent earned more than \$102,730. Median annual earnings in the industries employing the largest numbers of clinical, counseling, and school psychologists were:

Offices of mental health practitioners.....	\$69,510
Elementary and secondary schools.....	61,290
Local government.....	58,770
Individual and family services.....	50,780
Outpatient care centers.....	50,310

Median annual earnings of wage and salary industrial-organizational psychologists in May 2006 were \$86,420. The middle 50 percent earned between \$66,310 and \$115,000. The lowest 10 percent earned less than \$48,380, and the highest 10 percent earned more than \$139,620.

Related Occupations

Psychologists work with people, developing relationships and comforting them. Other occupations with similar duties include counselors, social workers, clergy, sociologists, special education teachers, funeral directors, market and survey researchers, recreation workers, and human resources, training, and labor relations managers and specialists. Psychologists also sometimes diagnose and treat problems and help patients recover. These duties are similar to those for physicians and surgeons, radiation therapists, audiologists, dentists, optometrists, and speech-language pathologists.

Sources of Additional Information

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

- American Psychological Association, Center for Psychology Workforce Analysis and Research and Education Directorate, 750 1st St.NE., Washington, DC 20002.

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.

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>

Social Scientists, Other

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

Significant Points

- About 41 percent of these workers are employed by governments, mostly by the Federal Government.
- The educational attainment of social scientists is among the highest of all occupations, with most positions requiring a master’s or Ph.D. degree.
- Overall employment is projected to grow about as fast as the average for all occupations, but varies by specialty.
- Job seekers may face competition, and those with higher educational attainment will have the best prospects.

Nature of the Work

The major social science occupations covered in this statement are 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 into the different ways individuals, groups, and institutions 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. In fact, many work as policy analysts for government or private organizations.

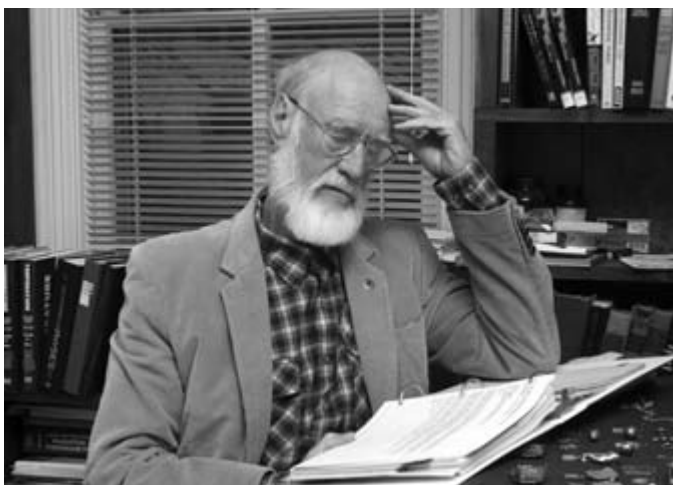
Research is a major activity of many social scientists, who use a variety of methods to assemble facts and construct theories. Applied research usually is designed to produce information that will enable people to make better decisions or manage their affairs more effectively. Social scientists often begin by collecting existing information. Collecting information takes many forms, including conducting interviews and questionnaires to gather demographic and opinion data, living and working among the population being studied, performing other field investigations, and experimenting with human or animal subjects in a laboratory. Social scientists also look at data in detail, such as studying the data they’ve collected, reanalyzing already existing data, analyzing historical records and documents, and interpreting maps and the effect of location on culture and other aspects of society. Following are several major types of social scientists. 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, linguistics, biophysical, or physical 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, such as nutrition and disease, which affected these populations. *Archaeologists* examine and recover material evidence including the ruins of buildings, tools, pottery, and other objects remaining from past human cultures in order to determine the history, customs, and living habits of earlier civilizations. With continued technological advances making it increasingly possible to detect the presence of underground anomalies without digging, archaeologists will be able to better target excavation sites. Another technological advancement is the use of geographic information systems (GIS) for tasks such as analyzing how environmental factors near a site may have affected the development of a society. Most anthropologists and archaeologists specialize in a particular region of the world.

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 major metropolises, 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, cultures, organizations, and social institutions people form. They also study the activities in which people participate, including social, religious, political, economic, and



Social scientists need strong research, analytical, and writing skills.

business organizations. They study the behavior of, and interaction among, groups, organizations, institutions, and nations and how they react to phenomena such as the spread of technology, health epidemics, crime, and social movements. They also trace the origin and growth of these groups and interactions. Sociologists analyze how social influences affect different individuals. They also are concerned with the ways organizations and institutions affect the daily lives of individuals and groups. To analyze social patterns, sociologists design research projects that use a variety of methods, including historical analysis, comparative analysis, and quantitative and qualitative techniques. 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.

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, and 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. 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 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. Many of the people who study geography and work with GIS technology are classified in other occupations, such as surveyors, cartographers, photogrammetrists, and survey technicians (who develop maps and other location-based information), urban and regional planners (who help to decide on and evaluate the locations of building and roads and other aspects of physical society), and geoscientists (who study earthquakes and other physical aspects of the Earth). (These occupations are described elsewhere in the *Handbook*.)

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. Other historians help study and preserve archival materials, artifacts, and historic buildings and sites.

Work environment. 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. 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. Those who teach in these settings are classified as postsecondary teachers.

Training, Other Qualifications, and Advancement

The educational attainment of social scientists is among the highest of all occupations, with most positions requiring a master’s or Ph.D. degree.

Education and training. Graduates with master’s degrees in applied specialties usually are qualified for positions outside of colleges and universities, although requirements vary by field. A Ph.D. degree may be required for higher-level positions. Bachelor’s degree holders have limited opportunities and do not qualify for most of the occupations discussed above. A bachelor’s degree does, however, provide a suitable background for many different kinds of entry-level jobs in related occupations, such as research assistant, writer, management trainee, or market analyst.

Training in statistics and mathematics is essential for many social scientists. Geographers, political scientists, and those in other fields increasingly use mathematical and quantitative research methods. The ability to use computers for research purposes is mandatory in most disciplines. Social scientists also must keep up-to date on the latest technological advances that affect their discipline and research. For example, most geographers use GIS technology extensively, and GIS is also becoming

more commonly used by archaeologists, sociologists, and other workers.

Many social science students also benefit from internships or field experience. Numerous local museums, historical societies, government agencies, non-profit 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.

Other qualifications. Social scientists need excellent written and oral communication skills to report research findings and to collaborate on research. Successful social scientists also need intellectual curiosity and creativity because they constantly seek new information about people, things, and ideas. The ability to think logically and methodically is also essential to analyze complicated issues, such as the relative merits of various forms of government. Objectivity, an open mind, and systematic work habits are important in all kinds of social science research. Perseverance, too, is often necessary, as when an anthropologist spends years studying artifacts from an ancient civilization before making a final analysis and interpretation.

Advancement. Some social scientists advance to top-level research and administrative positions. Advancement often depends on the number and quality of reports that social scientists publish or their ability to design studies.

Many social scientists choose to teach in their field, often while pursuing their own research. These workers are usually classified as postsecondary teachers. The minimum requirement for most positions in colleges and universities is a Ph.D. degree. Graduates with a master’s degree in a social science may qualify for teaching positions in community colleges. Social science graduates with sufficient education courses can qualify for teaching positions in secondary and elementary schools.

Employment

Social scientists held about 18,000 jobs in 2006. Many worked as researchers, administrators, and counselors for a wide range of employers. About 41 percent worked for Federal, State, and local governments, mostly for 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 elemen-

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Social scientists, other.....	—	54,000	58,000	3,500	6
Sociologists.....	19-3041	3,700	4,100	400	10
Anthropologists and archeologists.....	19-3091	5,500	6,400	800	15
Geographers.....	19-3092	1,100	1,200	100	6
Historians.....	19-3093	3,400	3,700	300	8
Political scientists.....	19-3094	4,700	4,900	300	5

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

tary 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, graduates in history are more likely to teach than are graduates in most other social science fields.

The following tabulation shows employment, by social science specialty.

Anthropologists and archeologists.....	5,500
Political scientists.....	4,700
Sociologists.....	3,700
Historians.....	3,400
Geographers.....	1,100

Job Outlook

Overall employment is projected to grow about as fast as average, but varies by detailed occupation. Job seekers may face competition, and those with higher educational attainment will have the best prospects.

Employment change. Overall employment of social scientists is expected to grow 10 percent from 2006 to 2016, about as fast as the average for all occupations. However, projected growth rates vary by specialty. Anthropologists and archaeologists, sociologists, and historians are projected to grow about as fast as average. Employment of geographers and political scientists is projected to grow more slowly than average, reflecting the relatively few opportunities outside of the Federal Government. Employment is projected to decline slowly in the Federal Government, a key employer of social scientists.

The following tabulation shows projected percent change in employment, by social science specialty.

	Percent
Anthropologists and archeologists.....	15
Sociologists.....	10
Historians.....	8
Geographers.....	6
Political scientists.....	5

Anthropologists and archaeologists will experience the majority of their job growth in the management, scientific, and technical consulting services industry. Anthropologists who work as consultants apply anthropological knowledge and methods to problems ranging from economic development issues to forensics. As construction projects increase, more archaeologists also will be needed to monitor the work, ensuring that historical sites and artifacts are preserved.

Political scientists, sociologists, and historians will mainly find jobs in policy or research. Demand for political science research is growing because of increasing interest about politics and foreign affairs, including social and environmental policy issues and immigration. Political scientists will use their knowledge of political institutions to further the interests of nonprofit, political lobbying, and social organizations. Likewise, the incorporation of sociology into research in other fields will continue to increase the need for sociologists. They 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. Historians may find opportunities with historic preservation societies or working as a consultant as public interest in preserving and restoring historical sites increases.

Geographers will work advising 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.”

Job prospects. In addition to opportunities from employment growth, some job openings for social scientists will come from the need to replace those who retire, enter teaching or other occupations, or leave their social science occupation for other reasons.

People seeking social science positions may face competition for jobs, and those with higher educational attainment will have the best prospects. 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 these social scientists, many compete for jobs with other workers, such as market and survey researchers, psychologists, engineers, urban and regional planners, and statisticians.

Some people with social science degrees will find opportunities as university faculty rather than as applied social scientists. Although there will be keen competition for tenured positions, the number of faculty expected to retire over the decade and the increasing number of part-time or short-term faculty positions will lead to better opportunities in colleges and universities than in the past. The growing importance and popularity of social science subjects in secondary schools also is strengthening the demand for social science teachers at that level.

Earnings

In May 2006, anthropologists and archaeologists had median annual wage-and-salary earnings of \$49,930; geographers, \$62,990; historians, \$48,520; political scientists, \$90,140; and sociologists, \$60,290.

In the Federal Government, social scientists with a bachelor’s degree and no experience often started at a yearly salary of \$28,862 or \$35,572 in 2007, depending on their college records. Those with a master’s degree could start at \$43,731, and those with a Ph.D. degree could begin at \$52,912, while some individuals with experience and an advanced degree could start at \$63,417. Beginning salaries were higher in selected areas of the country where the prevailing local pay level was higher.

Related Occupations

The duties and training of these social scientists are similar to other social scientists, including economists, market and sur-

vey 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—preschool, kindergarten, elementary, middle, and secondary; and archivists, curators, and museum technicians.

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

Geographers often study the Earth's environment and natural resources, as do conservation scientists and foresters, atmospheric scientists, and environmental scientists and hydrologists. Geographers also use GIS computer technology to make maps. Other occupations with similar duties include surveyors, cartographers, photogrammetrists, and surveying technicians; computer systems analysts; and computer scientists and database administrators.

Sources of Additional Information

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:

➤ Archaeological Institute of America, 656 Beacon St., 6th Floor, Boston, MA 02215. Internet:

<http://www.archaeological.org>

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

For information about careers in geography, contact:

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

Also see "Geography jobs," in the spring 2005 issue of the Occupational Outlook Quarterly and online at:

<http://www.bls.gov/opub/ooq/2005/spring/art01.pdf>

Information on careers for historians is available from:

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

For information about careers in political science, contact:

➤ American Political Science Association, 1527 New Hampshire Ave. NW., Washington, DC 20036.

Internet: <http://www.apsanet.org>

➤ National Association of Schools of Public Affairs and Administration, 1029 Vermont Ave. NW., Suite 1100, Washington, DC 20005. Internet: <http://www.naspa.org>

Information about careers in sociology is available from:

➤ American Sociological Association, 1307 New York Ave. NW., Suite 700, Washington, DC 20005.

Internet: <http://www.asanet.org>

For information about careers in policy analysis, an important task for some social scientists, see "Policy analysts: Shaping society through research and problem-solving," online at <http://www.bls.gov/opub/ooq/2007/spring/art03.pdf> and in the spring 2007 issue of the Occupational Outlook Quarterly.

Urban and Regional Planners

(O*NET 19-3051.00)

Significant Points

- Local governments employ about 68 percent of urban and regional planners.
- Most new jobs will be in affluent, rapidly growing communities.
- Job prospects will be best for those with a master's degree and strong computer skills; bachelor's degree holders may find positions, but advancement opportunities are limited.

Nature of the Work

Urban and regional planners develop long- and short-term plans for the use of land and the growth and revitalization of urban, suburban, and rural communities and the region in which they are located. They help local officials alleviate social, economic, and environmental problems by recommending locations for roads, schools, and other infrastructure and suggesting zoning regulations for private property. This work includes forecasting the future needs of the population. Because local governments employ the majority of urban and regional planners, they often are referred to as community or city planners.

Planners promote the best use of a community's land and resources for residential, commercial, institutional, and recreational purposes. They address environmental, economic, and social health issues of a community as it grows and changes. They may formulate plans relating to the construction of new school buildings, public housing, or other kinds of infrastructure. Planners also may help to make decisions about developing resources and protecting ecologically sensitive regions. Some planners are involved in environmental issues including pollution control, wetland preservation, forest conservation, and the location of new landfills. Planners also may help to draft legislation on environmental, social, and economic issues, such as planning a new park, sheltering the homeless, or making the region more attractive to businesses.

Before preparing plans for community development, planners study and 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, planners try to optimize land use for buildings and other public facilities. Planners prepare reports showing how their programs can be carried out and what they will cost.

Planners examine proposed community facilities, such as schools, to be sure that these facilities will meet the needs of a growing or changing population. They keep abreast of economic and legal issues involved in zoning codes, building

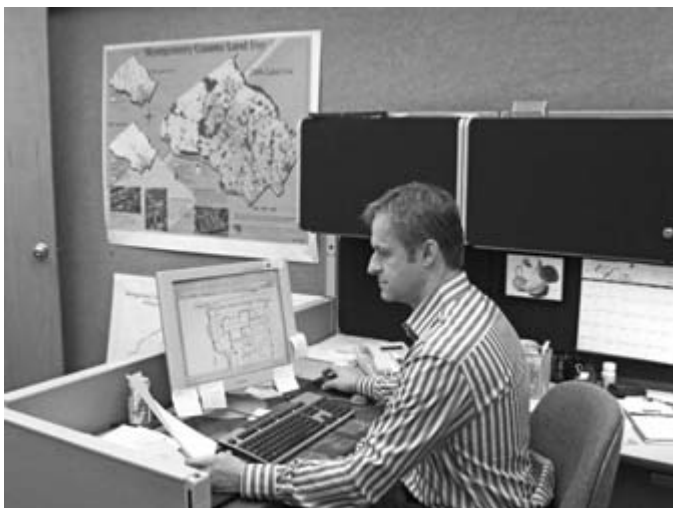
codes, and environmental regulations and ensure that builders and developers follow these codes and regulations. Planners also deal with land-use issues created by population movements. For example, as suburban growth and economic development create more jobs outside cities, the need for public transportation that gets workers to those jobs increases. In response, planners develop and model possible transportation systems and explain them to planning boards and the general public.

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 used to project program costs and forecast future trends in employment, housing, transportation, or population. Computerized geographic information systems (GIS) 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.

Most urban and regional planners focus on one or more areas of specialization. Among the most common are community development and redevelopment and land-use or code enforcement. While planners may specialize in areas such as transportation planning or urban design, they are also required to keep the bigger picture in mind, and do what's best for the community as a whole.

Work environment. Urban and regional planners often travel to inspect the features of land under consideration for development or regulation. 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. Plan-



Urban and regional planners develop plans for communities to best use land and other resources.

ners 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

A master's degree from an accredited planning program provides the best training for a wide range of planning positions. Experience and acquiring and maintaining certification lead to the best opportunities for advancement.

Education and training. Most entry-level jobs in Federal, State, and local governments require a master's degree from an accredited program in urban or regional planning or a related field, such as urban design or geography. Students are admitted to master's degree programs in planning with a wide range of undergraduate backgrounds; a bachelor's degree in economics, geography, political science, or environmental design is especially good preparation. A few schools offer a bachelor's degree in urban planning, and graduates from these programs qualify for some entry-level positions, but their advancement opportunities are often limited unless they acquire an advanced degree.

In 2007, 66 colleges and universities offered an accredited master's degree program, and 15 offered an accredited bachelor's degree program, in 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 at least 2 years of study.

Most college and university planning departments offer specialization in areas such as community development and redevelopment, land-use or code enforcement, transportation planning, environmental and natural resources planning, urban design, and economic planning and development.

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

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.

Licensure. As of 2007, New Jersey was the only State that required planners to be licensed, although Michigan required registration to use the title "community planner." Licensure in New Jersey is based on two examinations—one testing generalized knowledge of planning and another testing knowledge of New Jersey planning laws. Registration as a community planner in Michigan is based on professional experience and national and State examinations.

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Urban and regional planners	19-3051	34,000	39,000	4,900	15

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

Other qualifications. 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.

Certification and advancement. 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 pass an examination. Professional development activities are required to maintain certification. Certification may be helpful for promotion.

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 34,000 jobs in 2006. About 68 percent 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, transportation, or environmental protection, and a small number work for the Federal Government.

Job Outlook

Faster than average employment growth is projected for urban and regional planners. Most new jobs will be in affluent, rapidly expanding communities. Job prospects will be best for those with a master’s degree and strong computer skills.

Employment change. Employment of urban and regional planners is expected to grow 15 percent from 2006 to 2016, faster than the average for all occupations. 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 also create employment growth.

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 within budgetary constraints.

The fastest job growth for urban and regional planners will occur in the private sector, primarily in the professional, scientific, and technical services industries. For example, planners may be employed by firms to help design security measures for a building that are effective but also subtle and able to blend in with the surrounding area. However, because the private sector employs only 21 percent of urban and regional planners, not as many new jobs will be created in the private sector as in government.

Job prospects. In addition to those from employment growth, job openings 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 better job opportunities than those with only a bachelor’s degree. Also, computers and software—especially GIS software—are increasingly being used in planning, and those with strong computer skills and GIS experience will have an advantage in the job market.

Earnings

Median annual wage-and-salary earnings of urban and regional planners were \$56,630 in May 2006. The middle 50 percent earned between \$44,480 and \$71,390. The lowest 10 percent earned less than \$35,610, and the highest 10 percent earned more than \$86,880. Median annual earnings in the industries employing the largest numbers of urban and regional planners in May 2006 were:

Engineering services.....	\$63,840
Architectural, engineering, and related services	62,890
Architectural services	61,700
State government	57,490
Local government.....	54,550

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; geographers; property, real estate, and community association managers; surveyors, cartographers, photogrammetrists, and surveying technicians; and market and survey researchers.

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.

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>**

For additional information on urban and regional planning and on related occupations, see “Geography jobs” in the Spring 2005 Occupational Outlook Quarterly. The article is online at:

<http://www.bls.gov/opub/ooq/2005/spring/art01.pdf>