

# A guide to using the table

The table that follows is divided into sections that correspond to the 10 groups in the Standard Occupational Classification System. Key phrases are used for projected employment change and job market conditions. Use the index beginning on page 48 to find a specific occupation.

## Employment data

The table provides a snapshot of how employment is expected to change in more than 270 occupations. For each occupation, it shows estimated employment in 2002, the projected numeric change (how many jobs are expected to be gained or lost) over the 2002–12 decade, and the projected percent change (the rate of job growth or loss). Then, it gives a summary of job prospects and factors affecting employment.

The employment data in the table come from the

BLS Industry–Occupation Matrix, except where noted. This symbol (★) marks the occupations that are projected to grow much faster than average or to gain at least 200,000 new jobs.

## Occupational groups

Occupations are grouped according to the similarity of the tasks that workers perform. The table lists employment and outlook summaries for occupations in the following 10 groups and also provides a general statement about opportunities in the U.S. Armed Forces.

### **Management, business, and financial operations.**

Workers in these occupations establish plans and policies, manage money, and direct business activities.

**Professional and related.** Workers in this group perform a variety of skilled functions, such as teaching, designing, or diagnosing and treating illness.

**Service.** This group includes workers who assist the public in a number of ways, providing services from grounds maintenance to community safety.

**Sales and related.** Workers in this group advertise and sell goods and services and purchase commodities and property for resale.

**Office and administrative support.** Workers in these occupations prepare and organize documents, provide information to the public, gather and deliver goods, and operate office software and equipment.

**Farming, fishing, and forestry.** Workers in this group tend and harvest renewable resources and manage forests and public parks.

**Construction trades and related.** Workers in these occupations build and repair homes, businesses, roads, and other structures.

**Installation, maintenance, and repair.** These workers install and repair all types of goods and equipment.

**Production.** Workers in this group assemble goods or create energy, usually by operating machines and other equipment.

**Transportation and material moving.** Workers in these occupations move people and materials.

## Key phrases in the “Brief”

### For descriptions about changing employment between 2002 and 2012:

<i>If the statement reads...</i>	<i>Employment is projected to...</i>
Much faster than average	Increase 36 percent or more
Faster than average	Increase 21 to 35 percent
Average	Increase 10 to 20 percent
More slowly than average	Increase 3 to 9 percent
Little or no growth	Increase 0 to 2 percent
Declining employment	Decrease 1 percent or more

### If available, information about expected competition for jobs is provided.

- ◆ “Very good” or “excellent” indicates that job openings may be more numerous than jobseekers.
- ◆ “Good” or “favorable” indicates that job openings and jobseekers are expected to be about equal.
- ◆ “Keen competition” indicates that jobseekers may outnumber job openings.



# Management, business, and financial operations

## Management, business, and financial operations

### Management, business, and financial operations

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Engineering and natural sciences managers</b>	257,300	24,700	10	Average growth. Job growth should be closely related to that of the engineers and scientists these workers supervise. Opportunities are expected to be best for workers who have advanced technical knowledge and good business and communication skills.
<b>Farmers, ranchers, and agricultural managers</b>	1,376,000	-227,000	-17	Declining employment. Increased worker productivity and the continuing consolidation of small farms are expected to reduce employment of farmers and ranchers but create modest job growth for salaried agricultural managers. Raising nursery and greenhouse products and organic food is expected to provide the best opportunities.
<b>Financial managers</b>	599,100	109,500	18	Average growth. Employment is expected to grow as the economy expands and as organizations continue to rely on these workers' financial expertise. But keen competition for jobs is expected; candidates who have a master's degree in accounting or finance are expected to have the most favorable prospects.
<b>Food service managers</b>	385,500	44,300	12	Average growth. As demand and population grow, the number of eating and drinking places is expected to increase, creating jobs for these workers. Applicants who have an associate or bachelor's degree in restaurant and institutional food service management should have the best prospects.
<b>Funeral directors</b>	24,300	1,600	7	Slower than average growth. Employment growth is expected as both the population and the number of deaths increase. Employment opportunities are expected to be good, particularly for workers who also embalm. But graduates of mortuary science programs may have to relocate to find jobs.
<b>Human resources, training, and labor relations managers and specialists</b>	676,700	170,800	25	Faster than average growth. New employment regulations, ongoing efforts to recruit and retain employees, and the growing importance of employee training should increase demand for workers in this occupation. However, the abundant supply of qualified applicants is expected to create keen competition for jobs.
<b>Industrial production managers</b>	182,200	14,300	8	Slower than average growth. The increasing productivity of production workers is expected to limit employment growth of their managers. Applicants who have a degree in industrial engineering, management, or business administration, particularly those who have a bachelor's degree in engineering and a master's degree in business administration or industrial management, should enjoy the best job prospects.

# Management, business, and financial operations

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Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Lodging managers</b>	68,800	4,500	7	Slower than average growth. Employment growth is expected to be tempered by an increase in low-cost and extended-stay hotels, which require fewer managers, and the transfer of some managerial duties to front desk clerks. Job opportunities are expected to be best for those who have a college degree in hotel or restaurant management.
<b>Medical and health services managers</b>	243,600	71,300	29	Faster than average growth. Employment is expected to grow fastest—and opportunities are expected to be especially good—in home healthcare services, outpatient care centers, and offices of physicians and other health practitioners. Applicants who have a master's degree, healthcare experience, and strong business skills should have the best prospects.
<b>Property, real estate, and community association managers</b>	292,900	37,400	13	Average employment growth. A growing number of apartments, houses, and offices are expected to require managers. New homes increasingly are organized with community or homeowner associations that provide services and oversight and require professional management. Opportunities should be best for those who have a bachelor's degree in business administration, real estate, or a related field and have a professional designation.
<b>Purchasing managers, buyers, and purchasing agents</b>	527,100	41,300	8	Slower than average growth. Increased use of computerized purchasing systems should restrain employment growth. The best opportunities are expected for purchasing agents of complex equipment, workers in the services sector, and those who have a bachelor's degree in business.
<b>Top executives</b>	2,668,600	469,300 ★	18	Average growth. Projected employment growth of these workers varies by industry—for example, growth is projected to be faster than average in professional, scientific, and technical services but to decline in some manufacturing industries. Keen competition is expected because the prestige and high pay attract many qualified applicants. Expected to have the best opportunities are experienced managers whose accomplishments reflect strong leadership and an ability to improve an organization's efficiency or competitive position.

#### Business and financial operations

<b>Accountants and auditors</b>	1,055,200	205,500 ★	19	Average growth. Employment growth is expected because of changing financial regulations, rising scrutiny of business finances, and an increase in the number of businesses. Job prospects are expected to be favorable overall and best for those who have a master's degree, professional certification, and knowledge of accounting software.
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# Management, business, and financial operations

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Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Budget analysts</b>	62,200	8,700	14	Average growth. Employment growth should be driven by the continuing demand for expert analysis of complex financial information. Job competition is expected to be keen; candidates who have a master's degree should have the best opportunities.
<b>Claims adjusters, appraisers, examiners, and investigators</b>	241,400	33,900	14	Average growth. Because these jobs are not easily automated, employment should grow as the number of insurance claims increases. Keen competition is expected for investigator jobs, with college graduates having the best prospects.
<b>Cost estimators</b>	188,000	35,000	19	Average growth. Growth of the construction industry is expected to drive demand for these workers. Job prospects in construction and manufacturing—the primary employers of cost estimators—should be best for those who have industry work experience and a bachelor's degree in a related field.
<b>Financial analysts and personal financial advisors</b>	298,300	75,800	25	Faster than average growth. Rising levels of investment by businesses and individuals should drive growth. Baby boomers saving for retirement and a population that is generally better educated and wealthier are expected to require more financial advice. However, competition for financial analyst jobs is expected to be keen.
<b>Insurance underwriters</b>	101,800	10,200	10	Average growth. Underwriting software should continue to increase worker productivity. But because human skills are still needed, employment is expected to increase with rising insurance needs. Opportunities should be best for underwriters specializing in long-term care and other areas that are expected to have significant new business.
<b>Loan counselors and officers</b>	254,600	47,600	19	Average growth. Population increases and economic expansion are expected to spur above-average demand for loans, but increased automation of lending processes should curb employment. Those who have a bachelor's degree and have banking, lending, or sales experience should have the best job prospects.
<b>Management analysts</b>	577,400	175,700	30	Faster than average growth. Organizational changes, growth of international business, and changing technology are expected to provide opportunities for these workers. Despite fast growth, keen job competition is anticipated because the high salaries, good benefits, and prestigious work attract many jobseekers. Opportunities are expected to be best for those who have a master's degree and management experience.

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Tax examiners, collectors, and revenue agents</b>	74,800	3,800	5	Slower than average growth. Government budgetary constraints, the increased use of computers in filing and processing tax returns, and the contracting out of tax collections to the private sector are expected to dampen employment growth. Because of the relatively small number of openings, jobseekers should expect keen competition.



## Professional and related

### Computer and mathematical

<b>Actuaries</b>	15,300	2,300	15	Average growth. More workers should be needed to analyze an increasing array of risks related to health, terrorism, and environmental hazards. Employment in the insurance industry—the largest employer of actuaries—should be stable. The best opportunities are expected to be in consulting.
<b>Computer programmers</b>	498,600	72,700	15	Average growth. Job growth is expected to be slower than in the previous decade, as some routine programming tasks increasingly are eliminated by sophisticated software or are outsourced overseas. Prospects should be best for those with a bachelor's degree who know many programming languages and tools; those without formal education or equivalent work experience may face keen competition.
<b>Computer software engineers</b>	675,200	307,200 ★	45 ★	Much faster than average growth. Strong demand for software engineers is projected as organizations continue to adopt and integrate new technologies and seek to maximize the efficiency of their computer systems. Job growth will be slower than in the previous decade as the software industry matures and as some routine tasks are increasingly outsourced overseas. Very good opportunities are expected for those who have work experience and at least a bachelor's degree in computer engineering or computer science.
<b>Computer support specialists and systems administrators</b>	758,300	247,300 ★	33	Faster than average growth. As computers and software become more complex and new innovations are introduced, support specialists will be needed to help users. Job growth is not expected to be as explosive as in the previous decade, partly because some of these jobs are being outsourced overseas. Strong demand for network administrators also is expected as electronic commerce and computer applications develop and cybersecurity becomes a priority. Job prospects should be best for associate or bachelor's degree holders who keep current with the latest skills and technologies.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Computer systems analysts, database administrators, and computer scientists</b>	979,200	416,000 ★	42 ★	Much faster than average growth. Growth should be driven by rapid increases in computer systems design and related services. Employment prospects should be favorable, especially for candidates who have either a bachelor's degree in computer science or computer engineering or a master's degree in business administration with a concentration in information systems.
<b>Mathematicians</b>	2,900	-30	-1	Declining employment. The number of jobs for people with the title of mathematician is expected to decline, despite rising demand for workers with mathematical skills. This work is becoming more integrated with other fields, such as engineering, computer science, physics, and finance. Workers who have strong backgrounds in these related disciplines should have better opportunities. Competition should be keen.
<b>Operations research analysts</b>	61,700	3,900	6	Slower than average growth. Projected employment reflects a slowing in the use of this job title. Many operations-research positions instead use titles such as operations analyst, management analyst, systems analyst, or policy analyst. But opportunities are expected to increase as organizations strive to improve their productivity and competitiveness. Jobseekers who have a graduate degree in operations research, management science, or a closely related field should have the best prospects.
<b>Statisticians</b>	20,000	1,000	5	Slower than average growth. The use of this job title is expected to slow as workers who study statistics increasingly hold jobs with other titles. Opportunities will be best for those who analyze and interpret data related to economics, biological science, psychology, and computer software engineering.
<b>Architects, surveyors, and cartographers</b>				
<b>Architects, except landscape and naval</b>	113,200	19,500	17	Average employment growth. Growth in construction, particularly of nonresidential structures such as office buildings, shopping centers, schools, and healthcare facilities, is expected to spur employment. Due to the popularity of the occupation, jobseekers may face keen competition.
<b>Landscape architects</b>	23,100	5,100	22	Faster than average growth. Homeowners' and businesses' increasing desire for extensive landscaping projects and the need to design large-scale government transportation and water management projects are expected to generate high demand for these workers.



Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Surveyors, cartographers, photogrammetrists, and surveying technicians</b>	124,500	17,500	14	Average growth. Increasing availability and use of geographic data and geographic information systems (GIS) are expected to spur employment. Technician jobs are expected to grow faster than average, creating many opportunities, but low entry requirements could create competition among applicants. For surveyors, cartographers, and photogrammetrists, opportunities are expected to be best for those who have at least a bachelor's degree and strong technical skills.
<b>Engineers<sup>2</sup></b>				
	1,478,300	108,600	7	Slower than average growth. Expected changes in employment and, thus, job opportunities vary by specialty. Overall, job opportunities in engineering are expected to be good.
<b>Aerospace engineers</b>	77,900	-4,100	-5	Declining employment. Foreign competition and the slowdown in air travel are expected to limit demand for commercial aircraft and reduce employment in this occupation. Nevertheless, favorable opportunities are expected because of the declining number of degrees granted in aerospace engineering over the last decade.
<b>Agricultural engineers</b>	2,900	300	10	Average growth. Job opportunities should result from an increased demand for resource conservation and the global standardization of agricultural equipment.
<b>Biomedical engineers</b>	7,600	2,000	26	Faster than average growth. The demand for more advanced medical equipment is expected to spur employment growth. The number of degrees granted in biomedical engineering has increased, however, making competition for jobs more likely.
<b>Chemical engineers</b>	32,900	100	0	Little or no growth. Chemical companies are expected to continue researching and developing new chemicals and processes. The pharmaceuticals industry and the research and testing services industry may provide the best opportunities. Overall employment in the chemical manufacturing industry is projected to decline, but the need to replace workers who retire should create some opportunities.
<b>Civil engineers</b>	228,100	18,200	8	Slower than average growth. Spurred by general population growth and an increased emphasis on infrastructure and security, employment of these workers is projected to increase somewhat.
<b>Computer hardware engineers</b>	73,900	4,500	6	Slower than average growth. Although the use of information technology continues to expand rapidly, intense foreign competition and high worker productivity are projected to restrain employment growth. Computer hardware engineers may face keen competition for jobs because the number of degrees granted in this field has increased rapidly.



# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Electrical and electronics engineers, except computer</b>	291,900	16,700	6	Slower than average growth. Despite rising demand for electrical and electronic goods—such as advanced communications equipment, defense-related electronic equipment, and consumer electronics products—engineering services and electronic products from other countries are expected to limit employment growth. Favorable opportunities are expected, in part because of the need to replace workers who retire.
<b>Environmental engineers</b>	47,100	18,000	38 ★	Much faster than average growth. More of these workers will be hired to develop ways to clean hazards and comply with environmental regulations, especially as this specialty becomes better known. Opportunities are expected to be favorable.
<b>Industrial engineers, including health and safety</b>	193,800	19,700	10	Average growth. As firms seek to reduce costs and as concern for safety grows, employment of these workers is projected to increase. Employment of safety and health engineers is expected to grow less than employment of other types of industrial engineers.
<b>Materials engineers</b>	24,300	1,000	4	Slower than average growth. Although job declines are expected in many of the manufacturing industries that employ these workers, engineers should still be needed to develop new materials for electronics, biotechnology, and plastics products. As firms contract for engineering services, fast employment growth is projected in many professional, scientific, and technical services industries.
<b>Mechanical engineers</b>	215,100	10,300	5	Slower than average growth. Despite job declines in manufacturing, opportunities should result from the demand for more complex and efficient machinery and processes, growth in biotechnology and material science, and the contracting of work to business and engineering services firms.
<b>Mining and geological engineers, including mining safety engineers</b>	5,200	-100	-3	Declining employment. Employment is projected to fall in most of the industries employing these workers. However, very good opportunities are expected because of the small number of graduates in this field and the need to replace the many workers expected to retire.
<b>Nuclear engineers</b>	15,600	-20	0	Little or no growth. No new nuclear power plants have been constructed in many years, so little or no employment growth is projected. Nevertheless, good job prospects are expected as current workers retire and the number of graduates in this field remains small.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Petroleum engineers</b>	13,600	-1,300	-10	Declining employment. Most of the potential petroleum-producing areas in the United States have been explored, reducing employment in this country. Good employment opportunities are expected, however, as workers retire and the number of degrees granted in this field remains small. In addition, employment opportunities abound in other countries for U.S.-trained petroleum engineers.
<b>Drafters and engineering technicians</b>				
<b>Drafters</b>	216,100	6,000	3	Slower than average growth. Industrial growth and increasingly complex design problems are expected to boost the demand for drafting services. However, increased use of computer-assisted design and drafting (CADD) equipment should improve productivity and limit employment of less-skilled drafters. Job opportunities are expected to be best for people who have at least 2 years of postsecondary training and experience using CADD systems.
<b>Engineering technicians</b>	478,300	48,200	10	Average growth. Competitive pressures are expected to force companies to improve and update facilities and product designs more rapidly than in the past, creating job growth for these workers. Opportunities are expected to be best for individuals who have an associate degree or extensive job training.
<b>Life scientists</b>				
<b>Agricultural and food scientists</b>	18,000	1,600	9	Slower than average growth. These workers are projected to have little job growth in the Federal Government and modest growth in State and local governments, the largest employers of these scientists. Workers seeking research scientist and postsecondary teaching positions may face competition as the number of doctoral recipients increases and the number of positions remains limited. Opportunities may be more numerous for research assistants who have a master's degree.
<b>Biological scientists</b>	75,400	14,300	19	Average growth. The demand for medical research is expected to drive growth. But doctoral degree holders can expect keen competition for basic research positions as the number of Ph.D. recipients increases. More opportunities are expected for bachelor's degree holders in nonresearch positions.
<b>Conservation scientists and foresters</b>	32,800	1,400	4	Slower than average growth. Opportunities with State governments are expected to be limited by budget constraints and a decreasing emphasis on timber programs. Stronger growth is expected in consulting firms that specialize in issues related to environmental protection, land management, and water.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Medical scientists</b>	61,700	16,800	27	Faster than average growth. Growth will be generated by medical research and the demand for new drugs. Infection-control programs and concerns about bioterrorism also are projected to create jobs, particularly in epidemiology. But as the number of Ph.D. recipients grows, workers can expect competition for basic research positions.
<b>Physical scientists</b>				
<b>Atmospheric scientists</b>	7,700	1,200	16	Average growth. Consulting firms are expected to provide the best job prospects as weather predictions become more detailed and useful to businesses. The National Weather Service, the largest employer of atmospheric scientists, is expected to have limited job growth.
<b>Chemists and materials scientists</b>	91,300	11,300	12	Average growth. Most job growth is expected in pharmaceutical and medicine manufacturing and research and development firms, reflecting demand for new drugs and personal-care products. Those who have a graduate degree are expected to enjoy better opportunities than are those who have a bachelor's degree.
<b>Environmental scientists and geoscientists</b>	100,700	20,300	20	Average growth. Environmental scientist and hydrologist jobs are expected to grow faster than average as these workers help organizations comply with environmental laws. Average growth is expected for geoscientists as oil and gas exploration becomes more efficient. Geoscientists who speak a foreign language and are willing to work abroad should have the best prospects.
<b>Physicists and astronomers</b>	14,400	1,000	7	Slower than average growth. An emphasis on applied research means that many people whose work relates to physics will have other job titles. Increased undergraduate enrollment in science and limited research funds are expected to create competition among Ph.D.s for basic research jobs. Opportunities may be more numerous for master's degree holders in applied research and development.
<b>Social scientists and related</b>				
<b>Economists</b>	16,100	2,200	13	Average growth. Demand for economists stems from the growing complexity of the global economy and increased reliance on quantitative methods for analyzing and forecasting business, sales, and other economic trends. Bachelor's degree holders face competition for the limited number of positions for which they qualify. Opportunities should be best for workers who have advanced degrees and strong quantitative skills.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Market and survey researchers</b>	154,700	38,300	25	Faster than average growth. Increasing competition among companies and demand for public-opinion research are expected to fuel demand for these workers. Opportunities are expected to be best for those who have strong quantitative skills and a graduate degree in marketing or a related field.
<b>Psychologists</b>	139,100	33,800	24	Faster than average growth. Opportunities may be best for school psychologists as more student services are provided. Opportunities also are expected for clinical and counseling specialists, especially for those who hold doctorates, as they help clients deal with their stress, family problems, and other issues.
<b>Urban and regional planners</b>	32,200	3,400	11	Average growth. These workers will be needed to plan for the housing, land use, and transportation of a growing population. Budget constraints could limit job growth in local governments, the primary employers of planners. Growth should be more rapid in consulting firms. Most new jobs are expected to be in rapidly growing communities.
<b>Social scientists, other</b>	16,500	1,600	10	Average growth. Anthropologists, geographers, and sociologists are expected to have better job prospects than will historians and political scientists. Social scientists are expected to find some job opportunities in the private sector in product development, marketing, policy research, and application of GIS technology. Job competition is expected to remain keen for all specialties.

## Science technicians

	208,500	27,100	13	Average growth. Increases in scientific and medical research, especially in biotechnology and environmental science, should stimulate demand for technicians. Employment of biological, forensic science, and environmental technicians is expected to grow more rapidly than that of other technicians. A high rate of retirement is expected to provide jobs for entry-level chemical technicians.
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## Community and social services

<b>Clergy</b>	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	Opportunities should be very good for clergy as the number of graduates of seminaries and other theological schools is less than the number of openings. Roman Catholic priests should have the best job prospects. Rabbis also should have good opportunities. Openings for Protestant ministers vary by denomination.
<b>Counselors</b>	525,900	118,900	23	Faster than average growth. Employment is expected to increase with growth of educational, employment, rehabilitation, and other counseling services. Numerous job openings should result from the need to replace counselors who retire.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Probation officers and correctional treatment specialists</b>	84,300	12,400	15	Average growth. The increasing prison, parole, and probation populations should spur demand for these workers, but job growth depends primarily on the level of government funding for probation and parole agencies.
<b>Social and human service assistants</b>	305,200	148,700	49 ★	Much faster than average growth. Growth should result from the increasing demand for social and human services for substance abusers, the elderly, and the mentally and physically disabled. Job opportunities should be excellent, particularly for jobseekers who have appropriate postsecondary education.
<b>Social workers</b>	476,600	127,100	27	Faster than average growth. The rapidly increasing elderly population is expected to spur demand for social services. Competition for jobs is strongest in cities, but opportunities should be good in rural areas. Employment prospects should be best for social workers with experience in gerontology and substance abuse treatment.

## Legal

<b>Court reporters</b>	17,800	2,300	13	Average growth. Employment should be spurred by the continuing need for court records and increasing demand for captioned television programs and Internet broadcasts.
<b>Judges, magistrates, and other judicial workers</b>	51,400	4,200	8	Slower than average growth. Tight State and Federal budgets are expected to limit the number of jobs for new judges. Most openings should arise as judges retire. Opportunities should be good for arbitrators, mediators, and conciliators due to the growing popularity of cost-effective alternatives to litigation.
<b>Lawyers</b>	695,200	117,900	17	Average growth. Projected demand results primarily from increased legal activity in some areas, such as healthcare and intellectual property, and from population growth. Competition for jobs at the best law firms is expected to be keen.
<b>Paralegals and legal assistants</b>	199,600	57,300	29	Faster than average growth. As they become more skilled, paralegals' duties are increasing. These workers are assuming some tasks previously done by lawyers. Firms are expected to hire more paralegals to lower costs. Jobseekers with formal training have the best prospects.

## Education, training, library, and museum

<b>Archivists, curators, and museum technicians</b>	22,300	3,800	17	Average growth. Jobs are expected to grow as organizations give priority to establishing archives and organizing information and as public interest in science, art, history, and technology results in more museums. Keen competition is expected for these popular jobs. Jobseekers who have extensive computer skills should have the best opportunities.
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# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Instructional coordinators</b>	98,500	25,000	25	Faster than average growth. Growing numbers of instructional coordinators are expected to be needed to incorporate government standards into curriculums and to help teachers and administrators understand changes. Opportunities are expected to be best for those who specialize in subject areas—specifically, reading, mathematics, and science—that have been targeted for improvement by recent legislation.
<b>Librarians</b>	167,100	16,800	10	Average growth. Rising enrollments should increase the demand for school and university librarians; however, job growth is expected to be offset somewhat by computer systems that simplify cataloging, a task increasingly handled by library technicians. Very good opportunities should arise from the need to replace retirees.
<b>Library technicians</b>	119,300	20,000	17	Average growth. Projected employment growth reflects the continuing trend of library automation, offering technicians more responsibility. Budget constraints could result in the hiring of more library technicians than higher paid librarians. Opportunities should be good in special libraries.
<b>Teacher assistants</b>	1,276,700	294,100 ★	23	Faster than average growth. Fast growth in enrollments of special education students and students for whom English is not a first language should generate high demand for teacher assistants who provide extra help. A greater focus on educational quality and accountability also is likely to lead to increased demand for the remedial instruction that these workers provide. Opportunities should be best for workers who have experience in special education and for those who can speak a foreign language.
<b>Teachers—adult literacy and remedial and self-enrichment education</b>	280,400	96,700	34	Faster than average growth. Demand for self-enrichment courses is expected to rise as retirees and others have more free time. Opportunities also should be very good for teachers of English as a Second Language.
<b>Teachers—postsecondary</b>	1,581,200	602,700 ★	38 ★	Much faster than average growth. Workers' need to regularly update their skills should create new opportunities for postsecondary teachers, particularly at community colleges and for-profit institutions that cater to working adults. A rising young-adult population also will spur growth. Many new jobs are likely to be part time.
<b>Teachers—preschool, kindergarten, elementary, middle, and secondary</b>	3,754,400	665,600 ★	18	Average growth. Student enrollments, a key factor in employment growth for teachers, are expected to rise, especially in the South and West. Opportunities should be best for those willing to relocate or work in urban or rural areas. The large number of teachers expected to retire should lead to numerous job openings, particularly at the secondary level.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Teachers—special education</b>	432,900	129,800	30	Faster than average growth. Projected growth reflects legislation emphasizing training for people with disabilities, education reforms requiring higher graduation standards, and continued increases in the number of students who need special education services. Job prospects are expected to be best for applicants who are bilingual or have multicultural experience.
<b>Art and design</b>				
<b>Artists and related workers</b>	148,700	21,400	14	Average growth. Expanding electronic and interactive media should create opportunities for illustrators, animators, and multimedia artists. Competition for jobs is expected to be keen.
<b>Designers</b>	531,900	92,700	17	Average growth. Among the design specialties, graphic designers should have the most new jobs because of a rapidly expanding market for Web-based graphics and video entertainment. Competition for openings is expected to be extremely keen because many creative and talented people want to become designers.
<b>Entertainers and performers and sports and related</b>				
<b>Actors, producers and directors</b>	139,200	25,100	18	Average growth. Employment is projected to grow rapidly for workers who produce Internet, cable, and subscription broadcast media; motion pictures; and videos but to grow more slowly in traditional broadcast and performing arts media. Competition for jobs is expected to be keen because much of the work is short-term.
<b>Athletes, coaches, umpires, and related workers</b>	158,400	29,000	18	Average growth. Employment is expected to grow as the public continues to participate in organized sports. Opportunities for coaches and instructors should be abundant at high schools and at the amateur level as school athletic programs grow and as the public places a higher value on fitness. Competition for professional athlete and scouting jobs is expected to remain keen.
<b>Dancers and choreographers</b>	37,300	5,000	13	Average growth. Competition for jobs in musical theater, dance, and opera companies should be keen because many companies are reducing the number of performances and limiting the number of dancers. Although still competitive, jobs in more commercial arenas, such as theme parks, film, and other entertainment industries, should be more plentiful.
<b>Musicians, singers, and related workers</b>	215,400	34,800	16	Average growth. Most job growth is expected in religious organizations. Overall competition for jobs, especially among freelance musicians, is expected to be keen.



# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Media and communication-related</b>				
<b>Announcers</b>	75,700	-7,600	-10	Declining employment. Technological advances, station consolidation, and lack of new stations are expected to reduce employment. Competition for jobs is expected to be keen.
<b>Broadcast and sound engineering technicians and radio operators</b>	93,000	18,200	20	Average growth. Employment growth should be tempered by station consolidation and labor-saving technical advances, such as computer-controlled programming. Employment of these workers in the motion picture industry should grow rapidly, but jobs are expected to remain competitive because of the number of people attracted by the glamour of the industry. People seeking entry-level jobs are expected to face strong competition in major metropolitan areas, where pay generally is higher; prospects are better in small cities and towns.
<b>Interpreters and translators</b>	24,100	5,300	22	Faster than average growth. Employment growth is expected to result from increased international ties and increasing numbers of foreign language speakers in the United States. Job prospects vary by specialty and language.
<b>News analysts, reporters, and correspondents</b>	65,700	4,100	6	Slower than average growth. Employment growth is expected to be limited by mergers, consolidations, and closures of newspapers; decreased circulation; increased expenses; and a decline in advertising profits. Small-town and suburban newspapers and radio and television stations are expected to provide the most opportunities. Competition should continue to be keen for jobs in large metropolitan and national outlets.
<b>Photographers</b>	130,400	17,800	14	Average growth. Growth in the population, with its accompanying demand for portrait photography, and an increase in Internet magazines and websites that require photographs are expected to increase demand for photography services. However, workers should expect keen competition, particularly in commercial and news photography, because the work attracts many people.
<b>Public relations specialists</b>	158,100	52,100	33	Faster than average growth. The need for good public relations in an increasingly competitive business environment is expected to spur job growth. However, keen competition is expected for entry-level jobs, as many people are attracted to this high-profile profession. Opportunities should be best for jobseekers who combine a bachelor's degree in a communications-related field with an internship or related work experience.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Television, video, and motion picture camera operators and editors</b>	47,500	8,900	19	Average growth. Rapid expansion of the entertainment market, including motion picture production and distribution and made-for-Internet broadcasts, should spur growth in this occupation. Competition for jobs is expected to be keen. Those who succeed in getting a salaried job or in attracting enough freelance work to earn a living are likely to be creative, highly motivated, able to adapt to rapidly changing technologies, and adept at operating a business.
<b>Writers and editors</b>	318,600	51,100	16	Average growth. Technical writers, who prepare user manuals and write technical documentation, should experience rapid employment growth. More opportunities for self-employed writers, authors, and editors also are expected because many publishers increasingly rely on contract or freelance work. But short-term and irregular assignments also mean keen competition for work.
<b>Health diagnosing and treating</b>				
<b>Audiologists</b>	10,900	3,200	29	Faster than average growth. As the population ages, the number of people with hearing loss will increase, boosting demand for audiologists. Additionally, rising school enrollments and increasing services for special education students are expected to create jobs.
<b>Chiropractors</b>	48,900	11,400	23	Faster than average growth. The desire for alternative, noninvasive healthcare is expected to increase the demand for chiropractic services. Job prospects are expected to be good.
<b>Dentists</b>	152,600	6,300	4	Slower than average growth. As baby-boomers age, many are expected to need maintenance on complicated dental work. And people today are more likely to keep their teeth and, thus, to require care. But growth is expected to be offset by dental hygienists and assistants increasingly handling more routine services. Job prospects should be good.
<b>Dietitians and nutritionists</b>	48,900	8,700	18	Average growth. The increased emphasis on healthy eating for disease prevention is expected to boost employment. But growth may be constrained by limits on insurance reimbursement and by health educators or dietetic technicians assuming some of these workers' tasks.
<b>Occupational therapists</b>	81,600	28,700	35	Faster than average growth. Demand for therapeutic services is expected to rise because of a growing elderly population and the increasing number of individuals with disabilities or limited function.
<b>Optometrists</b>	32,100	5,500	17	Average growth. Demand for vision care should grow steadily because of an aging population that is susceptible to vision problems. Replacement needs are low because optometrists usually remain in the profession until they retire.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Pharmacists</b>	230,200	69,200	30	Faster than average growth. Continued employment increases are expected because of an aging population, a rise in the number of medications, and an increase in pharmacists' patient-care duties. Very good opportunities are expected.
<b>Physical therapists</b>	136,900	48,300	35	Faster than average growth. The increasing number of individuals with disabilities or limited function, including the elderly, is expected to spur demand for physical therapy.
<b>Physician assistants</b>	63,000	30,800	49 ★	Much faster than average growth. Projected growth reflects the expansion of health services and efforts to contain costs by using assistants. Prospects are expected to be good, particularly in rural and inner city clinics.
<b>Physicians and surgeons</b>	583,000	113,500	19	Average growth. The growing and aging population is expected to drive employment, as consumers continue to demand high levels of care that use the latest technologies, diagnostic tests, and therapies. Demand for physician services changes with consumer preferences, healthcare reimbursement policies, and legislation. Favorable prospects are expected, particularly in rural and low-income areas.
<b>Podiatrists</b>	13,300	2,000	15	Average growth. Demand for podiatric services is expected to rise as an active and aging population sustains more foot injuries. A limited number of job openings is expected, however, because the occupation is small and most podiatrists remain in it until they retire.
<b>Recreational therapists</b>	26,700	2,400	9	Slower than average growth. Employment is expected to grow in assisted living, residential care, and adult daycare facilities but decline slightly in hospitals as companies try to contain costs. Opportunities should be best for people who have either a bachelor's degree in therapeutic recreation or in a related subject with a concentration in therapeutic recreation.
<b>Registered nurses</b>	2,284,500	623,200 ★	27	Faster than average growth. An increasing demand for healthcare from an aging population and an increasing emphasis on preventive care are expected to spur growth. Employment opportunities are expected to be very good.
<b>Respiratory therapists</b>	112,200	38,900	35	Faster than average growth. A rise in the incidence of cardiopulmonary and respiratory ailments is expected as the population ages, spurring demand for respiratory-therapy services. Job opportunities should be very good, especially for those who have cardiopulmonary care skills or experience working with infants.
<b>Speech-language pathologists</b>	94,300	25,600	27	Faster than average growth. An increase in the elderly population is expected to raise the incidence of stroke and increase the need for these workers. Medical advances will help patients survive longer. Additionally, rising school enrollments and an increase in services for special education students is expected to create jobs.

# Professional and related Professional and related Professional and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Veterinarians</b>	57,500	14,400	25	Faster than average growth. Pet owners are expected to spend more on advanced veterinary medical care, creating more employment. Very good opportunities are expected, but competition for admittance to veterinary school is keen.
<b>Health technologists and technicians</b>				
<b>Cardiovascular technologists and technicians</b>	43,400	14,600	34	Faster than average growth. An aging population is expected to boost demand for cardiovascular procedures. Employment in most specialties is expected to grow rapidly, but fewer EKG technicians will be needed as other workers take over basic testing.
<b>Clinical laboratory technologists and technicians</b>	297,400	57,600	19	Average growth. Technological advances are expected to have two opposing effects on employment. New, increasingly powerful diagnostic tests are expected to encourage additional testing and spur employment; however, simplified testing procedures may allow nonlaboratory personnel to perform routine tests. Job opportunities are expected to be excellent.
<b>Dental hygienists</b>	148,000	63,700	43	Much faster than average growth. Employment is expected to grow as demand for dental services increases and as hygienists increasingly perform services previously performed by dentists. Job opportunities should be excellent. ★
<b>Diagnostic medical sonographers</b>	36,500	8,800	24	Faster than average growth. A growing and aging population is expected to spur job growth. Opportunities should be favorable as patients seek ultrasound as an alternative to radiologic procedures.
<b>Emergency medical technicians and paramedics</b>	179,100	59,300	33	Faster than average growth. Population growth and urbanization are expected to increase demand for professional, rather than volunteer, emergency medical technicians and paramedics. Competition is expected to be greater for jobs in local fire, police, and rescue-squad departments than for jobs in private ambulance services. Opportunities are expected to be best for those who have advanced certifications.
<b>Licensed practical and licensed vocational nurses</b>	701,900	141,800	20	Average growth. Employment is expected to grow with the aging population's long-term care needs and with a general increase in healthcare. Nursing-care facilities are expected to offer the most new jobs; employment in hospitals is projected to decline.

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Medical records and health information technicians</b>	146,900	68,700	47	Much faster than average growth. Rising employment is expected to result from rapid growth in the number of medical tests, treatments, and procedures performed and from increased scrutiny by third-party payers, regulators, and consumers. Job prospects should be very good.
<b>Nuclear medicine technologists</b>	17,100	4,100	24	Faster than average growth. New jobs are expected to arise from an increase in the number of middle-aged and older people, the primary users of diagnostic procedures such as nuclear medicine tests. However, because the occupation is small, relatively few openings are expected.
<b>Occupational health and safety specialists and technicians</b>	41,400	5,400	13	Average growth. Continuing demand for safe workplaces is expected to offset the desire for fewer regulations. Projected job increases reflect business growth and continuing efforts to comply with government and company regulations and policies.
<b>Opticians, dispensing</b>	63,200	11,500	18	Average growth. Sustained demand for eyeglasses and contact lenses is expected to create jobs, particularly with the growing number of middle-aged and elderly people, who use more eyewear than younger people. However, the number of job openings is expected to be low because the occupation is small.
<b>Pharmacy technicians</b>	210,800	60,700	29	Faster than average growth. More medications, increased medical needs of an aging population, and additional tasks given to these workers in an effort to increase efficiency are expected to result in good job opportunities, especially for those who have formal training and certification.
<b>Radiologic technologists and technicians</b>	174,100	40,000	23	Faster than average growth. The growing and aging population is expected to increase the demand for diagnostic imaging. Job opportunities are expected to be favorable.
<b>Surgical technologists</b>	72,200	20,200	28	Faster than average growth. Demand for these workers is expected to rise as an aging population and new surgical procedures lead to more surgeries. Hospitals are expected to remain the primary employer, but employment in physician offices and ambulatory surgical centers is expected to grow at a faster rate. Job opportunities are expected to be favorable.
<b>Veterinary technologists and technicians</b>	52,700	23,200	44	★ Much faster than average growth. The pet population is expected to increase, as is the willingness of pet owners to spend money on their pets; more jobs should result. In addition, technicians are expected to continue to replace less-skilled veterinary assistants because services are requiring more advanced skills. Keen competition is expected for jobs in zoos.



Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	

## Service

### Healthcare support

<b>Dental assistants</b>	266,000	113,000	42 ★	Much faster than average growth. Job growth should be spurred by rising demand for dental care from an aging population and the increasing reliance on dental assistants to perform routine tasks. Job prospects are expected to be excellent.
<b>Medical assistants</b>	364,600	214,800 ★	59 ★	Much faster than average growth. This is projected to be the fastest growing occupation because of technological advances in medicine, a growing and aging population, and the increasing use of these workers in group practices, clinics, and other outpatient facilities. Job prospects are expected to be best for workers who have experience or formal training, particularly those who have certification.
<b>Medical transcriptionists</b>	100,800	22,800	23	Faster than average growth. An older population, primary recipients of medical tests, treatments, and procedures, is expected to drive growth—as is the continuing need for medical documentation that can be shared electronically. Job opportunities are expected to be good.
<b>Nursing, psychiatric, and home health aides</b>	2,014,300	630,400 ★	31	Faster than average growth. Employment growth should be spurred by increasing demand for long-term care. Growth will be much faster than average for home health aides, faster than average for nursing aides, and about average for psychiatric aides. Job opportunities are expected to be excellent.
<b>Occupational therapist assistants and aides</b>	26,800	10,800	40 ★	Much faster than average growth. An aging population and an increase in the number of individuals with disabilities or limited function are expected to increase the demand for therapeutic services in the long term. Furthermore, occupational therapists are expected to delegate more work to assistants and aides.
<b>Pharmacy aides</b>	60,300	10,600	18	Average growth. Many new jobs, mostly in retail pharmacies, are expected as these workers help pharmacists and technicians dispense more medications. Good opportunities are expected, especially for those who have related work experience.
<b>Physical therapist assistants and aides</b>	87,200	39,500	45 ★	Much faster than average growth. Demand for these workers will be driven by the growing number of individuals with disabilities or limited function, including the elderly, and the increasing use of assistants in an effort to reduce the cost of therapy.

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Protective service</b>				
<b>Correctional officers</b>	475,600	111,100	23	Faster than average growth. Employment will be spurred by a growing inmate population, the expansion of correctional facilities, and mandatory sentencing guidelines that call for longer sentences and reduced parole. Excellent job opportunities are expected, especially in some rural locations.
<b>Fire fighting occupations</b>	358,900	71,800	20	Average growth. Most job growth is expected to come from volunteer positions being converted to paid positions. Prospective fire fighters are expected to face keen competition for jobs because many people are attracted to the occupation's challenge and service opportunities.
<b>Police and detectives</b>	840,100	192,700	23	Faster than average growth. A more security-conscious society and concern about drug-related crimes are expected to contribute to the increasing demand for police services. Competition should remain keen for high-paying jobs with State and Federal agencies and police departments in more affluent areas; opportunities should be better in local and special police departments, especially in areas with relatively high crime rates. Applicants who have military experience or college training in police science should have the best opportunities.
<b>Private detectives and investigators</b>	48,000	12,200	25	Faster than average growth. Increased employment is expected to stem from concern about crime, increased litigation, and the need to protect confidential information and property. Keen competition is expected. Many entry-level jobs are part-time positions with detective agencies or stores.
<b>Security guards and gaming surveillance officers</b>	1,004,400	319,300 ★	32	Faster than average growth. Concern about crime, vandalism, and terrorism will drive employment growth. Opportunities should be favorable overall, but competition is expected for high-paying positions that require longer periods of training and a higher level of security, such as those at nuclear power plants and weapons installations.
<b>Food preparation and serving related</b>				
<b>Chefs, cooks, and food preparation workers</b>	2,968,200	366,700 ★	12	Average growth. Population growth and the expansion of full-service, casual restaurants are expected to spur growth. Job openings in this very large occupation should be plentiful because of high replacement needs.
<b>Food and beverage serving and related workers</b>	6,539,000	1,133,000 ★	17	Average growth. Job opportunities should be excellent because of high replacement needs and because rising population and incomes will lead to more family-dining restaurants.



Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Building and grounds cleaning and maintenance</b>				
<b>Building cleaning workers</b>	3,988,700	587,700 ★	15	Average growth. More workers are expected to be needed to clean new offices, schools, and institutional buildings. Additionally, more time-pressed households are expected to hire cleaners instead of doing the work themselves. But most expected openings will result from the need to replace workers who permanently leave this large occupation.
<b>Grounds maintenance workers</b>	1,310,000	282,500 ★	22	Faster than average growth. Homeowners' increasing desire for landscaping is expected to drive demand for these workers. Additionally, the need to care for institutional grounds is expected to create growth. Good prospects are expected due to growth and replacement needs.
<b>Pest control workers</b>	61,600	10,400	17	Average growth. Increases in construction, more complex pest-control techniques, and population growth in the pest-susceptible South and West are projected to generate jobs. Good job prospects are expected because of the need to replace workers who permanently leave the occupation.
<b>Personal care and service</b>				
<b>Animal care and service workers</b>	151,300	31,500	21	Faster than average growth. The pet population is expected to increase, as is the willingness of pet owners to spend money on their pets, resulting in increased jobs. Openings are expected to be plentiful, in part because of the need to replace workers who permanently leave the occupation.
<b>Barbers, cosmetologists, and other personal appearance workers</b>	754,100	111,100	15	Average growth. Job growth is expected due to increasing population, incomes, and demand for cosmetology services. Job opportunities should be favorable, especially because of the need to replace workers who leave the occupation permanently. Competition is expected for jobs at high-paying salons.
<b>Child care workers</b>	1,211,100	141,600	12	Average growth. A slight increase in the number of young children and of women in the labor force is expected, resulting in increasing participation in after-school daycare and early childhood education programs. High replacement needs should create good job prospects.
<b>Flight attendants</b>	104,000	16,600	16	Average growth. An improving economy and a growing population are expected to boost demand for airline travel and, consequently, these workers. The attractiveness of this occupation is expected to create keen competition for jobs. Those who have attended college for at least 2 years and who have experience dealing with the public should have the best prospects.

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Gaming services occupations</b>	192,000	40,400	21	Faster than average growth. A growing interest in gaming and the opening of casinos in more States and Native American lands are expected to create demand for these occupations. Prospects are best for those who have a degree or certification in gaming or a hospitality-related field, previous training or work experience in casino gaming, and strong customer-service skills.
<b>Personal and home care aides</b>	607,600	245,900 ★	40 ★	Much faster than average growth. The rapid growth of this occupation reflects an increasing number of older people who need assistance, technology that allows more home care, and shorter hospital stays. Excellent job prospects are expected.
<b>Recreation and fitness workers</b>	484,800	143,100	30	Faster than average growth. Increased demand for leisure and fitness activities is expected to drive employment. Job growth is expected to be faster for fitness workers than for recreation workers. Keen competition is expected for full-time positions for recreation workers; better opportunities are expected for fitness workers.



## Sales and related

<b>Cashiers</b>	3,465,000	462,100 ★	13	Average growth. Increased purchases of goods and services will drive growth. Job growth and replacement needs are expected to create favorable prospects, especially in retail trade.
<b>Counter and rental clerks</b>	435,800	114,400	26	Faster than average growth. Plentiful entry-level and part-time jobs are expected as businesses grow and work to improve customer service.
<b>Demonstrators, product promoters, and models</b>	179,200	30,300	17	Average growth. Greater use of trade shows and in-store demonstrations is expected to spur employment, especially for part-time work. Job openings should continue to be plentiful for demonstrators and product promoters, but keen competition is expected for modeling jobs.
<b>Insurance sales agents</b>	381,400	32,100	8	Slower than average growth. Sales of insurance products are expected to grow. Employment is not projected to increase as fast as sales, however, because of competition from Internet and direct marketing and the ability of agents to handle more clients. Job opportunities should be good for those who have a bachelor's degree and proven sales ability.

# Sales and related

## Sales and related

### Sales and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Real estate brokers and sales agents</b>	406,800	19,900	5	Slower than average growth. Employment is expected to grow as housing needs rise and real estate is used increasingly as an investment, but growth will be tempered by the Internet and other productivity-enhancing technologies. Most openings will come from the need to replace agents who leave the occupation permanently. Beginning workers often face stiff competition from full-time, experienced workers.
<b>Retail salespersons</b>	4,075,800	595,900 ★	15	Average growth. Job growth reflects rising sales to an increasing population. Good opportunities are expected because of the need to replace workers who permanently leave this large occupation. Opportunities should be abundant for part-time and temporary work.
<b>Sales engineers</b>	81,700	16,300	20	Average growth. Employment growth is projected to stem from the increasing production and sale of technical goods. Job prospects are expected to be best for those who have sales skills and an appropriate technical background.
<b>Sales representatives, wholesale and manufacturing</b>	1,857,100	356,300 ★	19	Average growth. An increasing variety and number of goods will drive growth. Job prospects for wholesale sales representatives should be better than those for manufacturing sales representatives because manufacturers are expected to continue contracting sales duties to independent agents, reducing the overall number of agents. Prospects will be best for those who have sales ability and technical expertise.
<b>Sales worker supervisors</b>	2,395,000	204,000 ★	9	Slower than average growth. Employment growth is projected to be restrained somewhat as companies increase the number of workers each supervisor oversees. Competition is expected for these jobs, particularly those with attractive earnings and working conditions. Candidates who have retail experience should have the best opportunities. The number of self-employed supervisors is expected to decline as independent retailers face increasing competition from national chains.
<b>Securities, commodities, and financial services sales agents</b>	299,900	39,000	13	Average growth. As personal incomes increase, investors will seek more services and advice from these workers. Some beginning sales agents are unable to develop a sizeable clientele and leave the occupation, creating additional job openings. Considerable competition is expected for available positions because of the occupation's high earnings potential.
<b>Travel agents</b>	118,500	-16,400	-14	Declining employment. As people increasingly use websites to make their own travel arrangements, the need for agents is expected to shrink. Keen competition is expected because many people are attracted to the occupation's travel benefits.

# Office and administrative support

## Office and administrative support

### Office and administrative support



Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Communications equipment operators</b>	303,700	-31,900	-11	Declining employment. Employment is expected to decline due to new laborsaving communications technologies, the movement of jobs overseas, and consolidation of jobs into fewer locations. Some openings are expected to result from the need to replace existing workers who leave the occupation permanently.
<b>Computer operators</b>	181,800	-30,400	-17	Declining employment. Software that makes computer operations easier should greatly reduce the need for these workers. Opportunities are expected to be best for experienced operators who have formal computer-related education and familiarity with a variety of operating systems.
<b>Customer service representatives</b>	1,894,100	459,700 ★	24	Faster than average growth. Significant employment growth is expected as organizations increasingly rely on these workers to assist customers. Replacement needs also should create numerous openings in this large occupation. As technology eliminates these workers' simpler functions, job duties are becoming more complex and postsecondary training more valued. Excellent opportunities are expected, especially for bilingual jobseekers.
<b>Data entry and information processing workers</b>	632,800	-114,300	-18	Declining employment. As personal computers and data-capturing technologies are more widely used and as businesses increasingly contract out this work, demand for these workers is expected to continue to decline. But because of replacement needs, numerous openings are expected, especially for jobseekers proficient in the latest software.
<b>Desktop publishers</b>	35,000	10,200	29	Faster than average growth. Sophisticated publishing software that allows page layout and design work to be performed in-house is expected to increase demand for these workers. Jobseekers who have certificates or degrees should have the best opportunities.
<b>Financial clerks<sup>2</sup></b>	3,725,900	260,700 ★	7	Slower than average growth. Office automation, industry consolidation, and the contracting out of these jobs is expected to make financial clerks more productive and to slow their job growth. But due to high replacement needs, openings are expected to be plentiful.
<b>Bill and account collectors</b>	413,000	101,000	24	Faster than average growth. High demand for collectors is expected as debt levels rise and as businesses emphasize cash flow and the faster collection of payments.

# Office and administrative support

## Office and administrative support

### Office and administrative support

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Billing and posting clerks and machine operators</b>	506,600	40,200	8	Slower than average growth. Increasing automation is expected to limit growth. At the same time, however, the increased complexity of medical billing is expected to create new healthcare jobs. The need to send bills out faster will create additional employment.
<b>Bookkeeping, accounting, and auditing clerks</b>	1,983,100	59,300	3	Slower than average growth. Office automation, downsizing of administrative departments, and consolidation of recordkeeping functions are expected to reduce demand for accounting clerks. Bookkeepers, those who can perform a variety of accounting tasks, and those who have college training are expected to have the best job prospects.
<b>Gaming cage workers</b>	18,300	2,700	15	Average growth. Employment of gaming cage workers is not expected to grow as fast as some other gaming occupations, due to an increase in cashless gaming where debit-like cards substitute for cash.
<b>Payroll and timekeeping clerks</b>	197,700	12,900	7	Slower than average growth. Despite automation and outsourcing, the increasing complexity of payroll matters and regulations is expected to create some demand for payroll clerks. Automation of the timekeeping function is expected to cause employment of timekeepers to decline. Replacement needs should create numerous opportunities, especially for jobseekers with certifications.
<b>Procurement clerks</b>	76,800	-5,200	-7	Declining employment. The growing use of computers and the Internet for ordering supplies is expected to reduce demand for these clerks.
<b>Tellers</b>	530,400	49,800	9	Slower than average growth. Banks are opening more branch offices and are extending their hours, thus creating jobs for tellers, particularly part-time ones. Those who can sell bank products and who are skilled in customer service and cash handling will have the best job prospects.
<b>Information and record clerks<sup>2</sup></b>	5,090,000	913,900	18	Average growth. In addition to job openings from the general expansion of business, numerous openings should result from the need to replace workers who permanently leave these large occupations.
<b>Brokerage clerks</b>	77,900	-11,400	-15	Declining employment. Demand for these workers is expected to be limited by the proliferation of online trading and widespread automation in the securities and commodities industry.
<b>Credit authorizers, checkers, and clerks</b>	79,700	-5,400	-7	Declining employment. Computerized credit scoring and other technologies will allow fewer workers to process an increasing number of credit applications.

# Office and administrative support

## Office and administrative support

### Office and administrative support

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>File clerks</b>	264,600	-700	0	Little or no growth. Employment is expected to be slowed by automation and the consolidation of clerical jobs. Jobseekers who have typing and other secretarial skills and are familiar with a range of office machines should have the best prospects.
<b>Hotel, motel, and resort desk clerks</b>	177,700	42,500	24	Faster than average growth. Demand for workers is expected to increase as more hotels, motels, and other lodging establishments are built and as occupancy rates rise. Opportunities for part-time and nighttime work should be plentiful as front desks remain open around the clock.
<b>Human resources assistants, except payroll and timekeeping</b>	173,800	33,500	19	Average growth. Although limited by computer automation, some growth is expected as assistants take on new roles in recruitment.
<b>Interviewers</b>	457,200	18,700	4	Slower than average growth. Employment of loan interviewers and eligibility interviewers for government programs is projected to decline due to automated data collection, but employment of data collectors and healthcare admissions interviewers is expected to increase faster than average, reflecting rapid growth in healthcare services. Prospects should be best for jobseekers who have customer service, mathematics, and telephone skills.
<b>Library assistants, clerical</b>	120,400	25,900	21	Faster than average growth. Efforts to contain costs in local governments and academic institutions are expected to create a preference for hiring library-support staff instead of librarians. Good job prospects are expected due to growth and high replacement needs.
<b>Order clerks</b>	329,700	-18,600	-6	Declining employment. Demand for these workers is expected to decrease because of growth in online retailing, business-to-business electronic commerce, and the use of automated systems that simplify order placement. Many openings, especially for seasonal work, will result from the need to replace workers who leave the occupation permanently.
<b>Receptionists and information clerks</b>	1,100,300	324,600 ★	29	Faster than average growth. Job growth will be driven by rapid increases in services industries, where most receptionists are employed. Opportunities should be best for people who have comprehensive clerical and technical skills and related work experience.
<b>Reservation and transportation ticket agents and travel clerks</b>	177,300	21,700	12	Average growth. Employment growth from increased travel should be offset by technology that allows travelers to make their own arrangements. Keen competition is expected because of the travel benefits and glamour associated with travel jobs and the minimal training requirements.

# Office and administrative support

## Office and administrative support

### Office and administrative support

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Material recording, scheduling, dispatching, and distributing occupations<sup>2</sup></b>	4,004,900	20,500	1	Little or no change. Growth varies by detailed occupation. Numerous job openings are expected to result from the need to replace workers who permanently leave these very large occupations.
<b>Cargo and freight agents</b>	59,100	9,200	15	Average growth. The increasing use of the Internet to purchase goods and the growing importance of same-day delivery are expected to create demand for cargo and freight agents. However, technological advancements, such as the use of bar codes to track shipments, are expected to curb growth.
<b>Couriers and messengers</b>	132,300	5,300	4	Slower than average growth. Employment growth should be dampened by the increasing use of e-mail, Internet downloads, and other information-handling technologies to deliver documents. But couriers will still be needed to transport materials that cannot be sent electronically, such as passports and medical samples.
<b>Dispatchers</b>	262,200	36,200	14	Average growth. Demand for police, fire, and ambulance dispatchers should be fueled by a growing and aging population that will demand more emergency services. Economic expansion and population growth also are expected to spur demand for other types of dispatchers.
<b>Meter readers, utilities</b>	54,000	-7,600	-14	Declining employment. The increasing use of automated meter-reading technology is expected to reduce the need for these workers.
<b>Production, planning, and expediting clerks</b>	287,600	40,400	14	Average growth. Increasing pressure on manufacturing firms to produce and deliver goods efficiently is expected to spur job growth.
<b>Shipping, receiving, and traffic clerks</b>	803,000	24,200	3	Slower than average growth. Growth should be moderated by the use of computers to store and retrieve shipping and receiving records.
<b>Stock clerks and order fillers</b>	1,627,700	-68,100	-4	Declining employment. Automation in factories and stores is expected to thwart job growth. There may be more opportunities in apparel, grocery, and department stores. Because this occupation is very large, numerous openings are expected to be created from replacement needs.
<b>Weighers, measurers, checkers, and samplers, recordkeeping</b>	80,700	11,800	15	Average growth. The need for accurate measurements and high-quality materials and the use of records to verify information are expected to spur demand for these workers.

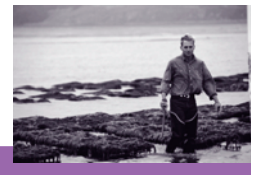


# Farming, fishing, and forestry

## Farming, fishing, and forestry

### Farming, fishing, and forestry

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Office and administrative support worker supervisors and managers</b>	1,459,400	95,900	7	Slower than average growth. As technology increases productivity, demand for office and administrative support workers and, consequently, their supervisors and managers, is projected to slow. Competition for these jobs is expected to be keen.
<b>Office clerks, general</b>	2,991,100	309,600 ★	10	Average growth. Demand for general office clerks is expected to increase as jobs for more specialized clerks decline. Office automation has led to consolidation of clerical tasks and more variety in each worker's responsibilities. Plentiful full-time, part-time, and temporary opportunities should result from job growth, the large size of the occupation, and the need to replace workers who permanently leave the occupation. Prospects should be best for those who are proficient in the use of office software and machinery and who have good writing and communication skills.
<b>Postal Service workers</b>	664,200	-28,500	-4	Declining employment. Declining mail volume and increasing use of automated mail-processing systems are expected to decrease employment within these occupations. Keen competition is expected for jobs.
<b>Secretaries and administrative assistants</b>	4,104,300	183,600	4	Slower than average growth. Organizational restructuring and increasing office automation are expected to slow job growth overall. Average growth is projected for legal, medical, and executive secretaries, with employment of other secretaries declining. Many openings are expected to result from the need to replace workers who permanently leave this very large occupation. Opportunities should be best for experienced applicants who have extensive knowledge of office software.



## Farming, fishing, and forestry

<b>Agricultural workers</b>	795,100	35,600	4	Slower than average growth. New jobs are expected for farmworkers and nursery and greenhouse workers. But employment will be dampened by farm consolidation and laborsaving farming equipment. Abundant opportunities are expected because of the need to replace farmworkers and because of faster growth among nursery and greenhouse workers.
<b>Fishers and fishing vessel operators</b>	36,400	-9,800	-27	Declining employment. Job declines are projected due to increased competition from imported and farm-raised fish, a lack of new wild fish stocks, and an expected increase in fishing restrictions.

# Construction trades and related

## Construction trades and related

### Construction trades and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Forest, conservation, and logging workers</b>	81,100	-1,500	-2	Declining employment. Employment of logging workers is expected to decline because of increased mechanization and imported wood. Employment of forest and conservation workers, however, is expected to grow as States set aside more land for ecological purposes.
<b>Boilermakers</b>	24,600	400	2	Little or no growth. Employment growth is expected to be limited by the use of smaller boilers and the trend toward boiler repair rather than replacement. Despite the lack of new jobs, many openings are expected because of the need to replace workers who leave the occupation permanently; many boilermakers retire early, in part because the work is physically demanding. Good opportunities are expected in some locations.
<b>Brickmasons, blockmasons, and stonemasons</b>	164,900	23,400	14	Average growth. Opportunities for employment are expected to be excellent because more buildings will be constructed or repaired and many experienced workers are expected to retire.
<b>Carpenters</b>	1,208,600	122,400	10	Average growth. Employment growth is expected as construction activity increases. The rise in demand for larger homes with more amenities and for retirees' second homes is expected to continue. Excellent job opportunities are projected, primarily due to the many retirements from this large occupation. Carpenters with versatile skills should have the best opportunities for steady work.
<b>Carpet, floor, and tile installers and finishers</b>	163,700	27,400	17	Average growth. Projected job growth primarily reflects the continued need to refurbish existing floors. But employment of one specialty—floor sanders and finishers—is projected to grow more slowly than average as more people opt for prefinished flooring. Carpet installers, the largest specialty, should have the best job prospects.
<b>Cement masons, concrete finishers, segmental pavers, and terrazzo workers</b>	190,200	48,700	26	Faster than average growth. Favorable opportunities are projected. The need for new bridges, factories, and other structures and the greater use of concrete will create growth.



## Construction trades and related

# Construction trades and related

## Construction trades and related

### Construction trades and related

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Construction and building inspectors</b>	83,700	11,600	14	Average growth. Rising concern for public safety should increase the demand for these workers; and, as the volume of real-estate transactions increases, the demand for home inspections should rise. Opportunities should be best for highly experienced supervisors and craft workers who have some college education, engineering or architectural training, or certification.
<b>Construction equipment operators</b>	415,800	44,500	11	Average growth. Employment is expected to increase as business growth and public-works funding leads to new houses, bridges, and other structures. Job opportunities for these workers are expected to be good—due, in part, to the small number of training programs and, consequently, trained jobseekers.
<b>Construction laborers</b>	937,800	132,700	14	Average growth. Employment growth from infrastructure rebuilding is expected to be tempered by automation of some job tasks. Favorable opportunities are expected, due to the large number of workers expected to leave the occupation permanently.
<b>Drywall installers, ceiling tile installers, and tapers</b>	176,100	37,500	21	Faster than average growth. Employment growth reflects increased remodeling, new construction, and rising popularity of insulated exterior wall systems. Good job opportunities are expected.
<b>Electricians</b>	659,400	154,500	23	Faster than average growth. As the population and economy grow, more electricians are expected to be needed to install and maintain electrical devices and wiring in homes, factories, and other structures. Wiring for telecommunications and other new technologies also is expected to stimulate demand. Job opportunities are expected to be good.
<b>Elevator installers and repairers</b>	21,000	3,600	17	Average growth. Nonresidential construction and the need to install increasingly complex elevators are expected to drive growth. Job opportunities are expected to be limited in this small occupation. Prospects should be best for those who have postsecondary education in electronics.
<b>Glaziers</b>	48,500	8,300	17	Average growth. Employment growth is expected because of growth in construction and improvements in glass safety and insulation. As older glaziers retire, excellent job opportunities are expected. Prospects vary by geographic area.
<b>Hazardous materials removal workers</b>	37,600	16,200	43 ★	Much faster than average growth. Projected growth reflects increasing concern for a safe, clean environment. Job opportunities are expected to be good.
<b>Insulation workers</b>	53,500	8,500	16	Average growth. Job growth is expected to be spurred by new construction, renovation, and demand for more efficient heating and cooling systems. Excellent job opportunities are expected.

# Installation, maintenance, and repair

## Installation, maintenance, and repair

### Installation, maintenance, and repair

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Painters and paperhangers</b>	467,600	53,100	11	Average growth. Renovation and new construction are expected to drive job growth. Generally, the most versatile workers will be best able to find work during economic downturns. Good job prospects are expected because of the need to replace workers who leave the occupation permanently.
<b>Pipelayers, plumbers, pipefitters, and steamfitters</b>	550,100	98,800	18	Average growth. Employment is expected to be tempered by the use of plastic pipes but spurred by construction, renovation, and increasing use of sprinkler systems. Excellent opportunities are expected.
<b>Plasterers and stucco masons</b>	59,100	8,000	14	Average growth. Job opportunities are expected to be favorable, especially in the South and Southwest, as the popularity of plaster and decorative finishes increases.
<b>Roofers</b>	166,200	30,900	19	Average growth. More roof replacements and repairs are expected to drive growth. Jobs should be plentiful due to greater replacement needs in this occupation compared with that in other construction trades.
<b>Sheet metal workers</b>	205,000	40,600	20	Average growth. Job opportunities are expected to be good in the construction industry because of the demand for sheet-metal installations in industrial, commercial, and residential structures; the popularity of decorative sheet-metal products; and increased architectural restoration. Prospects in manufacturing are expected to be less favorable.
<b>Structural and reinforcing iron and metal workers</b>	106,700	17,200	16	Average growth. Growth in industrial and commercial construction and the rehabilitation and replacement of an increasing number of older buildings, power plants, and bridges is expected to create employment. Job openings for ironworkers usually are more abundant in spring and summer, when construction increases.



## Installation, maintenance, and repair

### Electrical and electronic equipment mechanics, installers, and repairers

<b>Computer, automated teller, and office machine repairers</b>	156,300	23,500	15	Average growth. Job increases are expected as business and residential customers increasingly rely on computers and office machines in their daily activities. Job prospects should be best for computer repairers and applicants who have experience and electronics knowledge.
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# Installation, maintenance, and repair

## Installation, maintenance, and repair

### Installation, maintenance, and repair

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Electrical and electronics installers and repairers</b>	172,200	14,200	8	Slower than average growth. Employment growth is expected to vary by specialty, growing fastest in commercial, industrial, and automotive equipment specialties. Improvements in equipment design should limit job growth somewhat by simplifying repair tasks.
<b>Electronic home entertainment equipment installers and repairers</b>	42,600	3,700	9	Slower than average growth. Technological advancements are expected to improve the reliability of entertainment equipment and lower maintenance requirements. Jobseekers who have hands-on experience and knowledge of electronics should have the best opportunities.
<b>Radio and telecommunications equipment installers and repairers</b>	226,000	-3,500	-2	Declining employment. Some workers will be needed to upgrade telecommunications networks, but total employment is expected to decline because of increasingly reliable self-monitoring and self-diagnosing equipment and because higher capacity equipment is expected to reduce the overall amount of equipment needed. Moreover, the replacement of two-way radio systems with wireless systems, especially in service vehicles, is expected to reduce the need for onsite radio mechanics.
<b>Vehicle and mobile equipment mechanics, installers, and repairers</b>				
<b>Aircraft and avionics equipment mechanics and service technicians</b>	154,000	15,200	10	Average growth. More mechanics are expected to be needed as air traffic resumes its upward trend and recovers from the effects of terrorism fears and the recession. In addition, many aircraft mechanics are expected to retire over the next decade, creating many job openings. People who complete aircraft mechanic training programs should have excellent job prospects, especially toward the end of the projections decade.
<b>Automotive body and related repairers</b>	220,100	28,600	13	Average growth. Demand is expected to increase as the number of vehicles grows. But demand is expected to be tempered by technology that improves safety and reduces the likelihood of accidents. Employment growth also should be lessened by changes in body-shop management that increase productivity, reduce overhead expenses, and improve standardization. Opportunities should be best for people who have formal training in automotive body repair and mechanics.

# Installation, maintenance, and repair

## Installation, maintenance, and repair

### Installation, maintenance, and repair

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Automotive service technicians and mechanics</b>	818,200	101,200	12	Average growth. Increasing demand for automotive services, due to growth in the number of vehicles, is expected to be tempered by improvements in vehicle quality that reduce the need for extensive repairs and maintenance. Job opportunities should be very good for people who complete automotive training programs—especially those that include basic electronics—in high schools, vocational and technical schools, or community colleges.
<b>Diesel service technicians and mechanics</b>	267,200	37,800	14	Average growth. As the volume of freight increases, the number of diesel trucks and the need for technicians and mechanics are expected to increase. Opportunities should be good for people who complete formal training in diesel mechanics. Applicants who do not have formal training may face stiffer competition.
<b>Heavy vehicle and mobile equipment service technicians and mechanics</b>	175,600	15,400	9	Slower than average growth. Increasing numbers of technicians will be required to support growth in construction. Opportunities should be good for people who complete formal training.
<b>Small engine mechanics</b>	66,900	12,500	19	Average growth. As disposable incomes rise, ownership of motorcycles, boats, and lawn and garden equipment is expected to increase, spurring demand for the mechanics who service them. Job prospects are expected to be especially favorable for those who complete formal training programs.
<b>Other installation, maintenance, and repair</b>				
<b>Coin, vending, and amusement machine servicers and repairers</b>	42,700	6,500	15	Average growth. New jobs are expected because of the increasing number of vending and amusement machines in use. Opportunities should be especially good for people who have some knowledge of electronics.
<b>Heating, air conditioning, and refrigeration mechanics and installers</b>	248,700	79,100	32	Faster than average growth. The demand for climate-control systems is expected to increase with population and economic growth. Employment also should be spurred by the need to replace older systems and to comply with environmental regulations. Good job prospects are expected, particularly for those who have technical-school or apprenticeship training. Workers who specialize in installation may experience unemployment when construction activity declines, but maintenance and repair work usually remains stable.

# Installation, maintenance, and repair

## Installation, maintenance, and repair

### Installation, maintenance, and repair

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Home appliance repairers</b>	42,000	2,300	5	Slower than average growth. Job growth is expected as more appliances are used and as they become more complicated and expensive. Good prospects are expected as job openings continue to outnumber jobseekers. Self-employment in this occupation is expected to decline.
<b>Industrial machinery installation, repair, and maintenance workers, except millwrights</b>	289,200	16,300	6	Slower than average growth. More workers will be needed to install, repair, and maintain the growing amount of automated production machinery. And because many workers are expected to retire, applicants who have broad skills in machine repair and maintenance should have favorable prospects.
<b>Line installers and repairers</b>	268,400	33,000	12	Average growth. New jobs are expected to result from growth in the construction and telecommunications industries and the modernization of telecommunications networks.
<b>Maintenance and repair workers, general</b>	1,265,600	206,800 ★	16	Average growth. Employment of general maintenance and repair workers is expected to increase with the number of buildings. Job openings should be plentiful due to the need to replace the many workers who permanently leave this large occupation.
<b>Millwrights</b>	69,500	3,700	5	Slower than average growth. Millwrights will be needed to install new machinery, but demand for their services is expected to be dampened by their rising productivity and by lower skilled workers taking over some tasks. Skilled candidates, especially those who are trained to install new production technologies, should have good opportunities.
<b>Precision instrument and equipment repairers</b>	63,700	5,500	9	Slower than average growth. Employment should be spurred by greater use of medical equipment and by increases in the number of children learning musical instruments. Mainly because of the small number of trained applicants, good opportunities are expected in most occupational specialties.





Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	

## Production

### Assemblers and fabricators

	2,121,800	-77,300	-4	Declining employment. Automation and the movement of assembly tasks to countries that have lower labor costs are expected to cause job declines. But the need to replace workers who leave the occupation permanently should create many openings.
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### Food processing occupations

	756,600	79,300	10	Average growth. Increased demand for bakeries and processed and prepared meats is expected to spur growth overall. But less expensive meat imports are expected to curtail employment growth in many food processing occupations. Job growth will be concentrated in manufacturing, as meat cutting and processing shifts from retail stores to food processing plants.
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### Metal workers and plastics workers

<b>Computer control programmers and operators</b>	151,200	14,800	10	Average growth. These occupations should provide excellent job opportunities due to the small number of people entering training programs. Employment growth of computer-controlled machine tool operators is projected to be slower than average. Employment growth of numerical tool and process control programmers is expected to be about average. Job growth in both occupations is driven by the increasing use of computerized machine tools but is limited by technological improvements.
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<b>Machinists</b>	386,800	31,900	8	Slower than average growth. Technological advances that increase productivity are expected to slow growth, but workers still will be needed to create parts, maintain automated systems, and do other tasks. Job opportunities should be excellent.
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<b>Machine setters, operators, and tenders—metal and plastic</b>	1,267,400	63,400	5	Slower than average growth. Automation, trade, the demand for goods, and the reorganization of production processes are expected to spur employment growth among some operators, such as multiple machine tool operators and plastics-molding, core-making, and casting machine operators. But those trends are expected to create declines in other operator specialties, including cutting, punching, and press machine setters, operators, and tenders. Retirements are expected to create many openings.
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Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Tool and die makers</b>	109,500	400	0	Little or no growth. Job growth will be slowed by automation, even though some of these workers are needed to maintain automated equipment. Because many workers are retiring, skilled applicants should enjoy excellent opportunities.
<b>Welding, soldering, and brazing workers</b>	451,700	66,700	15	Average growth. As some manufacturing and construction industries grow, so will jobs for welders who work in those industries. Improved technology also is creating jobs by making welding more effective. Job prospects should be excellent.
<b>Printing</b>				
<b>Bookbinders and bindery workers</b>	98,000	-4,700	-5	Declining employment. Automation is reducing the need for bindery workers and allowing other press operators to perform bindery work. Additionally, rising imports of printed products are expected to lessen employment. Hand bookbinding is expected to remain highly specialized, with limited demand for more workers.
<b>Prepress technicians and workers</b>	147,600	-5,100	-3	Declining employment. Computerization and desktop publishing are expected to cause prepress jobs to decline. However, employment of job printers, who handle a variety of printing jobs, should continue to rise as technology makes smaller printing jobs economically viable. Prospects are expected to be best for those who have printing-industry experience or formal training and the ability to perform a variety of printing processes.
<b>Printing machine operators</b>	198,700	9,100	5	Slower than average growth. Rising demand for printed materials in schools and in advertisements will be offset by consolidation in the newspaper industry and computerization of these workers' tasks. Good job opportunities are expected because many workers are expected to retire.
<b>Textile, apparel, and furnishings occupations</b>				
	1,084,700	-152,500	-14	Declining employment. Employment in most apparel and textile occupations is expected to decline because of imports, offshore assembly, and increased productivity through automation. But replacement needs will create many openings. Experienced upholsterers should have good opportunities despite falling employment because few people are training for the occupation.

# Production Production Production

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Woodworkers</b>				
	373,600	19,200	5	Slower than average growth. Model- and pattern-makers are expected to have average growth. Little or no growth is expected among woodworking machine setters, operators, and tenders; slower than average growth is expected for cabinet-makers and bench carpenters and furniture finishers. Employment is expected to be adversely affected by technological advances, imports, substitution of other materials for wood, and environmental measures. Job prospects should be best for highly skilled woodworkers who can operate computerized machine tools.
<b>Plant and system operators</b>				
<b>Power plant operators, distributors, and dispatchers</b>	50,900	-300	-1	Declining employment. Increased automation, low replacement needs, and more competition among electricity providers are expected to limit opportunities. Job applicants may face keen competition. Those trained in computers and automated equipment should have the best prospects.
<b>Stationary engineers and boiler operators</b>	55,400	100	0	Little or no growth. Commercial and industrial development will increase the amount of equipment that is operated and maintained, but automation and increased productivity are expected to limit job growth. Applicants may face keen competition.
<b>Water and liquid waste treatment plant and system operators</b>	99,300	15,900	16	Average growth. A growing population is expected to increase demand for water and waste services, spurring employment. Job prospects are expected to be good for qualified applicants.
<b>Other production occupations</b>				
<b>Dental laboratory technicians</b>	46,900	1,700	4	Slower than average growth. Rising disposable income should spur demand for cosmetic prosthetics, but improved dental health is expected to reduce demand for full dentures. Job opportunities should be favorable, in part because of the public's unfamiliarity with the occupation lessens the number of applicants.
<b>Inspectors, testers, sorters, samplers, and weighers</b>	515,400	24,100	5	Slower than average growth. The growing use of automated inspection and the shift of quality-control responsibilities from inspectors to production workers are expected to slow growth. The need to replace workers who permanently leave this large occupation should create numerous openings, but most are expected to be filled by experienced workers who have advanced skills.

# Transportation and material moving

## Transportation and material moving

### Transportation and material moving

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Jewelers and precious stone and metal workers</b>	40,300	1,800	4	Slower than average growth. Job growth stems from increased demand for jewelry by a more affluent population. Opportunities should be excellent because the number of retiring master jewelers exceeds the number of trainees.
<b>Ophthalmic laboratory technicians</b>	33,100	3,000	9	Slower than average growth. Increased automation is expected to continue to improve worker productivity and curtail growth. Job openings are expected to be few because the occupation is small.
<b>Painting and coating workers, except construction and maintenance</b>	186,600	24,300	13	Average growth. Employment growth for highly skilled transportation painters and automotive refinishers is projected to be faster than that for lower skilled painting, coating, and spraying machine operators, whose jobs are subject to automation.
<b>Photographic process workers and processing machine operators</b>	82,400	6,500	8	Slower than average growth. Increasing use of digital technology to download, retouch, and print images is expected to slow demand for these workers.
<b>Semiconductor processors</b>	46,500	-4,900	-11	Declining employment. Automation and rising imports are expected to lower employment. Those with an associate degree in a technology field should have the best prospects.



## Transportation and material moving

### Air transportation

<b>Aircraft pilots and flight engineers</b>	100,200	17,800	18	Average growth. Employment of pilots is expected to increase as the population grows and the economy improves. Smaller regional airlines and corporate-owned aircraft are expected to provide the best prospects. Keen competition is expected, particularly for airline pilots, because many qualified people are attracted to the high earnings, prestige, and travel benefits of this occupation. Flight engineers' employment is projected to decline because some new planes do not require their services.
<b>Air traffic controllers</b>	25,600	3,200	13	Average growth. Increased air traffic is expected to require more controllers. But growth is expected to be tempered by automation and budget constraints. Competition to get into Federal Aviation Administration training programs is expected to remain keen.

# Transportation and material moving

## Transportation and material moving

### Transportation and material moving

Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	
<b>Material moving occupations</b>				
	4,869,400	442,600 ★	9	Slower than average growth. Employment growth is expected to stem from an expanding economy and increased spending on roads and infrastructure. However, equipment improvements, including automation of material handling, will continue to raise productivity and moderate employment. Job openings should be numerous because the occupation is very large and replacement needs are great.
<b>Motor vehicle operators</b>				
<b>Bus drivers</b>	654,400	106,300	16	Average growth. Projected growth reflects increasing school enrollments and a rise in population, especially in the suburbs. Good job prospects are expected. Opportunities should be best for those who have good driving records and are willing to start on a part-time or irregular schedule.
<b>Taxi drivers and chauffeurs</b>	132,200	28,700	22	Faster than average growth. As the population grows, local and suburban travel is expected to rise. Good opportunities should result from the need to replace the many drivers who permanently leave the occupation after a short time. Opportunities should be best for those who have good driving records and the ability to work flexible schedules.
<b>Truck drivers and driver/sales workers</b>	3,220,800	592,200 ★	18	Average growth. An expanding economy and the need to move more freight are expected to spur faster than average growth for truck drivers. Slower than average growth among driver/sales workers is expected as companies increasingly shift sales, ordering, and customer service tasks to sales and office staffs. Job opportunities should be favorable for truck drivers due to the growth of this large occupation and the need to replace drivers who leave permanently, but keen competition is expected for jobs that have the most attractive earnings and working conditions.
<b>Rail transportation occupations</b>				
	101,100	-5,400	-5	Declining employment. Job consolidation and rules that allow smaller crews are expected to reduce railroad employment. Employment growth for subway and streetcar operators, however, is expected to be average as the demand for public rail transportation increases. Keen job competition is expected because of these occupations' high pay, job security, and minimum educational requirements.



# Job opportunities in the U.S. Armed Forces

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Occupation	Employment, 2002	Employment change, projected 2002-12 <sup>1</sup>		Employment prospects
		Numeric	Percent	

#### Water transportation occupations

	68,000	2,300	3	Slower than average growth. Expected increases in international trade will cause more goods to be shipped, resulting in increased demand for these occupations. In addition, higher insurance costs for foreign-flag ships will generate more jobs on U.S.-flag ships. Keen competition is expected, but prospects vary.
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## Job opportunities in the U.S. Armed Forces

	2,500,000 <sup>4</sup>	( <sup>5</sup> )	( <sup>5</sup> )	Opportunities for qualified people should be good in all branches of the U.S. Armed Forces.
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<sup>1</sup> Numeric and percent changes are calculated from unrounded figures for current and projected employment.

<sup>2</sup> Individual estimates do not sum to total due to rounding.

<sup>3</sup> These matrix data are not published in the *Occupational Outlook Handbook*.

<sup>4</sup> This estimate is from the U.S. Department of Defense.

<sup>5</sup> Projections are not available from the Bureau of Labor Statistics.



[www.bls.gov/opub/ooq/ooqhome.htm](http://www.bls.gov/opub/ooq/ooqhome.htm)