

# ACEEF

Adams County Economic Education Foundation

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*Gettysburg Adams Chamber of Commerce*

Funded in part by:

*Robert C. Hoffman Charitable Endowment Trust*

# CAREER FOCUS



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## JOB DESCRIPTION ICONS



Requires Artistic Ability



Requires Hands On



Requires Science Skills



Requires Caring for Others



Requires Math Skills



Requires Travel



Requires Computer and Electronic Skills



Requires Money Management Skills



Requires Working Outdoors



Requires Face to Face Communication



Requires Reading and/or Writing

# 1. ACCOUNTANT

Accountants are responsible for tracking the many financial transactions that happen in business everyday. They maintain records, compile and analyze information, and provide reports and suggestions to management. They also prepare profit and loss statements, tax forms, and annual reports to investors. There are three categories of accountants: public accountants, private accountants, and government accountants. Public accountants generally work for an accountant firm or on a freelance basis for several companies. Private accountants usually work for one company as in-house accountants. Government accountants often work with billion dollar budgets in locations such as the Internal Revenue Service (IRS), banks, or individual government agencies.



## **EDUCATIONAL REQUIREMENTS**

Most accountant positions require no less than a bachelor's degree in accounting or an associated business field. Some companies prefer applicants with a master's degree in accounting, or with a master's degree in business administration with a concentration in accounting. College internships are usually a required part of the training as well. Some students with an associate degree from two-year business schools or junior colleges can obtain junior accounting positions and advance to accountant positions by demonstrating their accounting skills on the job. Some more prestigious positions require a Certified Public Accountant (CPA) license. In general, to earn a CPA applicants need some accounting experience, a bachelor's degree, and a passing score on the Uniform CPA Examination.

## **SKILLS FOR SUCCESS**

- Ability in Mathematics
- Integrity
- Computer Skills
- Ability to analyze, compare, and interpret facts and figures quickly
- Strong verbal and written communication skills

## **FUTURE JOB OUTLOOK**

Employment opportunities for accountants are expected to grow faster than average from 2006-2016. The greatest job prospects will be for accountants who possess a college degree or certification, and especially a CPA.

## **JOB OPPORTUNITIES**

- Bookkeeper - Business Office
- Public Accounting Firms
- Government Agencies
- Bank Examiner
- Auditor
- Self-employment/work at home

## **SALARY RANGE**

Average Wage: \$29.66 hourly, \$61,690 annually



## 2. ADMINISTRATIVE ASSISTANT/OFFICE MANAGER

An Administrative Assistant/Office Manager assists Executives by coordinating and directing basic office services, such as staff assignments, records management, budget control, and special management studies.

### ***EDUCATIONAL REQUIREMENTS***

Administrative assistants acquire skills in various ways.

Training ranges from high school vocational education programs that teach office skills and keyboarding to one and two-year programs in office administration offered by business schools, vocational-technical institutes, and community colleges. However, many skills tend to be acquired through on-the-job instruction by other employees or by equipment and software vendors. Bachelor's degrees and professional certifications are becoming increasingly important as business continues to become more global.



### ***SKILLS FOR SUCCESS***

- Assigning duties to workers
- Filing documents
- Preparing and organizing records
- Proofreading data for accuracy
- Time Management
- Strong people skills
- Planning staff work tasks
- Preparing orders for supplies
- Service Orientation

### ***FUTURE JOB OUTLOOK***

The outlook is stable for careers as an administrative assistant/office manager. Current US employment in this field is over 1 million, with an average growth rate and a large number of annual openings (949,000 per year). Large concentrations of this occupation are found in the following industries: professional, scientific and technical services (10.88%), educational services (5.19%), administrative and support services (6.75%), local government (8.73%), finance and insurance (10.74%), state government (9.87%), health care (7.23%) and manufacturing (6.39%).

### ***JOB OPPORTUNITIES***

- Secretary
- Medical Assistant
- Medical Secretary
- Executive Assistant
- Administrative Secretary
- Office Manager

### ***SALARY RANGE***

Average Wage: \$20.92 hourly, \$43,520 annually



## 3. ADVERTISING/MARKETING

People in the advertising and marketing fields promote products or services to a target group. They may handle public relations and advertising for a wide range of companies, non-profit organizations, and the government. They also develop sales tools and marketing materials, such as brochures, print or broadcast advertisements, press releases, sales letters, and product updates. They may conduct market research, analyze the research data, and compile reports based on their findings. These tend to be very deadline-driven occupations with lots of challenges.

### ***EDUCATIONAL REQUIREMENTS***

Depending upon the type of occupation sought in the areas of advertising and marketing, educational requirements can range from a six-month training program to one-year, two-year, four-year and graduate level programs. Frequently, a Bachelor's degree is required, usually in business, marketing, advertising, communication, commerce or public relations.



### ***SKILLS FOR SUCCESS***

- Excellent time management skills
- Strong interpersonal skills
- Ability to analyze and input data
- Passion and enthusiasm for chosen career
- Flexibility
- Good computer skills
- Excellent verbal and written communication skills

### ***FUTURE JOB OUTLOOK***

The job opportunities will be stable to moderately increasing in the foreseeable future. The Internet will provide new opportunities for people in the advertising and marketing fields, as new businesses are started and competition increases.

### ***JOB OPPORTUNITIES***

- Marketing firms
- Large corporations
- Non-profit organizations
- Colleges and universities
- State and federal government
- Internet-based companies

### ***SALARY RANGE***

Average Wage: \$29.12 hourly, \$60,570 annually



## 4. AGRICULTURE/TECHNOLOGY IN AGRICULTURE

Agricultural workers play a large role in getting food, plants, and other agricultural products to market. Among their activities are planting and harvesting crops, installing irrigation, raising animals, and inspecting our food for safety. The United States is one of the largest and most productive agricultural sectors in the world. It produces enough food and fiber to meet the needs of Americans and to export huge quantities to feed and clothe people in other countries. However, with changing technology, farming has become very complex, creating great competition and making it very challenging for small and medium size farms. Large corporate farms now tend to be the rule rather than the exception. Science and technology have created other opportunities in agriculture. Ag scientists have played key roles in increasing the quantity and quality of food. Ag technicians set up and maintain laboratories. They collect and record data to help scientists with experiments in biology or agriculture.



### ***EDUCATIONAL REQUIREMENTS***

Many agricultural workers learn their skills on the job. Some occupations, however, require more work experience or formal education. A college degree in agricultural science is a good foundation for many careers in agriculture. There are several ways to qualify for a job as a science technician. Many employers prefer applicants who have at least two years of specialized training or an associate's degree in applied science or science-related technology. Because employers' preferences vary, however, some science technicians have a bachelor's degree in chemistry, biology or forensic science, or have taken several science and math courses at four-year colleges.

### ***SKILLS FOR SUCCESS***

- Operating computers
- Operating laboratory testing equipment
- Raising or capturing fish or animals/ growing and harvesting plants

### ***FUTURE JOB OUTLOOK***

Overall employment of agricultural workers is projected to undergo little or no change over the 2006-16 decade, reflecting in large part the outlook for farm workers in crops, nurseries, and greenhouses, who make up the large majority of all agricultural workers. Best opportunities will be in specific segments of agricultural biotechnology, specifically in scientific research and development services. Research will be needed to combat insects and diseases as they further adapt to pesticides and as soil fertility and water quality continue to need improvement.

### ***JOB OPPORTUNITIES***

- Farm/Orchard–Owner/Operator/Manager
- Ranch–Owner/Operator/Manager
- Scientist/engineer–laboratory/office
- Agricultural Inspector
- Agricultural equipment operators
- Agricultural engineers
- Crop greenhouse and nursery farm workers
- Federal, State and Local government agencies

### ***SALARY RANGE***

Average Wage: \$8.98 hourly for laborers to \$43,350 annual salary for Ag. Technicians.



## 5. AIRLINE INDUSTRY/AVIATION MAINTENANCE

The airline industry offers many career opportunities. Airline pilots operate aircraft for commercial airlines or for private companies to transport passengers, freight, mail, or other commodities. Flight Attendants are employed on commercial flights to see to the safety and comfort of the passengers. Airline mechanics service, inspect and repair aircraft. Other opportunities include: dispatchers who plan flights, analyze weather conditions and determine fuel requirements and maximum weights, air traffic controllers, ticket and reservation agents, safety inspectors, security representatives, cargo agents and baggage handlers.



### ***EDUCATIONAL REQUIREMENTS***

Airline pilots must have a commercial pilot's license with an instrument rating and must be certified for the type of aircraft their employer operates. Flight Attendants are trained in company schools and experience dealing with the public. Aircraft Mechanics attend aircraft mechanic trade schools with continued training a necessity. Airline ground occupations require a high school diploma, attending company classes, on the job training and/or trade schools.

### ***SKILLS FOR SUCCESS***

#### ***Pilot***

- Ability to make quick decisions
- Excellent physical health, vision and hearing
- Ability to use sophisticated equipment
- Accurate judgment under pressure
- Excellent verbal communication skills

#### ***Flight Attendant***

- Excellent interpersonal skills
- Excellent health
- Must meet minimum height requirements
- Presentable appearance, no visible tattoos, body piercings, unusual hairstyles
- Pleasant, calm personality
- Ability to speak clearly

#### ***Aviation Mechanic***

- Mechanical Aptitude
- Ability to troubleshoot and diagnose complex problems
- Detail-oriented

### ***FUTURE JOB OUTLOOK***

Opportunities in air transportation will vary depending on the occupation. Low turnover rates are expected for pilots, while opportunities for flight attendants and aircraft mechanics should be favorable.

### ***JOB OPPORTUNITIES***

- Major airports located close to cities
- Small private airports

### ***SALARY RANGE***

Average Wage: Pilots-\$67,500; Flight Attendant-\$37,740; Aircraft Mechanic-\$53,420



## 6. ARCHAEOLOGIST

Archaeologists are the detectives of human history. They use scientific methods to study artifacts—human-made objects like pottery, houses and carvings. Using clues from artifacts, and the sites that hold the artifacts, they try to recreate and interpret human cultures of the past. They conduct research to reconstruct records of past human life and culture from human remains, artifacts, architectural features, and structures recovered through excavation, underwater recovery, or other means of discovery. There are two main branches of archaeology: prehistoric and historical. Prehistoric archaeology deals with societies that existed before written history. Historical archaeology begins with the written history of the region the archaeologist investigates.



### ***EDUCATIONAL REQUIREMENTS***

Most positions requiring a Bachelor's Degree and a Master's or Ph.D degree. Bachelor's degree holders have limited opportunities. A bachelor's degree does, however, provide a suitable background for many different kinds of entry-level jobs in related occupations, such as research assistant, or writer. Graduates with Master's degrees in applied specialties usually are qualified for positions outside of colleges and universities, although requirements vary by field. A Ph.D degree may be required for higher-level positions.

### ***SKILLS FOR SUCCESS***

- Analyzing social science data/complex problem solving
- Operating computers to record and analyze social science data
- Researching social sciences
- Management of financial resources

### ***FUTURE JOB OUTLOOK***

The outlook for careers in this field is stable with a low number of job openings. Employment: This was a very small occupation in the United States, employing 5,000 workers in 2004. Archaeologists will see the majority of their employment growth in the management, scientific, and technical consulting services industry. Also, as construction projects increase, archaeologists will be needed to perform preliminary excavations in order to preserve historical sites and artifacts.

Industries:

Federal Government (27.95%), Management, scientific, and technical consulting services (21.93%), Research and development in the social sciences and humanities (18.21%), State government (8.31%), Research and development in the physical, engineering, and life sciences (8.31%)

### ***JOB OPPORTUNITIES (depending on level of education as described above)***

- College and University professor
- Museum Curator
- Scientific Researcher
- Excavation and traveling

### ***SALARY RANGE***

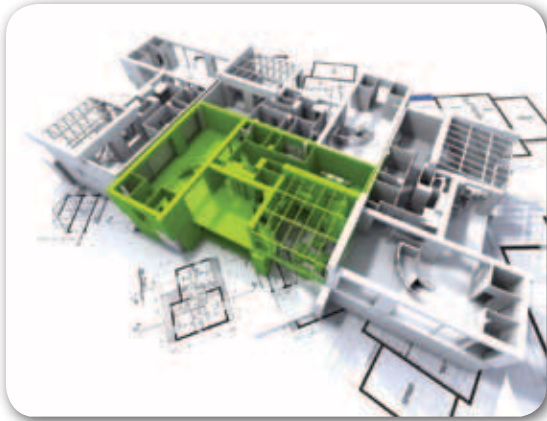
Average Wage: \$26.07 hourly, \$54,230 annually





# 7. ARCHITECTURE/CADD

Architects design buildings, manage projects and sites, evaluate and specify materials, oversee construction, plan neighborhoods and other outdoor spaces, design interiors, create landscape plans, and even work to preserve historic buildings. Architects design and build a wide variety of buildings such as offices and apartment buildings, schools, libraries, churches, hospitals, college campuses, factories, and homes. Most architects specialize in one type of building. For example, landscape architects design parks, playgrounds, residential neighborhoods, industrial parks, and even college campuses. Computer-aided design and drafting (CADD) is becoming more common due to the increased use of computers.



## ***EDUCATIONAL REQUIREMENTS***

Architects must obtain a license. To do so one must: Earn a professional degree in architecture. Most common is the five-year Bachelor's degree from an accredited architecture program. Students can also obtain a master's degree in architecture if their bachelor's degree is in another area. Courses of study include: architectural history and theory, building design, CADD, structures, technology, construction methods, math, physical sciences, and liberal arts. They must complete a period of practical training or internship under a licensed architect (sometimes up to three years) and receive a passing score on the Architect Registration Examination.

## ***SKILLS FOR SUCCESS***

- Ability to visually communicate ideas
- Creativity
- Visual orientation and the ability to understand spatial relationships
- Artistic and drawing ability
- Computer skills

## ***FUTURE JOB OUTLOOK***

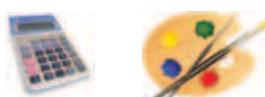
Employment will grow faster than the average through 2016. The best opportunities will open up for those architects who can distinguish themselves with their creativity.

## ***JOB OPPORTUNITIES***

- Private architectural firms
- Construction companies

## ***SALARY RANGE***

Average Wage: \$34.88 hourly, \$72,550 annually



## 8. ART CAREERS/ART THERAPY

People in art careers use their creative talents to communicate thoughts, feelings, or ideas to others. This can be done in a wide range of ways, including creating a sculpture, painting, drawing, photograph, pottery, jewelry, graphic design, or multimedia presentation. Art therapists help their clients communicate through the creative process. They analyze patients' artwork, or patients' responses to artwork, and assist in their emotional, educational or social development. Therapists use art to free creativity, reduce anxiety and increase self-esteem in their clients.



### ***EDUCATIONAL REQUIREMENTS***

Education training and experience are required at different levels for success in different occupations. Post-secondary training is recommended for all artist specialties. Although formal training is not strictly required, it is very difficult to become skilled enough to make a living without some training. Many colleges and universities offer programs leading to a bachelor's or master's degree in fine arts or art-related major. Depending on where they work, art therapists may require a master's degree. Most hold undergraduate degrees in counseling, psychology or a related field.

### ***SKILLS FOR SUCCESS***

#### ***Artist:***

- Artistic ability/Creativity
- Operating computers to lay out designs and colors
- Producing designs of ideas

### ***FUTURE JOB OUTLOOK***

Stable to average growth—Fine artists work mostly on a freelance or commission basis and may find it difficult to earn a living solely by selling their artwork. Only the most successful fine artists receive major commissions for their work. Art therapy is a growing occupation as it gains acceptance as a viable therapeutic and evaluative tool, but it is still a relatively rare field with less than 5,000 in the U.S. Art therapists with advanced degrees may teach at the university level and do research. Most art therapists continue their own art career while practicing as an art therapist.

### ***JOB OPPORTUNITIES***

#### ***Fine Artist:***

- Cartoonist
- Delineator
- Exhibit Artist
- Fashion Artist
- Illustrator
- Painter
- Painting Restoration
- Police Artist
- Printmaker
- Quick Sketch Artist
- Sculptor
- Teach art lessons
- Self employed /own an art studio
- Advertising and related services

#### ***Art Therapy:***

- Nursing & personal care facilities
- Hospitals and clinics
- Correctional facilities
- Schools, colleges and universities
- Home health care services
- Individual & family services

### ***SALARY RANGE***

Average Wage: \$18.95 hourly, \$39,410 annually



## 9. AUTOMOTIVE TECHNICIAN

Automotive technicians are highly trained individuals with the knowledge and ability to diagnose mechanical problems and make repairs to vehicles. Automotive service technicians examine, evaluate and determine problems with vehicles, talk to customers, present repair cost estimates and offer options for completing those repairs. They



must have the ability to understand complex, computer-based diagnostic equipment. They must be able to understand and use a wide variety of power equipment such as grinding machines, pneumatic wrenches, hoists and welding tools as well as many common hand tools.

### ***EDUCATIONAL REQUIREMENTS***

A career as an automotive technician almost always requires a formal training program in high school or tech school.

### ***SKILLS FOR SUCCESS***

- Excellent eye/hand coordination
- Mechanical Aptitude
- Ability to analyze situations
- Good math and reading skills

### ***FUTURE JOB OUTLOOK***

Automotive service technicians and mechanics are expected to increase as fast as the average through the year 2014. For well-prepared people with a technical background, automotive service technician careers offer an excellent opportunity for good pay and the satisfaction of performing highly skilled work using the latest technology.

### ***JOB OPPORTUNITIES***

- Automotive Repair Shops
- Auto supply stores
- New or Used Car Dealerships
- Commercial Vehicle Garages

### ***SALARY RANGE***

Average Wage: \$17.21 hourly, \$35,790 annually



# 10. BIOLOGISTS/CHEMISTS/BIO-TECH

Biological scientists study living organisms and their relationship to the environment. They perform research to gain a better understanding of fundamental life processes or apply that understanding to developing new products or processes. Most specialize in one area of biology, such as zoology, microbiology, marine biology, biochemistry, botany, physiology, biophysics and ecology. Basic biological research enhances our understanding so that we can develop solutions to human health problems and improve the natural environment. These biological scientists mostly work in government, university, or private industry laboratories, often exploring new areas of research. Biological scientists most often work in laboratories with technical equipment, such as electron microscopes. Some research specialties, including wildlife biology, require field-based research to gather samples and generate data.



## ***EDUCATIONAL REQUIREMENTS***

A bachelor's degree in biological science is required for most positions in this field, and an advanced degree is recommended. Most college and universities offer four-year programs in biology or a related sub-field. A bachelor's degree in biology qualifies a person to work as a laboratory technician, research assistant, and for some product development and marketing positions in the private sector. For those who wish to lead research studies, at least a master's degree is required, with a doctorate preferred. A Ph.D program in biological science may take three to five years to complete.

## ***SKILLS FOR SUCCESS***

- Detail oriented
- Ability to work independently or part of a team
- Ability to communicate clearly and concisely
- Scientific curiosity
- Self-discipline
- Patience

## ***FUTURE JOB OUTLOOK***

Employment of biological scientists is projected to grow 9 percent over the 2006-16 decade, about as fast as the average for all occupations, as biotechnological research and development continues to drive job growth.

## ***JOB OPPORTUNITIES***

- Federal, state, local governments
- U.S. Departments of Agriculture, Interior, and Defense
- Pharmaceutical and medicine manufacturing industry
- National Institute of Health
- Colleges and universities
- Scientific research and testing laboratories

## ***SALARY RANGE***

Average Wage: \$58,530-\$79,390 annually



# 11. BUSINESS OWNER/MERCHANDISING

Small business is the backbone of the economy. Whether they sell bikes, coffee, computers or ideas, small businesses provide valuable services and create most new jobs. Businesses with fewer than 200 employees are considered to be small businesses. This includes home-based businesses, restaurants, retail stores, and franchise outlets—any business that offers a product or service. Owning and operating a small business takes lots of work and dedication. In many cases, the small business owner is in charge of running the business as well as doing the books, the ordering, the advertising and anything else that's needed. Success isn't guaranteed in small business. It's a fact people have to accept if they're going to start up their own business. Relatively few small businesses survive their third year.



## ***EDUCATIONAL REQUIREMENTS***

A high school diploma plus on the job-training is recommended. Pursuing a post-secondary degree in Business Management, Marketing or Entrepreneurship is also recommended. You can take a four-year bachelor's program, a two-year associate's degree or a shorter certificate program in entrepreneurship. Many organizations also offer entrepreneurial training to young people in middle and high school through an internship or apprenticeship program.

## ***SKILLS FOR SUCCESS***

- Work well with people
- Self motivated
- Planning and administering budgets
- Ambitious
- Hiring and supervising staff
- Judgment and decision making

## ***FUTURE JOB OUTLOOK***

Projected job growth can be attributed to the increasing complexity of business. The most successful job applicants will have a combination of experience and college degrees. Because it has become difficult to keep abreast of technological innovations, changes in government relations and growing environmental concerns, corporations, institutions and governments will increasingly need well-trained, well-informed business and management professionals.

## ***JOB OPPORTUNITIES***

- Business Owner
- Accounting
- Purchaser
- Business Analyst
- Human Resources
- Financial Management
- Marketing

## ***SALARY RANGE***

Average Wage: \$17.90 hourly, \$37,230 annually



## 12. CHILD CARE/EARLY CHILDHOOD EDUCATION

Early childhood education teachers utilize children's play to advance language and vocabulary development (by means of storytelling, rhyming games, and acting games), increase social skills, and introduce scientific and mathematical concepts. Early childhood teachers use a less structured approach, including small-group lessons, one-on-one instruction, and learning through creative activities such as art, dance, and music. Child care workers care for children who do not yet attend school. They not only care for children's basic needs, but also arrange activities and stimulate children's physical, emotional, intellectual, and social growth. There are generally three different classifications distinguished by the location of work: household workers (child's home), family child care providers (provider's home), and child care workers (child care center).



### ***EDUCATIONAL REQUIREMENTS***

Education requirements vary for childcare workers. A high school diploma is usually all that is required for private childcare workers.

Private firms and publicly funded programs usually require some courses in early childhood education or an associate degree in Early Childhood Education. Early childhood teachers in public settings generally require a bachelor's degree in Early Childhood Education. Some only require an associate degree. Courses of study include: classroom management, child development, health and safety for children, and methods of educating children.

### ***SKILLS FOR SUCCESS***

- Patience
- Energy and stamina
- Love for children
- Skill in music, art, drama, and storytelling
- Communication skills

### ***FUTURE JOB OUTLOOK***

The outlook for careers in child care and early childhood education is greater than the average for all occupations through 2016

### ***JOB OPPORTUNITIES***

- Children's homes
- Childcare workers' own homes
- Childcare centers
- Preschools

### ***SALARY RANGE***

Average Wage: \$9.23 hourly, \$25,700 annually



# 13. INFORMATION TECHNOLOGY/COMPUTER PROGRAMMING

A Computer Programmer develops and writes computer programs to store, locate, and retrieve information by converting raw data into coded computer language

## ***EDUCATIONAL REQUIREMENTS***

The education level for this occupation is commonly a Bachelor's degree, although some programmers may qualify for certain jobs with two-year degrees or certificates. Employers are primarily interested in programming knowledge, and computer programmers are able to get certified in a language such as Microsoft or Java.



## ***SKILLS FOR SUCCESS***

- Critical thinking
- Reading comprehension
- Learning strategies

## ***FUTURE JOB OUTLOOK***

Careers in Computer Programming will face a slower than average growth. As programming tasks become increasingly sophisticated and additional levels of skill and experience are demanded by employers, graduates of 2-year programs (and those with less than a 2-year degree) will face strong competition for jobs. Prospects should be best for college graduates with knowledge of and experience working with, a variety of programming languages and tools.

## ***JOB OPPORTUNITIES***

- Manufacturing
- Finance and insurance
- Software publishers
- State and local government
- Wholesale trade
- Internet service providers
- Administrative and support services
- The military

## ***SALARY RANGE***

Average Wage: \$34.32 hourly, \$71,380 annually



# 14. CONSTRUCTION/CARPENTRY

Workers in this field construct, erect, install, and repair structures or fixtures made of wood, plywood, steel and wallboard. They use carpenter's hand tools and power tools.

## ***EDUCATIONAL REQUIREMENTS***

High school preferred, plus long term, on-the-job training Carpenters learn their trade through formal and informal training programs.

To become a skilled carpenter usually takes between three and four years of both classroom and on-the-job training. While there are a number of different ways to obtain this training, in general, the more formalized the process, the more skilled you will become. Entry-level workers generally start as helpers, assisting more experienced workers. During this time, the carpenter's helper may elect to attend a trade or vocational school, or community college to receive further trade-related training. Some employers, particularly large non-residential construction contractors with union membership, offer employees formal apprenticeships. These programs combine on-the-job training with related classroom instruction. Apprenticeship programs are usually three to four years in length, but vary with the apprentice's skill. The number of apprenticeship programs is limited, however, so only a small proportion of carpenters learn their trade through these programs, mostly those working for commercial and industrial building contractors of labor unions.



## ***SKILLS FOR SUCCESS***

- Using construction hand and power tools
- Enjoy physical work
- Following construction blueprints and plans
- Like to work outside
- Working as a member of a construction team
- Following written construction work orders

## ***FUTURE JOB OUTLOOK***

Employment: Very large occupation

Growth: Average growth

Self Employment: 32% are self-employed

## ***JOB OPPORTUNITIES***

- Carpenter
- Prop Maker
- House Repairer
- Construction worker
- Carpenter's Helper
- Mason

## ***SALARY RANGE***

Average Annual Wage: \$29,720-\$83,270





# 15. COSMETOLOGIST

Cosmetologists often focus on providing hair care services to customers. They offer a variety of services such as shampooing, cutting, and coloring hair. Many cosmetologists offer further services including manicures, pedicures, scalp and facial treatments, makeup analysis, and wig and hairpiece cleaning and styling. Some cosmetologists specialize as skin care specialists, or estheticians, who cleanse and beautify the skin by giving facials, full-body treatments, and head and neck massages as well as apply makeup.

## ***EDUCATIONAL REQUIREMENTS***

Most cosmetologists are required to receive a license for professional practice. To receive licensure, individuals must graduate from a state-licensed cosmetology school which takes about nine months to complete. After graduating from cosmetology school, individuals must pass a state licensing examination.



## ***SKILLS FOR SUCCESS***

- Interpersonal or people skills
- Business skills for those looking to operate their own salon.

## ***FUTURE JOB OUTLOOK***

Faster than the average.

## ***JOB OPPORTUNITIES***

- Beauty salons
- Nail salons
- Day and resort spas
- Nursing and other residential care homes.
- Best opportunities in highly populated areas especially cities

## ***SALARY RANGE***

Average Wage: \$10.94 hourly, \$22,760 annually



## 16. COUNSELOR/GUIDANCE COUNSELOR

Counselors work with individuals and groups to promote optimum mental health with an emphasis on prevention. Counselors may help individuals deal with addictions and substance abuse; family, parenting, and marital problems; suicide; stress management; problems with self-esteem; and issues associated with aging and mental and emotional health. Counselors must have a genuine fondness for people. They must be driven to assist clients in solving or dealing with their problems. They need to be able to maintain professionalism in situations that can occasionally become difficult or trying. School counselors consult with teachers, families and the community, in addition to their work with students. They help students create a vision for their futures. They also help students to deal with many challenges, including behavioral issues, grief, abuse and family challenges such as separation and divorce.



### ***EDUCATIONAL REQUIREMENTS***

Education training and experience are required at different levels for success in different occupations. To become a mental health counselor, forty-eight states and the District of Columbia have some form of counselor licensure that governs their practice of counseling. Requirements typically include the completion of a master's degree in counseling, the accumulation of two years or 3,000 hours of supervised clinical experience beyond the master's degree level, the passage of a state-recognized exam, adherence to ethical codes and standards, and the completion of annual continuing education requirements. School Counselors must get licensed or certified through their state's board of education. This requires continuing education credits—usually a master's degree. Depending on the state, the degree can be in education, counseling, related behavioral sciences or a related human service field.

### ***SKILLS FOR SUCCESS***

- Good judgment and decision-making
- Complex problem solving skills
- Desire to help others
- Follow code of ethics
- Negotiation and persuasion skills
- Social perceptiveness
- Inspire respect, trust, and confidence

### ***FUTURE JOB OUTLOOK***

Overall employment of counselors is expected to increase by 21 percent between 2006 and 2016. However, growth is expected to vary by specialty.

### ***JOB OPPORTUNITIES***

- Health care and social assistance centers
- Mental health and substance abuse facilities
- Local government
- Colleges
- Hospitals
- Individual and family services
- Residential care facilities
- Schools

### ***SALARY RANGE***

Average Wage: \$18.34 hourly, \$53,380 annually



# 17. ELECTRICAL UTILITY WORKER

Electrical Utility workers install or repair cables or wires used in electrical power or distribution systems. They may erect poles and light or heavy duty transmission towers. Line installers, or line erectors, install new lines by constructing utility poles, towers, and underground trenches to carry the wires and cables. Line erectors use a variety of construction equipment including digger derricks, trenchers, cable plows, and borers. Line installers and repairers are also responsible for maintenance of electrical, telephone, and cable television lines.

## ***EDUCATIONAL REQUIREMENTS***

Most occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees in these occupations usually need one or two years of training involving both on-the-job experience and training with experienced workers.



## ***SKILLS FOR SUCCESS***

- The ability to see details at close range (within a few feet of the observer).
- The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
- The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down.
- The ability to listen to and understand information and ideas presented through spoken words and sentences.

## ***FUTURE JOB OUTLOOK***

Overall employment of line installers and repairers is expected to be average.

## ***JOB OPPORTUNITIES***

- Line Maintainer
- Cable Splicer
- Line Erector
- Electrical and Electronics Repairers
- Line Repairer
- Tower Erector
- Electric Motor, Power Tool, and Related Repairers;
- Powerhouse, Substation and Relay workers

## ***SALARY RANGE***

Average Wage: \$27.90 hourly, \$58,780 annually



# 18. ELECTRICIAN

Electricians install, connect, test and maintain electrical systems for a variety of purposes, including climate control, security and communications. They generally specialize in construction or maintenance work, although a growing number do both.

## ***EDUCATIONAL REQUIREMENTS***

Most electricians learn their trade through apprenticeship programs. These programs combine on-the-job training with related classroom instruction and those who complete apprenticeship programs qualify to do both maintenance and construction work. Apprenticeship programs usually last 4 years and each year includes at least 144 hours of classroom instruction and 2,000 hours of on-the-job training.

## ***SKILLS FOR SUCCESS***

- Good math and English language skills
- Ability to read blueprints
- Ability to understand electrical code requirements
- Ability to follow instructions
- Must be detail-oriented
- Strong oral and written communication skills
- Manual dexterity
- Eye-hand coordination
- Physical fitness



## ***FUTURE JOB OUTLOOK***

Employment of electricians is expected to increase as fast as average for all occupations the year 2014. As the population and economy grow, more electricians will be needed to install and maintain electrical devices and wiring in homes, factories, offices and other structures.

## ***JOB OPPORTUNITIES***

- New technologies are expected to stimulate demand. Opportunities for employment will probably be the best in the areas of maintenance and in electrical contracting firms.

## ***SALARY RANGE***

Average Wage: \$23.20 hourly, \$43,250 annually



# 19. ELECTRONICS (ENGINEERING TECHNICIANS)



Businesses and other organizations depend on complex electronic equipment for a variety of functions. Industrial controls automatically monitor and direct production processes on the factory floor. Transmitters and antennae provide communication links for many organizations. Electric power companies use electronic equipment to operate and control equipment. The Federal Government uses radar and missile control systems to provide for national defense and to direct commercial air traffic. These complex pieces of electronic equipment are installed, maintained, and repaired by electrical and electronics installers and repairers.

## ***EDUCATIONAL REQUIREMENTS***

Knowledge of electrical equipment and electronics is necessary for employment. Many applicants gain this training through one or two years at vocational schools and community colleges. Entry-level repairers may work closely with more experienced technicians who provide technical guidance.

## ***SKILLS FOR SUCCESS***

- Excellent eyesight and color perception
- Good communication skills
- Ability to troubleshoot
- Good dexterity
- Mechanical ability
- Diagnostic skills

## ***FUTURE JOB OUTLOOK***

Employment is expected to increase more slowly than the average through the year 2016. Job prospects should be best for applicants with an associate degree, certification, and related experience.

## ***JOB OPPORTUNITIES***

- Utilities
- Machinery and equipment repair shops
- Electronics and appliance retailers
- Federal, State and local government
- Manufacturers of electrical, electronic, and transportation equipment
- Building equipment contractors
- Electrical and electronics wholesalers
- Motor vehicle and parts dealers

## ***SALARY RANGE***

Average Wage: \$26.94 hourly, \$56,040 annually



## 20. ENGINEERING

An engineer is a person who is professionally engaged in a field of engineering. Engineers are concerned with developing economical and safe solutions to practical problems, by applying mathematics and scientific knowledge while considering technical constraints. As such, the work of engineers is the link between perceived needs of society and commercial applications. Some consider this profession to be the link between art and science.

### ***EDUCATIONAL REQUIREMENTS***

Engineering degrees range from a Bachelor's degree in sciences or engineering (4 years), to a Master's degree in sciences or engineering (adding 1 or 2 years depending on the university), to a Ph.D. of Engineering which entails completing original research. Bachelor and Master's degrees are generally recognized as sufficient qualification in the labor market. Ph.D.'s often go on to teach in engineering schools. Many states require engineers to be licensed.



### ***SKILLS FOR SUCCESS***

- Analyzing and testing engineering plans
- Creating design concepts for structures and facilities
- Directing an engineering design team
- Operating computers to create engineering designs
- Giving advice on building plans and projects
- Operating computers to record and analyze engineering data
- Creating engineering concepts
- Designing structures and land use
- Explaining charts and maps
- Complex problem solving
- Judgment and decision making

### ***FUTURE JOB OUTLOOK***

Outlook: Stable

### ***JOB OPPORTUNITIES***

- Electrical Engineer
- Aerospace Engineer
- Mining Engineer
- Nuclear Engineer
- Mechanical Engineer
- Health and Safety Engineer
- Marine Engineer
- Industrial Engineer
- Civil Engineer
- Petroleum Engineer
- Agricultural Engineer
- Engineering Manager

### ***SALARY RANGE***

Average Wage: varies- \$40,000-\$100,000 annually



# 21. BANKING/FINANCIAL MANAGEMENT

Direct and coordinate financial activities of workers in a branch, office, or department of an establishment, such as branch bank, brokerage firm, risk and insurance department, or credit department. Establish and maintain relationships with individual or business customers or provide assistance with problems these customers may encounter. Examine, evaluate, or process loan applications. Plan, direct, or coordinate the activities of workers in branches, offices, or departments of establishments, such as branch banks, brokerage firms, risk and insurance departments, or credit departments. Oversee the flow of cash or financial instruments. Recruit staff members and oversee training programs.



## ***EDUCATIONAL REQUIREMENTS***

Most of these occupations require a four year degree, but some do not. A considerable amount of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.

## ***SKILLS FOR SUCCESS***

- Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times
- Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- The ability to add, subtract, divide or multiply quickly and correctly.

## ***FUTURE JOB OUTLOOK***

Slow 3%-9%

## ***JOB OPPORTUNITIES***

- Administrative Services Managers
- Auditors
- Treasurers and Controllers
- Purchasing Managers
- Accountants
- Bank Managers

## ***SALARY RANGE***

Average Wage: \$51.52 hourly, \$107,160 annually



## 22. FIREFIGHTERS

Firefighters use many different kinds of equipment including hoses, axes, and fire extinguishers to put out fires. Firefighters fight fires in buildings and many times are the first to arrive for automobile accidents. Firefighters also assist during floods, earthquakes, and other disasters. In addition, firefighters are trained to provide emergency



medical treatment to injured survivors. Fire investigators and fire marshals examine the causes of fire for their departments, police departments, and even insurance companies. These individuals also do preventative work by examining buildings for fire hazards and educating others regarding fire prevention and safety.

### ***EDUCATIONAL REQUIREMENTS***

Firefighters must be 18 years old with a high school diploma. Most fire fighting jobs require a passing score on a written and physical exam. Many fire fighting jobs require college courses or an associate's degree in fire science. Advancement to lieutenant and chief requires college education, seniority, and passing scores on examinations. Firefighters receive a great deal of training once they are hired. Some participate in four-year apprenticeships. Almost all departments require firefighters to be certified as emergency medical technicians.

### ***SKILLS FOR SUCCESS***

- Strength, physical stamina, coordination, and agility
- Self-discipline
- Mechanical aptitude
- Initiative and good judgment
- Abstinence from drugs due to job requirements and random testing
- Mental alertness
- Courage
- Sense of public service
- Ability to work and get along with others

### ***FUTURE JOB OUTLOOK***

Employment for firefighters is expected to grow as fast as average for all occupations through 2016

### ***JOB OPPORTUNITIES***

- Any town to city in the US

### ***SALARY RANGE***

Average Wage: \$21.76 hourly \$45,250 annually

First-line supervisors/managers of firefighters \$36,820-\$97,820

Fire inspectors and investigators \$29,840-\$74,930





## 23. FOOD PREP/CHEFS/CULINARY ARTS

Chefs perform a variety of food preparation duties to prepare food items for cooking, serving, or storing. A chef directs and participates in the preparation, seasoning, and cooking of soups, meats, fish, vegetables, salads, desserts, or other foods. They may plan and price menu items, order supplies, and keep records and accounts. Bakers specialize in breads, cakes and cookies. Caterers tackle the complicated task of providing food for both large and small occasions. The job involves everything from menu planning to cleanup.

### ***EDUCATIONAL REQUIREMENTS***

Education training and experience are required at different levels for success in different occupations. Food prep, as well as, institutional and cafeteria cook positions require little education or training and most skills are learned on the job. In the past, most bakers were trained on the job. Today, the best jobs go to those with specialized training in the form of an apprenticeship or other baking education. There are about 800 schools in North America that offer education in baking and related culinary arts. Some programs are two and four-year degree programs, while others are shorter, more hands-on courses in the methods and practices of baking. Executive chefs and head cooks who work in fine-dining restaurants require many years of training and experience and an intense desire to cook. Some chefs and cooks may start their training in high school or post-high school vocational programs. Others may receive formal training through independent cooking schools, professional culinary institutes, or two or four-year college degree programs in hospitality or culinary arts.



### ***SKILLS FOR SUCCESS***

- Committed to customer satisfaction
- Ability to work long hours, standing
- Measuring ingredients for recipes
- Using food and drink preparation equipment
- Strong organizational skills
- Ability to work in a fast paced environment
- Preparing food for customers

### ***FUTURE JOB OUTLOOK***

Employment of chefs, cooks, and food preparation workers is expected to increase by 11 percent over the 2006-16 decade, which is about as fast as average for all occupations.

### ***JOB OPPORTUNITIES***

- Restaurants
- Hospitals
- Self-employed
- Hotels and resorts
- Nursing care facilities
- Special food services
- Government
- Schools
- Bakeries

### ***SALARY RANGE***

Average Wage: \$8.50 hourly, \$43,850 annually



## 24. FORENSIC SCIENCE TECHNICIANS

Forensic scientists investigate crimes by collecting and analyzing physical evidence. Often, they specialize in areas such as DNA analysis or firearm examination, performing tests on weapons or on substances such as fiber, glass, hair, tissue, and body fluids to determine their significance to the investigation. Proper collection and storage methods are important to protect the evidence. They also prepare reports to document their findings and the lab techniques used.

### ***EDUCATIONAL REQUIREMENTS***

Most forensic science employers require a four-year degree in a foundation science such as biology and chemistry or a degree in mathematics or statistics to work in the field, and many prefer a master's degree in forensic science. More universities are now offering an undergraduate degree in forensic science as well as a master's degree. Military service and training is another way to gain knowledge and experience.



### ***SKILLS FOR SUCCESS***

- Highly developed technical and communication skills
- Strong computer skills
- Attention to detail
- Ability to apply scientific knowledge to solve complex real-life problems
- Strong working knowledge of science and mathematics principals

### ***FUTURE JOB OUTLOOK***

Jobs for forensic science technicians are expected to increase much faster than average through 2014. Crime scene technicians who work for state public safety departments should experience favorable employment prospects.

### ***JOB OPPORTUNITIES***

Job seekers with a four-year degree in a forensic science will enjoy much better opportunities than those with only a two-year degree. Additional opportunities should be available as a result of homeland security measures and funding made available by the federal government. There should also be opportunities for teaching positions at universities as those institutions expand or create forensic science degree programs

### ***SALARY RANGE***

Average Wage: \$24.79 hourly, \$51,570 annually



## 25. FORESTRY/WILDLIFE MANAGEMENT

Forests and rangelands supply wood products, livestock forage, minerals, and water; serve as sites for recreational activities; and provide habitats for wildlife. Conservation scientists and foresters manage, develop, use, and help to protect these and other natural resources.



### ***EDUCATIONAL REQUIREMENTS***

A bachelor's degree in forestry is the minimum educational requirement for professional careers in forestry. In the Federal Government, a combination of experience and appropriate education occasionally may substitute for a 4-year forestry degree, but job competition makes this difficult. Sixteen states have mandatory licensing or voluntary registration requirements. Foresters who wish to perform specialized research or teach should have an advanced degree, preferably a Ph.D.

### ***SKILLS FOR SUCCESS***

- Enjoy working outdoors
- Work well with others
- Appreciation for nature/wildlife
- Good computer skills
- Willingness to relocate to find work
- Good communication skills
- Ability to use a wide variety of tools
- Ability to tolerate extensive walking and physical exertion

### ***FUTURE JOB OUTLOOK***

Employment of conservation scientists and foresters is expected to grow more slowly than the average for all occupations through 2016, some openings are expected as today's scientists and foresters retire.

### ***JOB OPPORTUNITIES***

- Federal Government
- Local government
- Sawmills
- Logging companies
- State government
- Self-employed consultants
- Wood products manufacturers
- Forestry industry

### ***SALARY RANGE***

Average Wage: \$16.05 hourly, \$33,330 annually



## 26. GRAPHIC DESIGN/COMMERCIAL ARTIST



Professionals in this field design art and copy layouts for a wide variety of material to be used by businesses. Often used by magazines, newspapers, television, and for packaging. They also may create graphics for television and computer-generated media, and use computer software to design new images or to modify existing ones.

### ***EDUCATIONAL REQUIREMENTS***

A bachelor's degree is required for most entry-level and advanced graphic design positions, although some entry-level technical positions may only require an associate degree. Beginning graphic designers usually receive on-the-job training and normally need one to three years of training before they can advance to higher level positions.

### ***SKILLS FOR SUCCESS***

- Producing designs of ideas or letters
- Working as a member of a design team
- Complex problem solving
- Time management
- Sketching original designs for materials and products
- Operating computers to lay out designs and colors
- Equipment selection
- Troubleshooting

### ***FUTURE JOB OUTLOOK***

Growth: Average growth

Self Employment: 25% are self employed

### ***JOB OPPORTUNITIES***

- Graphic Designer
- Website Designer
- 3D Designer
- Sign Maker
- Commercial Art Designer
- Marketing Specialist

### ***SALARY RANGE***

Average Wage: \$20.92 hourly, \$43,500 annually



## 27. HORTICULTURE/LANDSCAPING

Horticulturists develop, grow, distribute, and use many types of plants such as fruits, vegetables, shrubs, trees, and grass. They may work in landscape horticulture, turf grass management, floriculture, fruits and vegetables, education and research, and plant inspection. Landscape horticulturists beautify homes and businesses by planting trees, shrubs and other vegetation, and designing gardens. Horticulturists not only plant and design, but they also educate the public, farmers, growers, and gardeners regarding the latest research and techniques of horticulture.

### ***EDUCATIONAL REQUIREMENTS***

Most horticulture jobs require at least an associate's degree. However, a bachelor's degree in horticulture or a similar field is preferred.

Typical college courses are in biology, chemistry, and botany. Entry-level landscapers and lawn-care workers need only on-the-job training. Landscape horticulturists usually must obtain a four-year degree in landscape horticulture. Students can earn up to a doctoral degree in Horticulture in order to advance to education, research, and higher paying jobs.



### ***SKILLS FOR SUCCESS***

- Mechanical aptitude
- Ability to work with all types of tools
- Landscapers and lawn-care workers need extra strength, endurance, and agility

### ***FUTURE JOB OUTLOOK***

Stable outlook

### ***JOB OPPORTUNITIES***

- Biology labs
- Businesses
- Research stations
- Individuals' homes
- Gardens
- Golf courses

### ***SALARY RANGE***

Horticultural Extension Agent - \$29.85 hourly, \$62,090 annually

Landscaper - \$11.25 hourly, \$23,400 annually



## 28. HOTEL MANAGERS/TRAVEL & TOURISM

A wide range of careers falls within the Travel & Tourism area. This includes hotel & motel management, cruise directors, travel agents, bed & breakfast operators, golf club management, and tour guides. Individuals having a career within this area help to make their customers' time spent at their facilities an informative and enjoyable experience. They might provide program and recreational activities for their customers.

### ***EDUCATIONAL REQUIREMENTS***

Education training and experience are required at different levels for success in different occupations. Hotels increasingly emphasize specialized training. Post-secondary training in hotel, restaurant, or hospitality management is preferred for most hotel management positions; however, a college liberal arts degree may be sufficient when coupled with related hotel experience. To become a travel agent, you may take courses via correspondence programs or at travel schools. Community colleges also offer diplomas in travel counseling. Many vocational schools offer six to twelve week full time travel agent programs. Golf course management and superintendent programs are available at community colleges and universities. Golf club managers come to the occupation from a variety of backgrounds. Some are graduates of one or two-year training programs that are specific to golf course management. Others are professional golfers (members of the PGA) and have successfully completed specific training.



### ***SKILLS FOR SUCCESS***

- Good organizational skills
- Enjoy working with people
- Computer skills
- Time management
- Good interpersonal skills
- Ability to deal with customer complaints
- Managing, hiring and supervising staff

### ***FUTURE JOB OUTLOOK***

Most careers in this industry will have a stable future growth. There may be a decrease in the need for travel agents as people are able to make their own reservations on the Internet.

### ***JOB OPPORTUNITIES***

- Hotels and motels
- Golf /Country Clubs
- Large corporations
- Resorts
- Tour companies
- Scheduled air transportation
- Travel agencies
- Cruise companies
- State and Federal government

### ***SALARY RANGE***

Average Wages: \$22.54 hourly, \$46,880 annually



## 29. HVAC/HEATING, VENTILATION, AIR CONDITIONING



Heating, ventilation, air-conditioning and refrigeration mechanics and installers (also called technicians) install, maintain and repair such systems. These systems are comprised of many mechanical, electrical and electronic components, such as motors, compressors, pumps, fans, ducts, pipes, thermostats and switches. They must be able to maintain, diagnose and correct problems throughout the entire system.

### ***EDUCATIONAL REQUIREMENTS***

Because of sophistication of equipment in this area, employers prefer to hire those with technical school training or those who completed an apprenticeship. Many still learn the trade informally on the job. Many high schools and secondary technical and trade schools, community colleges and the U.S. Armed Forces offer six-month to two-year programs. Even after completing these programs, new technicians need between six months to two years of field experience before they are considered proficient.

### ***SKILLS FOR SUCCESS***

- Adept at using wide variety of tools
- Good written and verbal communication skills
- Ability to read and follow blueprints
- General knowledge of construction industry

### ***FUTURE JOB OUTLOOK***

Employment in this area is projected to increase faster than average in the near future.

### ***JOB OPPORTUNITIES***

Job prospects will be best for those with training from an accredited technical school or with formal apprenticeship training. The increased complexity of HVAC systems, increasing the possibility that equipment may malfunction, will also create opportunities for service technicians.

### ***SALARY RANGE***

Average wage: \$20.45 hourly, \$42,530 annually



## 30. INTELLIGENCE COMMUNITY

The Central Intelligence Agency, and other U.S. Intelligence agencies, have people watching, listening and actively investigating people and events both around the world and in the United States. They gather information and determine if a security risk is present. But intelligence agencies employ more than just intelligence officers. For those who meet the requirements, there are many different roles to fill. These include mission support administrators, finance assistants, human resource administrators, security protective officers, press operators and paralegals.

### ***EDUCATIONAL REQUIREMENTS***

While the majority of CIA positions require a minimum of a college degree, there are some which do not. The CIA requires applicants to be American citizens. Potential recruits must obtain a top secret clearance. This involves a polygraph test, medical examination and background investigation. The process begins once a conditional offer of employment is extended. It can take anywhere from nine to twelve months to complete. Majors in computer/information sciences, economics, accounting, finance/banking, engineering, international relations, and foreign languages are sought by the CIA.



### ***SKILLS FOR SUCCESS***

- Strong academic background
- Integrity
- Patriotism
- Demonstrated interpersonal and teamwork skills
- Character
- Foreign language skills and overseas experience is a plus

### ***FUTURE JOB OUTLOOK***

The global war on terror and the need for Homeland Security have led to significant job growth.

### ***SALARY RANGE***

Dependent on the position

Intelligence Analyst: \$33.08 hourly, \$68,820 annually





# 31. JOURNALISM/NEWSPAPER

The news never stops, 24 hours a day, seven days a week. At a newspaper, there is always a story to write, a photo to be taken, advertisements to be created, and an edition to be printed and delivered. Newspaper employees work together as a team to keep the public informed about what's going on in the community and to help advertisers



reach their audience. In covering a story, newspaper journalists investigate leads and news tips, look at documents, observe events at the scene, and interview people. Reporters take notes and also may take photographs or shoot videos. At their office, they organize the material, determine the focus or emphasis and write their stories. General-assignment reporters write about newsworthy occurrences—such as accidents, political rallies, visits of celebrities, or business closings—as assigned by the editor. Large newspapers assign reporters to gather news about specific topics, such as crime or education. Some reporters specialize in fields such as health, politics, foreign affairs, sports, theater, consumer affairs, social events, science, business, or religion. Investigative reporters cover stories that may take many days or weeks of information gathering.

## ***EDUCATIONAL REQUIREMENTS***

Most employers prefer individuals with a bachelor's degree in journalism or mass communications, but some hire graduates with other majors. They look for experience at school newspapers or broadcasting stations, and internships with news organizations.

## ***SKILLS FOR SUCCESS***

- Ability to express ideas clearly and logically
- Excellent verbal communication skills
- Ability to work under pressure and meet deadlines
- Work individually as well as part of a team
- Excellent writing skills
- Self-motivation/perseverance
- Excellent interpersonal skills
- Computer skills

## ***FUTURE JOB OUTLOOK***

Little growth. Competition will continue to be keen for jobs at large metropolitan and national newspapers.

## ***JOB OPPORTUNITIES***

- Small community newspapers
- Large metropolitan/national newspapers
- Freelance journalism
- Online newspapers

## ***SALARY RANGE***

Average Wage: \$16.60 hourly, \$34,530 annually



## 32. LAW ENFORCEMENT

Law enforcement includes planning, managing and providing legal, public safety, protective and homeland security services, including professional and technical support services. People depend on police officers and detectives to protect their lives and property. Law enforcement officers have duties that range from controlling traffic to preventing and investigating crimes. They maintain order, enforce laws and ordinances, issue traffic summonses, investigate accidents, present evidence in court, serve legal documents for the court system, and apprehend, arrest and process prisoners.

### ***EDUCATIONAL REQUIREMENTS***

High school (GED), plus on-the-job training. Civil service regulations govern the appointment of police and detectives in most states, large municipalities, and special police agencies, as well as in many smaller jurisdictions. Eligibility for appointment usually depends on performance in competitive written examinations and previous education and experience. In larger departments, where the majority of law enforcement jobs are found, applicants usually must have at least a high school education. Some departments require a year or two of college coursework. Federal and state agencies typically require a college degree. Many states require licensure or certification.



### ***SKILLS FOR SUCCESS***

- Collecting information about laws and regulations
- Providing protective services
- Interviewing people to obtain information
- Coordination
- Complex problem solving
- Judgment and decision making
- Service orientation
- Investigating data to solve problems
- Compiling and cataloging written information
- Preparing case reports
- Social perceptiveness
- Instructing
- Negotiation

### ***FUTURE JOB OUTLOOK***

Outlook: Stable

### ***JOB OPPORTUNITIES***

- Bailiff
- Sheriff/Deputy Sheriff
- Police Patrol Officer
- Private Investigator
- Forensic Science Technician
- Fish and Game Warden

### ***SALARY RANGE***

Average Wage: \$35,000-\$70,000 annually



## 33. LAWYER, PARALEGAL/LEGAL TECHNICIAN

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

Paralegals, or legal assistants, help lawyers prepare for closings, hearings, trials, and corporate meetings. Paralegals may examine the details of cases and make certain that all relevant information is considered. They also identify appropriate laws, judicial decisions, legal articles, and other materials that are relevant to assigned cases. After they analyze and organize the information, paralegals may organize written reports that lawyers use in determining how cases should be handled.



### ***EDUCATIONAL REQUIREMENTS***

Lawyers must be licensed to practice. To become licensed, lawyers must obtain a bachelor's degree, and then attend law school for three years. In addition, they must pass the bar examination. Most college courses for lawyers/paralegals/legal assistants consist of different types of law such as real estate law, family law, etc. The most common way to become a paralegal/legal assistant is through a two-year college paralegal program that leads to an associate degree in paralegal studies. Individuals can obtain a bachelor's degree in another major and then obtain a certificate in paralegal studies. Some paralegal/legal assistant positions can be obtained from on the job training.

### ***SKILLS FOR SUCCESS***

- Public speaking ability
- Ability to work with people
- Strong sense of responsibility
- Perseverance, creativity, and reasoning ability

### ***FUTURE JOB OUTLOOK***

Employment of lawyers is expected average growth through 2016.

Employment of paralegals/legal assistants is expected to grow faster than the average through 2016.

### ***JOB OPPORTUNITIES***

- Private Law Firms
- Large Corporations
- District Attorneys Offices

### ***SALARY RANGE***

Average Wage: Lawyer - \$100 hourly, \$100,000 annually

Paralegal/legal assistant - \$22.44 hourly, \$47,450 annually



## 34. MILITARY (ALL BRANCHES)



The United States Armed Forces are made up of the Army, Navy, Air Force, Marine Corps, and Coast Guard. Within the different branches of the military, there are a wide range of careers. Some of these are: pilot, driver, infantryman, intelligence officer, radar and sonar equipment repair, truck mechanic, lawyer, accountant, chef, nurse, and computer programmer specialist.

### ***EDUCATIONAL REQUIREMENTS***

Education training and experience are required at different levels for success in different occupations. A number of positions within the military require specialized training, consisting of 15 to 25 weeks of classroom instruction. Training length varies depending on specialty. Further training occurs on the job and through advanced courses. A 4-year college degree is required to enter certain military occupations. Some specialties are closed to women, and for others a master's degree is preferred.

### ***SKILLS FOR SUCCESS***

- Ability to work independently as well as part of a team
- Commitment to the job
- Varying career specific skills

### ***FUTURE JOB OUTLOOK***

There will continue to be job opportunities at all levels within the Armed Forces. With the war on terror and homeland security, a present and future need exists for a ready military.

### ***JOB OPPORTUNITIES***

- U.S. Army
- U.S. Navy
- U.S. Air Force
- U.S. Marine Corps
- U.S. Coast Guard

### ***SALARY RANGE***

Pay grade and length of service determine the pay. Cost-of-living increases usually occur once a year. In addition to pay, enlisted personnel also receive a yearly clothing allowance, 30 days paid leave, free room and board, free meals, free health care coverage, reduced taxes, etc.



## 35. MINISTER/RELIGIOUS CAREERS



Ministers prepare and deliver sermons, lead congregations in worship services and perform various rites of the church, such as baptisms and confirmations. They also perform marriages, conduct funerals, provide counseling, give religious instruction and visit sick and handicapped people. Ministers also comfort the bereaved.

### ***EDUCATIONAL REQUIREMENTS***

A minister needs a broad general education and specific training. They must have a university degree followed by a postgraduate degree in theology. Usually they have a master's degree in divinity.

### ***SKILLS FOR SUCCESS***

- Devotion to God
- Compassion
- Good interpersonal skills
- Communication skills
- Active listening skills
- Active learning

### ***FUTURE JOB OUTLOOK***

The employment change from 2004 to 2014 is estimated to increase 12.4%.

### ***JOB OPPORTUNITIES***

- Churches
- Military Chaplains (3,500 of various faiths)

### ***SALARY RANGE***

Average Wage: \$21.14 hourly, \$43,970 annually



## 36. MUSICIANS, PROFESSIONAL

Musicians, singers, and related workers play musical instruments, sing, compose, arrange, or conduct groups in instrumental or vocal performances. They may perform solo or as a part of a group. Musicians, singers, and related workers entertain live audiences in nightclubs, concert halls, and theaters featuring opera, musical theater, or dance. Although most of these entertainers play for live audiences, some perform exclusively for recording or production studios. Regardless of the setting, musicians, singers and related workers spend considerable time practicing, alone and with their band, orchestra, or other musical ensemble.

### ***EDUCATIONAL REQUIREMENTS***

Most musicians start singing or playing at a young age. Many go on to pursue extended training through private lessons, college or a university program. Popular musicians must have an understanding of and feeling for the style of music that interests them. Classical training can expand their employment opportunities and musical abilities.



### ***SKILLS FOR SUCCESS***

- Musical talent
- Poise
- Physical stamina
- Ability to interpret music
- Good stage presence
- Strong work ethic to perfect craft
- Versatility
- Self-discipline

### ***FUTURE JOB OUTLOOK***

Employment is expected to grow about as fast as the average for all occupations. Keen competition for jobs, especially full-time jobs, is expected to continue. Talented individuals who are skilled in multiple instruments or musical styles will have the best job prospects.

### ***JOB OPPORTUNITIES***

- Theaters
- Production studios
- Cruise ships
- Concert halls
- Restaurants
- Teaching—schools/universities
- Nightclubs
- Amusement parks
- Recording studios
- Resorts

### ***SALARY RANGE***

Average Annual Salary \$50,410



## 37. PHOTOGRAPHERS/VIDEOGRAPHERS

Photographers photograph subjects or events using a variety of cameras that can accept lenses for close-up, medium-range, or distance photography. Photographers often use computers to manipulate images to create a desired effect. They may then store the images on a CD.

### ***EDUCATIONAL REQUIREMENTS***

One to two years post-secondary training is often required. Entry-level positions in photojournalism or in industrial or scientific photography generally require a college degree in photography or in a field related to the industry in which the photographer seeks employment. Freelance and portrait photographers need technical proficiency, gained through a degree program, vocational training or extensive photography experience. Voluntary certification is available from the Professional Photographers of America (PPA).



### ***SKILLS FOR SUCCESS***

- Creating photographic and motion picture images
- Persuasion
- Equipment maintenance
- Judgment and decision making
- Operation monitoring
- Operating audio-visual equipment
- Coordination
- Equipment selection
- Management of financial resources
- Quality control analysis

### ***FUTURE JOB OUTLOOK***

Outlook: Stable

Job Openings: Very small number

Employment: Small occupation

Self Employment: 58.8%

### ***JOB OPPORTUNITIES***

- Movie and TV Camera Operator
- Photographic Processing Machine Operator
- Sports Photographer
- Photographer
- Reporter
- Photographic Process Worker
- Photomicrographer
- Videographer

### ***SALARY RANGE***

Average Wage: \$14.00 hourly, \$29,130 annually



## 38. PROBATION OFFICERS/CORRECTIONS OFFICERS

Probation officers supervise people who are on probation instead of in prison. They maintain personal contact with the offenders and their families. Probation officers work with and monitor offenders to prevent them from committing new crimes. Corrections officers, also known as detention officers, are responsible for overseeing individuals who have been arrested and are awaiting trial or who have been convicted of a crime and sentenced



to serve time in a jail, reformatory, or penitentiary. They maintain security and inmate accountability to prevent disturbances, assaults, and escapes. Correctional officers periodically inspect the facilities, checking cells and other areas of the institution for unsanitary conditions, contraband, fire hazards, and any evidence of infractions of rules. In addition, they routinely inspect locks, window bars, grilles, doors, and gates for signs of tampering.

### ***EDUCATIONAL REQUIREMENTS***

A bachelor's degree in social work, criminal justice, psychology, or a related field is usually required for probation officers. Most probation officers work as trainees or on a probationary period for up to a year before being offered a permanent position. A high school diploma or graduation equivalency degree is required for correctional officers.

Certain prisons require entry-level officers to have a bachelor's degree and three years of related experience. Military and law enforcement experience can be a substitute for related correctional experience. Correctional officers receive a great deal of on-the-job-training as well.

### ***SKILLS FOR SUCCESS***

- Good physical and emotional condition
- Familiarity with the use of computers
- Listening and interpersonal skills
- Clean criminal record
- Knowledge of laws and regulations

### ***FUTURE JOB OUTLOOK***

Employment of probation officers is expected to be average growth. Employment of correctional officers is expected to grow faster than the average

### ***JOB OPPORTUNITIES***

- Federal, State and local court systems.
- Correctional facilities.

### ***SALARY RANGE***

Average Wage: \$22.69 hourly, \$47,200 annually





## 39. PUBLIC SERVICE CAREERS

What makes a professional career in public service so unique is the emphasis on tackling tough problems—the challenging issues that define the public agenda and call for talented individuals to devote their efforts to finding solutions. Professional public service today offers many career opportunities including those in nonprofit organizations and NGOs, governments at all levels, the international arena, higher education, healthcare, environment and in private sector companies that work under contract to governments. These opportunities provide good pay and benefits, numerous choices of where to work in the United States and around the world, and resources for further training and education as well personal and professional growth.



### ***EDUCATIONAL REQUIREMENTS***

Most of these occupations require at least a four-year bachelor's degree, but for true professional credentials and career success more and more people believe that a master's degree is desired and of benefit. Earning an advanced degree in public administration or public policy is an excellent way to launch and grow a career in the public sector.

### ***SKILLS FOR SUCCESS***

- The ability to listen to and understand information and ideas presented through words as well as new media tools. Communicate effectively.
- Problem solving or offering ideas on how to fix things.
- Using judgment and decision-making to achieve the best results possible.

### ***FUTURE JOB OUTLOOK***

Good 2006–2016 The public sector is growing and many people are retiring from nonprofit sector and government jobs.

### ***JOB OPPORTUNITIES***

- Program Manager
- Public Affairs Officer
- Legislative Analyst
- Elected Official
- Executive Director
- Budget Director
- Consultant
- Human Rights Specialist
- Environmental Manager
- City Manager
- Spokesperson
- Director of Government Affairs

### ***SALARY RANGE***

Average Wage: Varies-For those working in public sector the general range is \$25,000 to \$85,000 plus.



## 40. RADIO BROADCASTING

Broadcast disc jockeys are radio announcers. They select and introduce recorded music. They may also read the newscast, sports and weather information; voice commercials; and interview guests. It's their job to keep radio listeners entertained and informed by talking or playing music. Broadcast disc jockeys may also operate the control



board, sell commercial time to advertisers and write commercials or news. They sometimes research and write scripts for their own shows. Radio producers are an integral part of many radio programs. Producers work behind the scenes, as opposed to on the air, to make radio informative and entertaining. Producers fill a number of roles. Some research topics and find just the right guest for live talk-radio programs. Others collect taped interviews and natural sound and mix the two together in a packaged report. Radio producers also write commercials and oversee the mixing of voice and music for advertisements. Broadcast technicians set up, operate, and maintain electrical and electronic equipment used in radio broadcasts. Sportscasters work on radio and on television. They give the play-by-play and color commentary at sporting events.

### ***EDUCATIONAL REQUIREMENTS***

Education training and experience are required at different levels for success in different occupations. Broadcasting or applied communications are common backgrounds for people in this field. Another avenue of education for this field is a bachelor's degree in English, journalism or communications. Many sportscasters obtain a journalism degree from an accredited university. Students can also take more technical, hands-on broadcasting courses at colleges or technical institutes. The best way to prepare for a broadcast technician job is to obtain technical school, community college, or college training in broadcast technology, electronics, or computer networking.

### ***SKILLS FOR SUCCESS***

#### **Disc Jockey:**

- Excellent communication skills
- Good computer skills
- Ability to connect with listening audience
- Pleasant voice with a knack for sounding casual and comfortable

#### **Sportscaster:**

- Excellent communication skills
- Knowledge of sports
- Love of sports
- Personable

#### **Broadcast Technician:**

- Skills in observing and diagnosing electrical/electronic programs
- Ability to set-up and operate communications equipment
- Ability to transmit information electronically

### ***FUTURE JOB OUTLOOK***

The future is stable for careers in radio broadcasting.

### ***JOB OPPORTUNITIES***

- Radio Broadcasting Facilities
- State Government
- Federal Government

***SALARY RANGE*** - Average Wage: \$12.91 hourly, \$26,850 annually

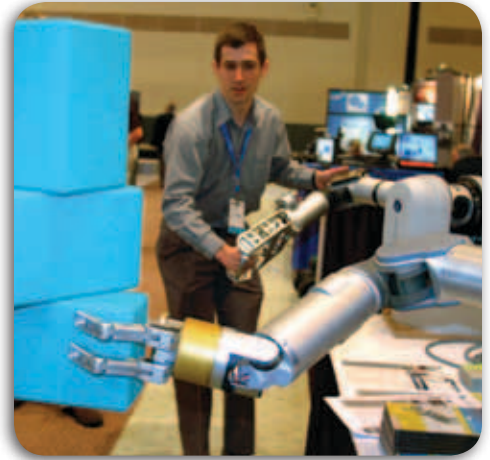


# 41. ROBOTICS

Robotics engineers spend a lot of time designing plans needed to build a robot. They design the processes needed for the robot to work. Sometimes they design the computer chips needed to go inside the robot. Robotics technologists design and create the machines. Robotics technology is the integration of mechanical, electrical and computer technology; it is a hands-on job.

## ***EDUCATIONAL REQUIREMENTS***

Robotic engineers often choose to get their undergraduate degree in engineering, although some choose to major in science, math or physics. Undergraduate degrees in robotics are nearly impossible to find. There are no accredited robotics programs. The minimum education needed to work as a robotics technologist is a diploma of technology from a technical institute or college.



## ***SKILLS FOR SUCCESS***

- Reading comprehension
- Mathematics
- Science
- Critical thinking
- Computer skills

## ***FUTURE JOB OUTLOOK***

The outlook for both engineers and technologists is growing

## ***SALARY RANGE***

Average Wage: \$43.50 hourly, \$90,270 annually



## 42. SOCIAL WORKERS/SOCIAL SERVICES

A Social Worker provides social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and the academic functioning of children. They may assist single parents, arrange adoptions, and find foster homes for abandoned or abused children. In schools, they address such problems as teenage pregnancy, misbehavior, and truancy. Social workers may also advise teachers on how to deal with problem children.

### ***EDUCATIONAL REQUIREMENTS***

Careers in this field require a Bachelor's Degree in Social Work. Many social workers go on to receive graduate degrees, including a master's in social work. Licensing requirements vary from state to state, most require license, certificate or registration.



### ***SKILLS FOR SUCCESS***

- Excellent communication skills
- Good judgment
- Compassion and caring for others
- Excellent listening skills
- Skill in situation assessment

### ***FUTURE JOB OUTLOOK***

Opportunities in social service should grow faster than average. There will continue to be great need for those who work with the disabled, mentally ill, unemployed, elderly, and prison population.

### ***JOB OPPORTUNITIES***

- Budget cuts could affect jobs in public agencies, but most of these jobs will migrate to private agencies.

### ***SALARY RANGE***

Average Wage: \$38,260- \$47,050 annually



## 43. MANUFACTURING

Manufacturing is a very wide range of careers but can be described in the simplest form as producing the right product at the best price, the best way and then getting it to your consumer at the right time. Some aspects of these careers include: Adhering to all applicable regulations, policies, and procedures for health, safety, and environmental compliance. Inspect finished products for quality and adherence to customer specifications. Set up and operate production equipment in accordance with current good manufacturing practices and standard operating procedures. Monitor and adjust production processes or equipment for quality and productivity.

### ***EDUCATIONAL REQUIREMENTS***

Many of these careers would learn their trade through on the job training or technical schools while some positions would require at least a four year degree.



### ***SKILLS FOR SUCCESS***

- Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Ability to conduct tests and inspections of products, services, or processes to evaluate quality or performance.
- Ability to watch gauges, dials, or other indicators to make sure a machine is working properly.
- Ability to perform routine maintenance on equipment and to determine when and what kind of maintenance is needed.

### ***FUTURE JOB OUTLOOK***

Slow 3-9% growth from 2010-2016

### ***JOB OPPORTUNITIES***

- Manufacturing Production Technician
- Machine assemblers
- Machine operators and setters
- Material Moving Worker
- Production Managers
- Purchasing Manager

### ***SALARY RANGE***

Average Wages: \$28.21 hourly, \$58,670 annually



# 44. TEACHER

Teachers instruct in basic academic, social, and other formative skills to pupils in public or private schools.

- Prepares reports on students as required by the school and state.
- Prepares course objectives and outlines, following curriculum guidelines set by the school or state.
- Administers standardized tests and interprets results to determine students' strengths and weaknesses.
- Teaches rules of conduct and maintains order.
- Counsels pupils when behavior or academic problems arise, and meets with parents when necessary.
- Adapts teaching methods and instructional materials to meet students' varying needs and interests.
- Assigns and grades class work and homework.
- Sponsors extracurricular activities such as clubs, student organizations and academic contests.



## ***EDUCATIONAL REQUIREMENTS***

The minimum educational requirement is a Bachelor's degree. All 50 states and the District of Columbia require public school teachers to be licensed. Licensure is not required for teachers in private schools in most states. Requirements for regular licenses to teach kindergarten through Grade 12 vary by state. However, all states require general education teachers to have a bachelor's degree and to have completed an approved teacher training program with a prescribed number of subject and education credits, as well as supervised practice teaching.

## ***SKILLS FOR SUCCESS***

- Social perceptiveness
- Counseling and advising people
- Love of learning

## ***FUTURE JOB OUTLOOK***

Outlook: Increasing

Job Openings: Large number

Employment: Very large occupation

Growth: Faster than average growth

## ***JOB OPPORTUNITIES***

- Special Education Teacher
- Secondary School Teacher
- Middle School Teacher
- Career and Technical Education Teacher
- Self-Enrichment Education Teacher
- Elementary Teacher

## ***SALARY RANGE***

Average Annual Wage \$51,590



## 45. TELEVISION BROADCASTING

Many individuals work together to make the finished product seen as a television broadcast. Broadcast technicians set up, operate, and maintain equipment that regulates the signal strength, clarity, and the range of sounds and colors of television broadcasts. These technicians also operate control panels to select the source of the material. Broadcast technicians may switch from one camera or studio to another, from film to live programming, or from network to local programming. Television announcers read prepared scripts or make impromptu commentary on the air, as they present news, sports, the weather, time, and commercials. If a written script is required, they may do the research and writing.

### ***EDUCATIONAL REQUIREMENTS***

Almost all announcers have a bachelor's degree in a subject such as communications, broadcasting, or journalism. Announcers usually perform unpaid internships. Announcers must work several years to move up the ladder starting as production assistants, researchers, or reporters. Broadcast technicians must attend technical school, community college, or college for broadcast technology, electronics, or computer networking. An associate degree is recommended for broadcast technicians.



### ***SKILLS FOR SUCCESS***

- Information technology skills
- Pleasant and well-controlled voice, good timing, excellent pronunciation, and correct grammar for announcers
- Neat and pleasing appearance for announcers
- Knowledge of theater, sports, music, business, politics, and other subjects likely to be covered in broadcasts

### ***FUTURE JOB OUTLOOK***

Employment of announcers is expected to moderately decline through 2016. Employment of broadcast technicians is expected to grow faster than the average for all occupations through 2016

### ***JOB OPPORTUNITIES***

- Usually work indoors in the television station or studio
- Occasionally must travel to locations of news happenings (which can be enjoyable such as sporting events or very dangerous such as hurricane coverage)

### ***SALARY RANGE***

Broadcast Technicians \$15,680-\$64,860

Television Announcers \$14,790-\$95,020



## 46. THEATER/PERFORMING ARTS

Performing Arts includes dance, music and drama. Dancers make a career out of entertaining audiences with their grace and creativity. Dance can be grouped into four categories: concert, commercial, traditional and social. Actors entertain and communicate with people through their interpretation of dramatic roles onstage, on the movie screen, on television or on the radio. Musicians work in a variety of areas. They play musical instruments, sing write songs, lead choirs, band and orchestras—and teach others to develop their musical talents.



A casting director is responsible for selecting principal actors to play roles. Playwrights take written works of real-life themes and turn them into scripts. Sometimes those scripts are adapted for movies, radio or television. Many other people are instrumental in creating a successful production. Lighting designers or technicians can choose to specialize in a number of areas, most often theater, TV or films. Costume designers plan and create clothing and accessories for all characters in a film or theater production. There are play and screenplay specialists also. They can be involved in historical research. They adapt novels for the stage or screen, translate plays

or give directors and actors advice on how to interpret a script. Make-up artists apply make-up for stage, film and television actors and models.

### ***EDUCATIONAL REQUIREMENTS***

Education training and experience are required at different levels for success in different performing arts occupations. Formal dance education is becoming more and more of a requirement for professional dancers. Dance degrees are available from many post-secondary institutions. Degree options include a bachelor of arts, bachelor of fine arts and a master of fine arts. Most musicians started singing or playing an instrument at a young age. Many go on to pursue extended training through private lessons, college or a university music program. Consider formal dramatic arts training at the college level. Workshops are also an excellent way to gain experience and are offered by smaller acting studios in most big cities. The route to becoming a make-up artist isn't clear-cut. Some people get into it through art and others fall in love with drama and get involved that way. You can take a general film or TV course or obtain a diploma from a recognized school. Courses will most likely include general instruction in make-up, but you'll also learn about all the other facets of production. Most costume designers have a bachelor's degree.

### ***SKILLS FOR SUCCESS***

- Talent
- Creativity
- Ability to engage an audience
- Ability to follow directions/lead of others

### ***FUTURE JOB OUTLOOK***

Employment in these occupations is expected to have average growth. Competition for jobs will be stiff as the number of highly trained professionals is greater than the number of roles available.

### ***JOB OPPORTUNITIES***

- Performing arts and related industries
- Motion picture and video industries
- Self-employment
- Restaurant, amusement, gambling and recreation industries
- Educational institutions

### ***SALARY RANGE***

Average Wage: \$20,440 - \$69,460 annual (not including actors)





# 47. TRANSPORTATION



Careers in transportation deal with moving goods and/or passengers from one location to another. It may require the use of automated equipment to load and unload goods. Some are involved in route sales of goods or products.

## ***EDUCATIONAL REQUIREMENTS***

These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed. Mechanics require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree. For most of these careers a special driver's license (CDL) is required to operate equipment.

## ***SKILLS FOR SUCCESS***

- Time Management
- Critical thinking
- Good driving skills
- Self motivated
- Logistical thinking

## ***JOB OPPORTUNITIES***

- Heavy and tractor trailer drivers
- Diesel mechanics
- Delivery drivers
- Heavy Equipment operators

## ***SALARY RANGE***

Average Wage: \$18.16 hourly, \$37,770 annually



## 48. VETERINARIAN/VET. ASSISTANT/ANIMAL CARE

Veterinarians care for the health of pets, livestock, and animals in zoos, racetracks, and laboratories. Most veterinarians diagnose animal health problems; vaccinate against diseases, such as distemper and rabies; medicate animals suffering from infections or illnesses; treat and dress wounds; set fractures; perform surgery; euthanize ailing animals and advise owners about animal feeding, behavior, and breeding. Veterinary technicians typically work in a private practice or animal hospital under the supervision of a veterinarian. They often perform lab tests such as urinalysis and blood counts, assist with dental prophylaxis, prepare tissue samples, take blood samples and assist veterinarians in a variety of test and analyses using a wide variety of medical equipment.



### **EDUCATIONAL REQUIREMENTS**

A Doctor of Veterinary Medicine (D.V.M. or V.M.D.) degree from a 4-year program at an accredited college of veterinary medicine is required to become a veterinarian after having completed a bachelor's degree. Two education paths are available for individuals who want to work with a veterinarian. Veterinary technicians and technologists generally complete a two-year or four-year college program. Each state regulates veterinary technicians and technologists differently, but all require them to pass a credentialing exam that includes oral, written and practical portions, and most states use the National Veterinary Technician (NVT) exam. Depending on the state, individuals passing these exams may become registered, licensed or certified.

### **SKILLS FOR SUCCESS**

- Love of animals
- Attention to detail
- Good verbal and written communication skills
- Good interpersonal skills and an ability to deal with the public
- Ability to accurately follow directions

### **FUTURE JOB OUTLOOK**

Career opportunities in this field are expected to grow quickly. Demand will grow as more affluent pet owners, become willing to pay for advanced care.

### **JOB OPPORTUNITIES**

The availability of advanced veterinary services, such as preventive dental care and surgical procedures, will provide opportunities for workers specializing in those areas.

- Biomedical facilities
- Wildlife facilities
- Animal control facilities
- Food safety inspection facilities
- Diagnostic laboratories
- Humane societies
- Drug or food manufacturing companies
- Animal Clinics

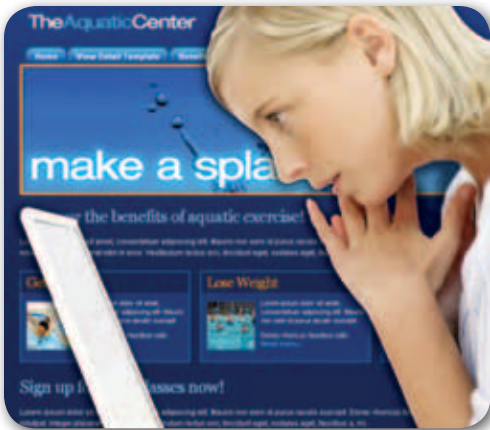
### **SALARY RANGE**

Veterinarian-average annual earnings between \$56,450 and \$94,880.

Vet assist-\$10.60 hourly, \$22,040 annually



# 49. WEB DESIGN



A company or organization's web-site is its face to the world. It takes a professional website designer to ensure that face makes a good first impression. Website designers tend to focus on one of two main areas. One is the overall design and appearance of the website. This requires a solid foundation in graphic design. The other main focus is on the development and programming side. This means writing the actual code to make the site function properly.

## ***EDUCATIONAL REQUIREMENTS***

Most web design companies require formal graphic design training. Some universities offer two-year programs, but three and four year programs are becoming the norm.

## ***SKILLS FOR SUCCESS***

- Technical skills
- Creative skills
- Must be able to work long hours

## ***FUTURE JOB OUTLOOK***

Careers in the computer field should continue to enjoy excellent job prospects. As technology becomes more sophisticated and complex, however, these positions will demand a higher level of skill and expertise from their employees. Expected growth is 37 percent from 2006 to 2016, much faster than average for all occupations.

## ***JOB OPPORTUNITIES***

- Multimedia Programs
- Graphic Arts Programs

## ***SALARY RANGE***

Average Wage: \$36.37 hourly, \$75,660 annually



# 50. WELDER/SHEET METAL WORKER

Welding is the most common way to permanently join metal parts. In this process, heat is applied to metal pieces, melting and fusing them to form a permanent bond. Because of its strength, welding is used in shipbuilding, automobile manufacturing and repair, aerospace applications and thousands of manufacturing activities.

## ***EDUCATIONAL REQUIREMENTS***

Training in welding, soldering and brazing can range from a few weeks to several years of school or on the job training. Formal training is available in high schools, vocational schools, postsecondary institutions such as vocational-technical institutes, community colleges, private welding schools and the military.

## ***SKILLS FOR SUCCESS***

- Good eyesight
- Manual dexterity
- Working knowledge of different metals
- Excellent hand-eye coordination
- Ability to read blueprints
- Good understanding of electricity principals.



## ***FUTURE JOB OUTLOOK***

Employment of welding, soldering and brazing workers is expected to grow slowly.

## ***JOB OPPORTUNITIES***

- Welding Technician
- Inspector
- Instructor
- Factory work
- Supervisor
- Own a repair shop
- Welding engineer

## ***SALARY RANGE***

Average Wage: \$17.04 hourly, \$35,450 annually



# 51. ALLIED HEALTH

## Unit Secretary/Registration Specialists, Medical Assistant, Surgical Technologist, Clerk, Medical Transcriptionist, Paramedic, Billing & Coding Specialist

### UNIT SECRETARY/REGISTRATION SPECIALIST

A unit secretary acts as a receptionist for visitors and serves as a central contact for coordinating care on the unit. A unit secretary is also responsible for electronic data entry and retrieval.

#### **EDUCATIONAL REQUIREMENTS**

Medical Terminology course and/or Medical Assistant course

#### **SKILLS FOR SUCCESS**

- Communication skills
- Organizational skills
- Attention to detail
- Interpersonal skills
- Computer skills

**SALARY RANGE** - Average Wage: \$14.68 hourly

### MEDICAL ASSISTANT/PHYSICIAN OFFICE CLINICAL ASSISTANT

A medical assistant/physician office clinical assistant assesses patients, performs treatments, administers medications (if qualified), and instructs patients and families in appropriate care as directed by provider.

#### **EDUCATIONAL REQUIREMENTS**

Careers in this field require an associates degree or diploma in medical assisting and national certification as a medical assistant or LPN.

#### **SKILLS FOR SUCCESS**

- Good communication skills
- Ability to put patients at ease
- Pleasant manner and appearance
- Respectful of confidentiality
- Manual dexterity
- Visual acuity
- Work well with others

**SALARY RANGE** - Average Wage: \$13.87 hourly

### SURGICAL TECHNOLOGIST

A surgical technologist works with the surgical team to prepare the operating room for surgery, provides technical services and assists in the operating room.

#### **EDUCATIONAL REQUIREMENTS**

Completion of a surgical technologist program and CPR certification

#### **SKILLS FOR SUCCESS**

- Conscientious
- Emotionally stable
- Familiar with operating procedures
- Manual dexterity to handle instruments quickly
- Quick response



#### **SALARY RANGE**

Average Wage: \$19.19 hourly

### MEDICAL TRANSCRIPTIONIST

Medical transcriptionists listen to dictated recordings made by physicians and other health care professionals and transcribe them into medical reports, correspondence, and other administrative material.

#### **EDUCATIONAL REQUIREMENTS**

Employers prefer to hire transcriptionists who have completed postsecondary training in medical transcription offered by many vocational schools, community colleges, and distance-learning programs. Completion of a 2-year associate degree or 1-year certificate program is highly recommended, but not always required.

#### **SKILLS FOR SUCCESS**

- Excellent understanding of medical terminology
- Good English grammar and punctuation skills
- Computer skills
- Excellent listening and hearing

#### **SALARY RANGE**

Average Wage: \$15.82 hourly

### PARAMEDIC/EMT

A paramedic responds to emergency calls and performs a variety of functions related to the care and treatment of patients suffering from urgent and emergent disease and/or injuries.

#### **EDUCATIONAL REQUIREMENTS**

A paramedic needs a high school diploma and certification as an Emergency Medical Technician- Paramedic in PA; ACLS certification and Medical Command Authorization.



#### **SKILLS FOR SUCCESS**

- Emotional stability
- Good physical coordination
- Able to lift and carry heavy loads
- Good eyesight and accurate color vision
- Good dexterity
- Desire to help others
- Compassion

#### **SALARY RANGE**

Average Wage: \$14.60 per hour

### BILLING & CODING SPECIALIST

Coding specialists assign codes to patients' medical information for insurance purposes. Each diagnosis and procedure has a specific code and these technicians must have comprehensive knowledge of disease processes. This is one of the few health care careers that there is little or no direct contact with patients.

#### **EDUCATIONAL REQUIREMENTS**

Medical records and health information technicians entering the field usually have an associate degree from a community or junior college.

#### **SKILLS FOR SUCCESS**

- Good communication skills
- Attention to detail
- Good computer skills
- Accuracy

#### **SALARY RANGE**

Average Wage: \$15.55 hourly



## 52. CHIROPRACTOR

Chiropractors diagnose and treat patients with health problems of the musculoskeletal system and treat the effects of those problems on the nervous system and on general health. Many chiropractic treatments deal specifically with the spine and the manipulation of the spine. Chiropractic medicine is based on the principle that spinal joint misalignments interfere with the nervous system and can result in lower resistance to disease and many different conditions of diminished health. The chiropractic approach to health care stresses the patient's overall health. Chiropractors provide natural, drugless, nonsurgical health treatments, relying on the body's inherent recuperative abilities. For treatment, chiropractors use a hands-on approach to adjust spinal vertebrae to relieve pressure on irritated nerves that can cause pain. They work to improve the structure of a patient's spine to create long-term relief from discomfort and pain. They may also treat their patients with massage, heat therapy, and ultrasound to restore balance to the system and they often prescribe changes in diet, exercises, or supports to aid the process.



### ***EDUCATIONAL REQUIREMENTS***

Most states require chiropractors to hold a four-year undergraduate degree (preferably in a pre-med or science field). Following an undergraduate degree, a Doctor of Chiropractic degree must be earned through a four-year advanced training program at an accredited Chiropractic institution. New chiropractors must also pass a four-part test administered by the national Board of Chiropractic Examiners. Some states also require additional testing.

### ***SKILLS FOR SUCCESS***

- Diagnostic skills
- Desire to help others
- Strong communication skills
- Must be able to work independently and handle responsibility
- Compassion and empathy
- Good listening skills
- Good dexterity

### ***FUTURE JOB OUTLOOK***

Employment of chiropractors is expected to increase faster than average - 14 % between 2006 and 2016. Projected job growth stems from increasing consumer demand for alternative health care.

### ***JOB OPPORTUNITIES***

- Chiropractic Clinics
- Private Practice
- Hospitals

### ***SALARY RANGE***

\$67,641-\$101,492



## 53. DENTIST/DENTAL HYGIENISTS

Dentists diagnose and treat problems with teeth and tissues in the mouth, along with giving advice and administering care to help prevent future problems. They provide instruction on diet, brushing, flossing, the use of fluoride and other aspects of dental care. They remove tooth decay, fill cavities, examine x-rays, place protective plastic sealants on children's teeth, straighten teeth and repair fractured teeth. They may also perform corrective surgery on gums and supporting bones to treat gum diseases. Dentists extract teeth and make models for dentures to replace missing teeth. They also administer anesthetics and write prescriptions for antibiotics and other medications. Dental hygienists remove soft and hard deposits from teeth, teach patients how to practice good oral hygiene, and provide other preventative dental care. They examine patients' teeth and gums, and using assorted tools, clean and polish teeth to remove calculus, stains and plaque. Hygienists use x-ray machines to take dental pictures, working with the dentist to identify areas of concern.



### ***EDUCATIONAL REQUIREMENTS***

Backgrounds in biology, chemistry, physics, mathematics, psychology and communication are recommended for those entering a career in dentistry. Dental schools require a minimum of two years of college-level pre-dental education. Most dental students have at least a bachelor's degree before entering dental school. All dental schools require applicants to take the Dental Admissions Test (DAT). All states require dentists to be licensed. To qualify for a license, candidates must graduate from an accredited dental school and pass written and practical examinations. A high school diploma and college entrance test scores are usually required for admission to a dental hygiene program. A minimum of an associate's degree or certificate in dental hygiene is generally required for practice in a private dental office. Dental hygienists must be licensed by the state in which they practice. Nearly all states require candidates to graduate from an accredited dental hygiene school and pass both a written and clinical examination.

### ***SKILLS FOR SUCCESS***

- Good manual dexterity
- Capacity for detailed work
- Excellent verbal communication skills
- Diagnostic ability
- Ability to work well with others
- Hand-eye coordination

### ***FUTURE JOB OUTLOOK***

Average employment growth is expected for dentists, as most openings will result from the need to replace the large numbers of dentists expected to retire. Employment of dentists is projected to grow nine percent through 2016. Employment of dental hygienists is expected to grow 30% through 2016, much faster than for all occupations.

### ***JOB OPPORTUNITIES***

- Dentist – office and clinic settings
- Dental Hygienist – office and clinic settings

### ***SALARY RANGE***

Average Wage: Dentist-\$68,990-\$212,910 annual; Dental Hygienist-\$68,250 annually



# 54. IMAGING

## Radiologic Technologist, Ultrasound Technologist, Nuclear Medicine Technologist, CT Technologist, MRI Technologist

### **RADIOLOGIC TECHNOLOGIST**

Radiographers are healthcare professionals who use radiation (x-ray) technology, computers, radiographic equipment and other imaging tools to capture images of virtually every region of the body.

#### **EDUCATIONAL REQUIREMENTS**

Must attend a two year allied health education program in radiography. Candidates must demonstrate competency in didactic course work and an ARRT specified list of clinical procedures. Also 15 college credits in general education must be completed to be eligible to take the ARRT registry examination.

**SALARY RANGE** - Average Wage: \$26.13 per hour

### **ULTRASOUND TECHNOLOGIST**

A medical sonographer/ultrasound technologist uses non-ionizing, high frequency inaudible sound waves to generate an image of a particular structure. Ultrasound also uses the speed and velocity of blood flow to diagnose vascular abnormalities.

#### **EDUCATIONAL REQUIREMENTS**

An ultrasound technologist must attend a two year allied health education program and 24 months formal ultrasound experience. Upon completion, he/she is eligible to take the registry examination.

**SALARY RANGE** - Average Wage: \$30.95 per hour

### **NUCLEAR MEDICINE TECHNOLOGIST**

Nuclear medicine uses radioactive isotopes to diagnose and treat diseases. It utilizes chemistry, physics, physiology and computer science information to provide diagnostic images and radionuclide therapy for a variety of organs in the human body.

#### **EDUCATIONAL REQUIREMENTS**

A nuclear medicine technologist must attend a two-year associates degree or four-year bachelor degree program in biology/nuclear

medicine and one-year internship at an accredited hospital. Upon completion he/she is eligible to take the registry examination.

**SALARY RANGE** - Average Wage: \$32.96 hourly

### **COMPUTER TOMOGRAPHY TECHNOLOGIST**

A computer tomography (CT) technologist is a radiologic technologist with specialized training to perform a sophisticated diagnostic procedure that uses a computer and x-rays to present cross-section "slices" of areas of the body. Computerized tomography uses radiation that passes through each cross-section in a specific way and is projected onto a detector that sends signals to a computer for processing.

### **EDUCATIONAL REQUIREMENTS**

A CT technologist must fulfill the Radiologic Technologist requirements. In addition, he/she must obtain clinical experience in CT to include an ARRT specified list of clinical procedures. Upon completion, he/she is eligible to take the CT registry examination.

**SALARY RANGE** - Average Wage: \$26.13 hourly

### **MRI TECHNOLOGIST**

An MRI technologist is a radiologic technologist with specialized training to perform a diagnostic procedure that uses a magnetic field to provide three-dimensional images of internal body structures. MRI is a computer-based cross-sectional image that provides both anatomic and physiologic information.

#### **EDUCATIONAL REQUIREMENTS**

An MRI technologist must fulfill the Radiologic Technologist requirements. In addition, an MRI tech must obtain clinical experience in MRI to include an ARRT specified list of clinical procedures. Upon completion, he/she is eligible to take the MRI registry examination.

**SALARY RANGE** - Average Wage: \$26.97 hourly



#### **SKILLS FOR SUCCESS IN IMAGING**

- Physical stamina – long periods of standing
- Sensitive to patients' physical and psychological needs
- Detail oriented
- Ability to follow instructions
- Ability to work as part of a team
- Mechanical ability to operate complicated equipment
- Manual dexterity
- Computer skills

#### **FUTURE JOB OUTLOOK IN IMAGING**

Employment of careers in imaging is expected to increase by about 15 percent from 2006 to 2016, faster than average for all occupations.

#### **JOB OPPORTUNITIES IN IMAGING**

- Hospitals
- Physicians' offices
- Medical and diagnostic laboratories
- Diagnostic imaging centers
- Outpatient care centers





# 55. MEDICAL LABORATORY

## **MEDICAL TECHNOLOGIST**

A medical technologist works with the laboratory team to ensure quality control; analyze specimens, perform chemical and/or immunological tests, and works with the rest of the health care team on matters related to laboratory services. Medical Technologists perform complex medical and clinical laboratory testing used in the detection, diagnosis and treatment of diseases. They microscopically examine blood, tissue and other body substances; make cultures of body fluid and tissue samples to determine the presence of bacteria, fungi, parasites or other microorganisms; and analyze samples for chemical content or a chemical reaction, such as determining blood glucose and cholesterol levels. They also evaluate test results, develop and modify procedures, along with establishing and monitoring programs to ensure accuracy of tests.

### **EDUCATIONAL REQUIREMENTS**

The usual requirement for an entry-level position as a medical technologist is a bachelor's degree with a major in medical technology or one of the life sciences.

#### **SKILLS FOR SUCCESS**

- Good analytical judgment
- Ability to work well under pressure
- Detail oriented

### **FUTURE JOB OUTLOOK**

Employment of clinical laboratory workers is expected to grow 14 percent between 2006 and 2016, faster than average growth for all occupations. The volume of laboratory tests continues to increase with both population growth and the development of new types of tests.

### **JOB OPPORTUNITIES**

- Hospital, private or research laboratories
- Clinics
- Physicians' offices

**SALARY RANGE** - Average Wage: \$26.98 hourly

## **PHLEBOTOMIST**

Phlebotomists are laboratory technicians who specialize in the collection of blood samples. They perform a variety of blood drawing procedures such as venipuncture using vacutainer tubes and sleeves, tourniquets, syringes and butterfly needles; prepare, process, label and store patient specimens and samples; maintain positive patient identification; and record appropriate collection information.

### **EDUCATIONAL REQUIREMENTS**

Training is available through community or junior colleges, vocational and technical schools, the military, some hospitals and some colleges and universities. Programs are one or two years in length with phlebotomy certification necessary for most jobs.

#### **SKILLS FOR SUCCESS**

- Ability to work under pressure
- Excellent communication skills
- Good manual dexterity

### **FUTURE JOB OUTLOOK**

Employment for phlebotomists is expected to grow faster than average for all occupations through the year 2014 as the volume of laboratory tests continues to increase.

### **JOB OPPORTUNITIES**

- Hospitals
- Medical and diagnostic laboratories
- Physicians offices
- Ambulatory health care services

**SALARY RANGE** - Average Wage: \$14.56 hourly



## 56. NURSING

Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) are on the front line of health care every day. They work in hospitals, clinics, private offices, nursing homes, and schools. They care for newborns, children, adults, and the elderly, providing not only for patients' physical needs, but for their mental and emotional needs as well. RNs provide oversight of health care, assess patients and analyze data. They execute medical regimens ordered by licensed practitioners such as physicians and nurse practitioners, formulate plans to meet patients' needs and ensure the plans are put into action. RNs also evaluate how plans have worked, ensure care is documented, and see that quality is maintained. They educate patients, families and communities about health promotion and disease prevention, and supervise care delivered by other health care team members. LPNs provide care under the direction of a RN, licensed physician or licensed dentist. They provide care that does not require the specialized knowledge of a RN, including but not limited to assistance with activities of daily living, administration of medications, including IV therapy, and various other technical skills, evaluate the residents' needs contribute to their plan of care and supervise the care provided by nursing assistants. LPNs assist RNs and doctors, help individuals with activities of daily living such as eating, dressing and mobility, obtain data such as temperature, blood pressure and blood sugar level and administer medication.



### ***EDUCATIONAL REQUIREMENTS***

RN - There are three major educational paths to registered nursing:

1. BSN is a bachelor's of science degree in nursing. A BSN is offered by colleges and universities and takes about 4 years to complete
2. ADN is an associate degree in nursing. ADN programs are offered by community and junior colleges and take about 2-3 years to complete.
3. Diploma programs in nursing are administered in hospitals and last about 3 years. Upon graduation from one of these programs, students must pass a national licensing examination (NCLEX-RN) to obtain a nursing license. All states require periodic renewal of licenses, which may require continuing education. LPN—All states require LPNs to pass a licensing examination, the NCLEX-PN after completing a state-approved practical nursing program. Most training programs are one year and are available through technical and vocational schools or from community and junior colleges. There are also programs offered through high schools, hospitals and colleges and universities

### ***SKILLS FOR SUCCESS***

- Compassionate, caring and sympathetic
- Responsible
- Detail oriented
- Critical Thinkers

### ***FUTURE JOB OUTLOOK***

Employment of RNs is expected to grow 23 percent from 2006 to 2016, much faster than average for all occupations. Growth in nursing fields will be driven by technological advances in patient care, increasing emphasis on preventive care, and a rapidly growing elderly population. Employment of CNAs is expected to grow 14 percent between 2006 and 2016, faster than average for all occupations, in response to the long-term care needs of an increasing elderly population and the general increase in demand for health care services.

### ***JOB OPPORTUNITIES***

- Hospitals - general medical or surgical units, intensive-care units, operating rooms, or emergency rooms
- Clinics
- Schools
- Universities
- Doctor's Offices
- Public health organizations
- Nursing homes
- Industry
- Home health care

### ***SALARY RANGE***

Registered Nurse: \$31.10 hourly, \$64,850 annually; Certified Nurses Assistant: \$11.54 hourly, \$24,040 annually



# 57. PHARMACIST

A Pharmacist is an expert on the safe and effective use of medications. They dispense prescription medications, counsel patients on the use of medications, side effects and interactions. Pharmacists also serve as a resource to physicians regarding effects of combining multiple medications and they work with patients to manage their medications effectively.

## ***EDUCATIONAL REQUIREMENTS***

Pharmacists must earn a Doctor of Pharmacy Degree (PharmD) from an accredited college or school of pharmacy. To be admitted to a PharmD program, an applicant must complete at least two years of post-secondary study, followed by at least three years of Pharmacy school. A license is required in all states. To obtain a license, a prospective pharmacist must graduate from a college of pharmacy that is accredited by the ACPE and pass both the NAPLEX (North American Pharmacist Licensure Exam), which tests pharmacy skills and knowledge, and the MPJE (Multistate Pharmacy Jurisprudence Exam) which tests state law knowledge.



## ***SKILLS FOR SUCCESS***

- Scientific and mathematical aptitude
- Good interpersonal skills
- Desire to help others
- Conscientious
- Detail-oriented
- Excellent verbal and written communication skills

## ***FUTURE JOB OUTLOOK***

Employment of pharmacists is expected to grow by 22% between 2006 and 2016, faster than the average for all occupations. An aging population will spur demand for pharmacists, as will scientific advances that will make more drug products available.

## ***JOB OPPORTUNITIES***

- Retail Drugstores
- Hospitals
- Nursing Homes
- Health Clinics
- Mail order facilities
- Government

## ***SALARY RANGE***

Average Wage: \$53.64 hourly, \$111,570 annually



## 58. PHYSICIANS/PHYSICIAN ASSISTANT

Physicians maintain or restore human health through study, diagnosis and treatment of illness or injury of patients. Primary-care physicians, including family practitioners, pediatricians and internists, are the first doctors people see for ailments. These physicians perform routine checkups, prescribe treatments and medications, visit patients in hospitals, and communicate with patients. They analyze records, reports, test results, or examination information to diagnose medical conditions of patients. Physicians also often refer patients to specialists. Most physicians specialize in a particular health-care area, such as orthopedics, cardiology, endocrinology, neurology, oncology and sports medicine. Physician assistants (PAs) practice medicine under the supervision of physicians and surgeons. They are formally trained to provide diagnostic, therapeutic and preventive health care services as delegated by a physician. Working as members of the health care team, they take medical histories, examine and treat patients, order and interpret laboratory tests and X-rays and make diagnoses. They also treat minor injuries by suturing, splinting and casting. Physician assistants record progress notes, instruct and counsel patients, and order or carry out therapy.



### ***EDUCATIONAL REQUIREMENTS***

Education and training is the same for most physicians, no matter what their specialties, up through the third year of medical school. Most applicants to medical school have a bachelor's degree. Applicants must take the Medical College Admission Test, MCAT, usually in their junior year of college. Medical schools require transcripts and might require interviews and letters of recommendation for admittance. Students should also have some experience, such as volunteering in the medical profession. Medical school graduates must take the U.S. Medical Licensing Exam. After graduation from Medical school, students spend up to seven years as residents. Board certification is required, with Board exams being administered after residency is completed or after one or two years of practice. Physician assistant programs usually last at least two years; admission requirements vary by program, but many require at least two years of college and some health care experience. All states require physician assistants to complete an accredited education program and to pass a national exam in order to obtain a license. Continuing medical education is also required.

### ***SKILLS FOR SUCCESS***

- Physical and mental stamina
- Leadership and team player skills
- Diagnostic skills
- Compassion and empathy
- Analytical thinking
- Strong oral and written communication skills
- Ability to adapt to a rapidly changing environment

### ***FUTURE JOB OUTLOOK***

Opportunities for individuals interested in becoming physicians and surgeons are expected to remain very good. Employment of physician's assistants is expected to grow much faster than average for all occupations through the year 2014, ranking among the fastest growing occupations due to anticipated expansion of the health care industry and an emphasis on cost containment.

### ***JOB OPPORTUNITIES***

- Private practice
- Clinics
- Hospitals
- Emergency rooms
- Pediatrics
- Family medicine
- Wide range of specialty areas
- General internal medicine

### ***SALARY RANGE***

Physician-Varies with specialty and experience, Family Practitioner-\$157,119 +



# 59. PSYCHOLOGISTS

Psychologists study the human mind and human behavior. Clinical psychologists help mentally and emotionally distressed clients adjust to life and may assist medical and surgical patients in dealing with illnesses or injuries. Some clinical psychologists work in physical rehabilitation settings, treating patients with spinal cord injuries, chronic pain or illness, stroke, arthritis, or neurological conditions. Others help people deal with personal crisis, such as divorce or the death of a loved one. Psychologists in health service fields provide mental health care in hospitals, clinics, schools, or private settings. Research psychologists investigate the physical, cognitive, emotional, or social aspects of human behavior.



## ***EDUCATIONAL REQUIREMENTS***

A four-year bachelor's degree, followed by a master's or doctoral degree, and license, are required for most psychologists. A doctoral degree is usually required for independent practice as a psychologist and generally requires 5 to 7 years of graduate study, culminating in a dissertation based on original research. Psychologists in independent practice or those who offer any type of patient care—including clinical, counseling, and school psychologists—must meet certification or licensing requirements in all states and the District of Columbia.

## ***SKILLS FOR SUCCESS***

- Emotional stability
- Excellent communication skills
- Ability to lead and inspire
- Patience and perseverance
- Desire to help others
- Excellent listening skills
- Sensitivity and compassion

## ***FUTURE JOB OUTLOOK***

Overall employment of psychologists is expected to grow faster than average. Job prospects should be the best for people who have a doctoral degree in an applied specialty, such as counseling or health, and those with a specialist or doctoral degree in school psychology.

## ***JOB OPPORTUNITIES***

- Counseling centers
- Universities
- Independent or group practices
- Schools
- Hospitals
- Industry
- Clinics

## ***SALARY RANGE***

Average Wage: annual range \$45,300-\$77,750



# 60. RESPIRATORY THERAPY

## RESPIRATORY THERAPIST



A Respiratory Therapist works under the direction of a physician to assist with assessment and evaluation of care and administers respiratory treatments to patients. Treatments include delivering oxygen, medicines, chest manipulation, and use of mechanical respirators. The Respiratory Therapist also samples blood, performs lung testing, and participates in cardio-pulmonary resuscitations.

### EDUCATIONAL REQUIREMENTS

High school students interested in applying to respiratory therapy programs should take courses in health, biology, mathematics, chemistry, and physics. Respiratory Care Practitioner (RCP) requires a Pennsylvania License as a Respiratory Care Practitioner. Certified Respiratory Therapist requires an associates degree or equivalency in Respiratory Therapy and successful completion of the Respiratory Care Certification examination administered by the National Board for Respiratory Care. Registered Respiratory Therapist requires a bachelor's degree or equivalency in Respiratory Therapy and successful completion of the Respiratory Care Registry examination administered by the National Board for Respiratory Care.

### SKILLS FOR SUCCESS

- Ability to pay attention to detail
- Follow instructions
- Work as part of a team
- Operate advanced equipment
- Proficiency with computers
- Compassion and caring with sensitivity to patients' needs

### FUTURE JOB OUTLOOK

Employment of respiratory therapists is expected to grow 19 percent from 2006 to 2016, faster than the average for all occupations.

### JOB OPPORTUNITIES

- Hospitals
- Nursing homes
- Home health agencies
- Doctors' offices

**SALARY RANGE** - Average Wage: \$26.10 hourly

## RESPIRATORY THERAPIST

A Sleep Technologist or Polysomnographer, performs a variety of tests and studies related to the diagnosis and treatment of sleep-related breathing disorders.

### EDUCATIONAL REQUIREMENTS

A career as a sleep technologist requires an associate's degree with certification from an accredited school in polysomnographic courses.

### SKILLS FOR SUCCESS

- Must enjoy working with people
- Willingness to work overnight hours
- Computer skills
- Excellent communication skills
- Attention to detail

**SALARY RANGE**- Average Wage: \$21.74 hourly



# 61. REHAB MEDICINE

## Physical Therapist, Physical Therapist Assistant, Occupational Therapist, Occupational Therapist Assistant, Speech Language Pathologist, Athletic Trainer, Massage Therapist

### PHYSICAL THERAPIST

A physical therapist provides services that help restore function, improve mobility and relieve pain for patients suffering from injuries or disease. They develop a treatment plan that describes treatment strategy, purpose and anticipated outcome.



### *EDUCATIONAL REQUIREMENTS*

Entry level/doctorate degree in physical therapy (6-7 years of college depending on the school) is required to become a physical therapist.

**SALARY RANGE** - Average Wage: \$36.69 hourly

### PHYSICAL THERAPY ASSISTANT

A physical therapy assistant works with patients to provide corrective exercise and treatment for patients after the physical therapist completes an evaluation and develops a treatment plan.

### *EDUCATIONAL REQUIREMENTS*

Associates degree in physical therapy assisting

**SALARY RANGE** - Average Wage: \$36.41 hourly

### OCCUPATIONAL THERAPIST

Occupational therapists help people improve their ability to perform tasks in their daily living and working environments. They work with individuals who have conditions that are mentally, physically, developmentally or emotionally disabling.

### *EDUCATIONAL REQUIREMENTS*

Entry level/masters degree in occupational therapy (5-6 years of college depending on the school) is required to become an OT.

**SALARY RANGE** - Average Wage: \$34.77 hourly

### OCCUPATIONAL THERAPY ASSISTANT (COTA)

An occupational therapy assistant works under the direction of a licensed professional to perform patient treatments and monitor patient progress toward achieving activities of daily living.

### *EDUCATIONAL REQUIREMENTS*

Associates degree in occupational therapy assisting

**SALARY RANGE** - Average Wage: \$24.52 hourly

### SPEECH LANGUAGE PATHOLOGIST

A speech language pathologist is a professional who works with individuals who have specific needs in the areas of speech and language.

### *EDUCATIONAL REQUIREMENTS*

Masters degree

**SALARY RANGE** - Average Wage: \$32.17 hourly

### ATHLETIC TRAINER

An athletic trainer provides athletic training services for schools, tournaments and organizations. Primary responsibility is patient care and safety.

### *EDUCATIONAL REQUIREMENTS*

Associates degree in athletic training

### *SALARY RANGE*

Average Wage: \$20.00 per hour

### MASSAGE THERAPIST

A massage therapist performs soft tissue manipulation utilizing nerve strokes and other Swedish movements either by hand or with mechanical or electrical apparatus, for the purpose of body massage. May include use of oil, salt glows, hot and cold packs and other recognized forms of massage therapy.



### *EDUCATIONAL REQUIREMENTS*

Certification from an accredited school of massage therapy is required to become a massage therapist.

### *SALARY RANGE*

Average Wage: \$16.72 hourly

### *SKILLS FOR SUCCESS IN REHAB MEDICINE*

- Strong interpersonal skills
- Good communication skills
- Compassion and empathy
- Desire to help others
- Patience
- Ability to inspire trust and respect of patients
- Diagnostic skills
- Ability to work independently or as a team

### *FUTURE JOB OUTLOOK IN REHAB MEDICINE*

Greater than average growth

### *JOB OPPORTUNITIES IN REHAB MEDICINE*

- Hospitals
- Clinics
- Private offices
- Homes
- Schools
- Home health care services
- Outpatient care centers
- Nursing homes





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