

# College to career:

Projected job openings in occupations that typically require a bachelor's degree



**W**hich occupations are expected to have the most jobs for college graduates? U.S. Bureau of Labor Statistics (BLS) employment projections shed light on occupations likely to have many opportunities for jobseekers who have a degree.

BLS has classified more than 150 occupations that typically require a bachelor's degree for entry. Between 2010 and 2020, these occupations are projected to have more than 8.5 million job openings. Occupations related to three groups—business, education, and computer science—account for many of these jobs.

Keep reading to learn more about prospects for moving from college to career. The first section describes unemployment and earnings by college major. The second section talks about projected job openings in occupations that typically require a bachelor's degree. The third section explains how to use this information to plan a career. And the final section gives sources for exploring further.

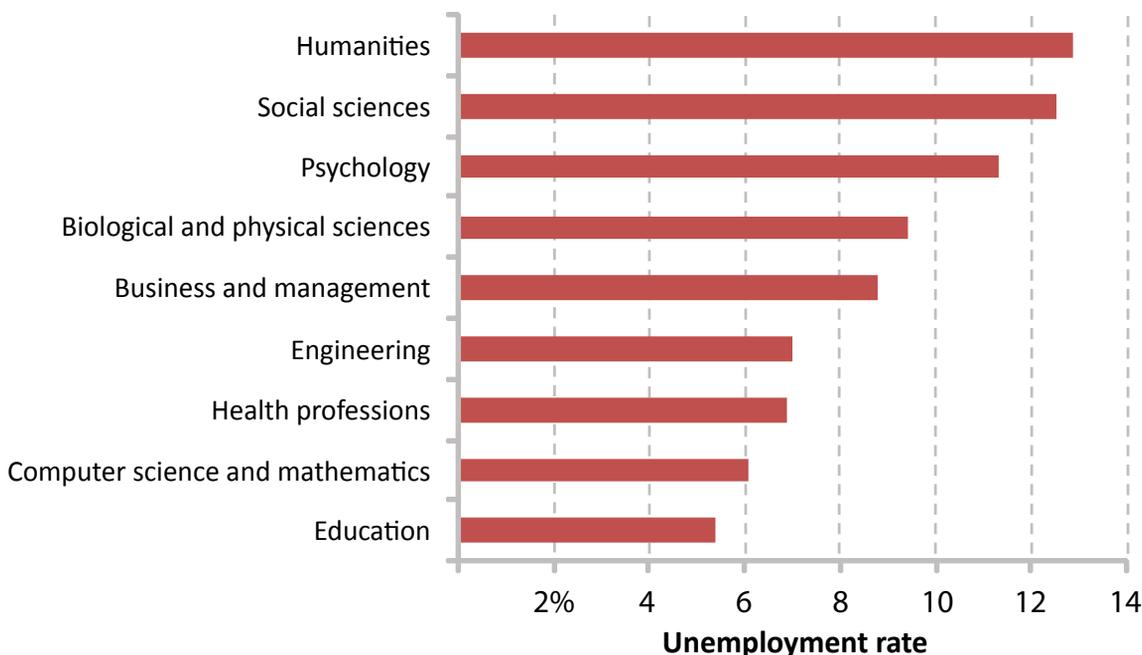
## Unemployment and earnings by college major

People with a bachelor's degree have a lower unemployment rate and earn more money than people who have less education, BLS data show. But your choice of college major can influence your employment options and earnings—and, sometimes, your ability to get a job.

Unemployment rates of recent college graduates vary by field, National Center for Education Statistics data from 2009 show. (See chart.) One year after graduation, 2007–08 bachelor's degree recipients in business, the most popular field of study, had an unemployment rate of about 9 percent. And unemployment among humanities and social science majors was almost 13 percent, more than twice the rate of their counterparts who majored in education or computer science and mathematics.

Table 1 on page 34 shows that earnings differ significantly by field. According to the

**Unemployment rates of 2007-08 graduates in 2009, one year after earning a bachelor's degree, by selected field of major**



Source: National Center for Education Statistics, Digest of Education Statistics, Table 403.

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National Association of Colleges and Employers, class of 2012 engineering graduates had the highest average annual starting salaries, at \$62,655. Humanities and social sciences graduates had average annual starting salaries that were more than \$25,000 less than that.

To enter some occupations, you typically need a bachelor's degree in a specific field. Engineers, for example, usually need a degree in engineering. For others, employers may be willing to hire people from a variety

of college majors. But having taken courses related to your occupations of interest is often helpful when looking for jobs.

## Projected job openings in bachelor's degree occupations

How can you identify which occupations that typically require a bachelor's degree are projected to have many job openings in the future? BLS classifies occupations into several education and training categories. Each occupation is assigned to the education, on-the-job training, and work experience categories that best describe a typical path for workers who want to enter the occupation.

Tables and accompanying text below give information about more than 100 bachelor's degree occupations. Occupations are grouped into eight career fields.

**Table 1: Average starting salaries of Class of 2012 graduates, by field of major**

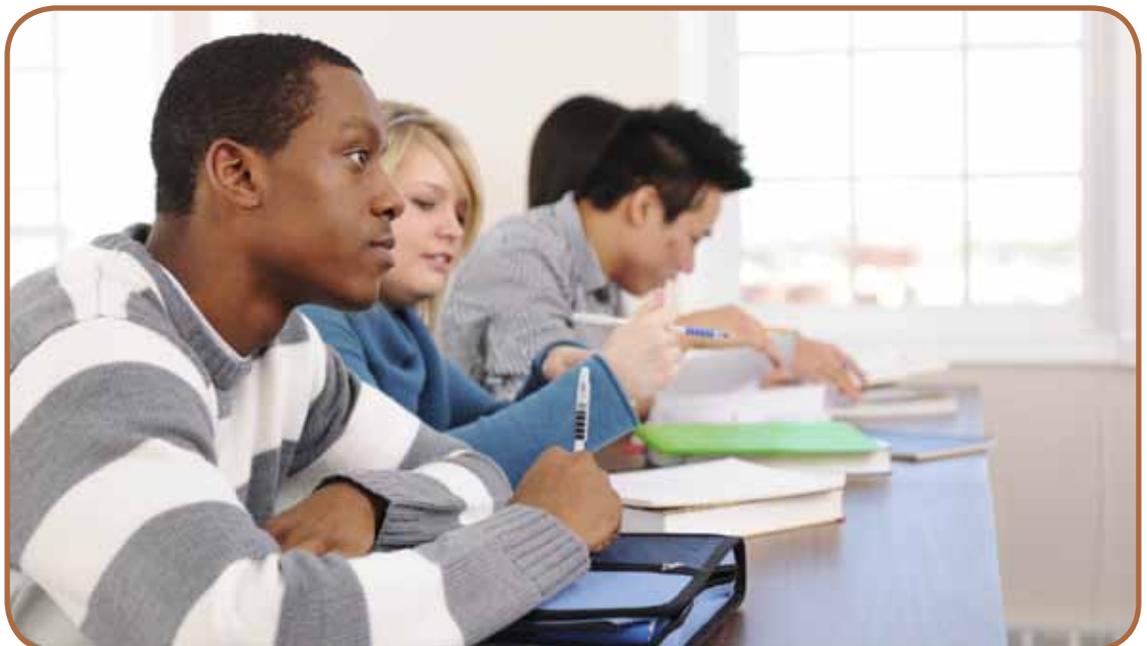
Field of major	Average starting salary
Engineering	\$62,655
Computer science	59,221
Business	53,900
Health sciences	49,196
Communications	43,717
Math and sciences	42,471
Education	40,668
Humanities and social sciences	36,988

Source: National Association of Colleges and Employers, January 2013 Salary Survey.

### What the tables show

Each table shows projected job openings, wages, and on-the-job training and work experience requirements that jobseekers typically need to enter a bachelor's degree-level occupation.

*While in college, you may find it useful to take courses related to occupations that interest you.*



**Job openings.** BLS economists project the number of job openings in an occupation by estimating the jobs expected to be available over 10 years, the most recent being between 2010 and 2020. The estimates reflect the total number of job openings expected in an occupation over the decade.

Projected openings include all jobs expected to be available in the occupation, stemming from both the need to replace workers who leave an occupation permanently and the creation of new jobs.

**Wages.** The wage data in the tables are median annual wages for May 2012. A median wage means that half of the workers in an occupation earned more than that amount, and half earned less. Recent college graduates and other entry-level workers should expect to earn less than the median wage.

Whether an occupation is considered to have a high or low wage depends on how it compares with the May 2012 median annual wage of \$34,750 for all wage and salary workers. Nearly all of the occupations in the tables had wages that were higher than the median.

**On-the-job training.** This column in the tables shows on-the-job training typically needed before workers attain competency in an occupation. The training is occupation-specific, not job-specific, meaning that the skills learned can be transferred to another job in the same occupation. And it includes technical training that workers receive after being hired.

Short-term on-the-job training lasts 1 month or less, moderate-term on-the-job training lasts between 1 and 12 months, and long-term on-the-job training lasts more than a year. Required internships or residencies, which generally involve supervised training in a professional setting, are also included in the category of on-the-job training.

**Work experience.** To enter some occupations, prospective workers first must have held a job in a related occupation. For example, art directors typically must have worked as a graphic designer, copy editor, or similar occupation before being eligible for entry-level art director jobs. Occupations that typically



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*Some occupations, such as art director, typically require work experience along with a college degree.*

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need work experience, as classified by BLS, are highlighted in the tables.

Most jobseekers benefit from having work experience. However, the occupations highlighted in the tables are those in which employers commonly consider it necessary for applicants to have experience in a related occupation.

### Occupation groups

The occupations that typically require a bachelor's degree are grouped into eight career fields. These fields are discussed in order of most projected job openings to least projected job openings for the occupations in each:

- Business, financial operations, and sales
- Education, training, and library
- Computer science and math
- Arts, media, and related
- Architecture and engineering
- Healthcare and community and social service
- Life, physical, and social science, and
- Other

Some of these career fields are associated with specific college majors. A marketing major, for example, might consider occupations in business, financial operations, or sales. An English major might be interested

**Table 2: Business, financial operations, and sales bachelor's-level occupations**

Occupation	Projected job openings, 2010–20	Median annual wage, 2012	On-the job training	Work experience
Accountants and auditors	452,100	\$63,550	None	None
Management analysts	274,300	78,600	None	1 to 5 years
Market research analysts and marketing specialists	191,800	60,300	None	None
Sales representatives, wholesale and manufacturing, technical and scientific products	159,700	74,970	Moderate-term	None
Securities, commodities, and financial services sales agents	133,700	71,720	Moderate-term	None
Financial analysts	104,200	76,950	None	None
Cost estimators	103,000	58,860	None	None
Training and development specialists	98,300	55,930	None	None
Personal financial advisors	90,200	67,520	None	None
Compliance officers	58,600	62,020	Moderate-term	None
Logisticians	48,700	72,780	None	1 to 5 years
Meeting, convention, and event planners	45,000	45,810	None	Less than 1 year
Insurance underwriters	39,100	62,870	Moderate-term	None
Sales engineers	32,100	91,830	Moderate-term	None
Credit analysts	25,900	61,080	None	None
Compensation, benefits, and job analysis specialists	24,000	59,090	None	None
Tax examiners and collectors, and revenue agents	23,000	50,440	Moderate-term	None
Budget analysts	19,600	69,280	None	None
Credit counselors	15,200	39,420	Moderate-term	None
Financial examiners	14,100	75,800	Moderate-term	None
Agents and business managers of artists, performers, and athletes	8,000	63,370	None	1 to 5 years

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).

in arts, media, and related occupations. And a social work major might find a good fit with healthcare or community and social service occupations.

These groupings by career field are based roughly on the occupation groups used in the *Occupational Outlook Handbook (OOH)*. Management occupations are discussed separately in a box on page 44.

**Business, financial operations, and sales.** Between 2010 and 2020, BLS projects about 2 million job openings in the occupations shown in table 2.

People in business, financial operations, and sales occupations usually like working with numbers or people or both. They have good organizational and analytical skills, which they use in decisionmaking and planning. And they are often detail oriented.

Of the occupations in the table, accountants and auditors and management analysts are projected to have the most job openings between 2010 and 2020. For business, financial operations, and sales occupations, the median annual wages in 2012 ranged from \$39,420 for credit counselors to \$91,830 for sales engineers.

In many of these occupations, college graduates typically can qualify for—and be competent in—entry-level jobs with a bachelor’s degree and no additional on-the-job training or work experience. Examples are financial analysts, cost estimators, and training and development specialists.

But in other occupations shown in the table, graduates usually need additional training or experience. Sales representatives, for example, often need moderate-term on-the-job training to become competent in the occupation. And meeting, convention, and event planners often need some hotel or planning experience.

**Education, training, and library.**

About 1.5 million job openings are projected between 2010 and 2020 in the occupations shown in table 3, according to BLS.

Workers in these occupations usually enjoy interacting with people. Most have good communication and instructional skills. Patience, critical thinking ability, and creativity are also important for some jobs.

Elementary and secondary school teachers are the occupations in the table projected to have the most job openings between 2010 and 2020. (Both totals exclude special education teachers, and secondary school teachers also does not include career or technical education teachers.) Median annual wages in May 2012 ranged from \$38,220 for museum technicians and conservators to \$56,830 for secondary school special education teachers.

Public school teachers must be licensed by the state in which they work. Licensure requirements vary, but supervised teaching experience (classified by BLS as an

**Table 3: Education, training, and library bachelor’s-level occupations**

Occupation	Projected job openings, 2010-20	Median annual wage, 2012	On-the-job training	Work experience
Elementary school teachers, except special education	573,200	\$53,400	Internship/residency	None
Secondary school teachers, except special and career/technical education	355,600	55,050	Internship/residency	None
Middle school teachers, except special and career/technical education	249,300	53,430	Internship/residency	None
Special education teachers, preschool, kindergarten, and elementary school	113,300	52,480 (preschool) and 53,820 (kindergarten and elementary school)	Internship/residency	None
Kindergarten teachers, except special education	79,300	50,120	Internship/residency	None
Special education teachers, secondary school	51,100	56,830	Internship/residency	None
Special education teachers, middle school	48,800	55,780	Internship/residency	None
Adult basic and secondary education and literacy teachers and instructors	26,000	48,590	Internship/residency	None
Career/technical education teachers, secondary school	25,200	55,160	Internship/residency	1 to 5 years
Career/technical education teachers, middle school	4,500	54,220	Internship/residency	1 to 5 years
Museum technicians and conservators	4,100	38,220	None	None
Audio-visual and multimedia collections specialists	2,900	43,350	None	1 to 5 years
Archivists	2,400	47,340	None	None

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).

internship/residency) is usually required. Prospective teachers often complete this requirement, commonly known as student teaching, while earning a degree.

In some education, training, and library occupations, entry-level workers typically need experience in a related occupation. Career and technical education teachers, for example, typically need 1 to 5 years of experience in the field in which they teach, so many of these teachers have had careers in business, computer science, or engineering.

*Workers in computer science occupations usually like analyzing and solving problems.*



**Computer science and math.** BLS projects the occupations in table 4 to have about 1.1 million job openings between 2010 and 2020. Most of the occupations in the table are related to computer and information technology.

People well suited for computer science and math occupations usually like analyzing and solving problems. Most have good technical ability and a strong grasp of mathematics. They also usually are detail oriented. Communication skills are important for some jobs in this group.

Between 2010 and 2020, computer systems analysts and applications software developers are projected to have the most job openings of the occupations in the table. In May 2012, median annual wages for occupations in this group ranged from \$62,500 for Web developers to \$99,000 for systems software developers.

Only one of the occupations in this table typically requires on-the-job training: actuaries. These workers must pass a series of exams to become fully competent in the occupation; many people take these exams while working as trainees in the occupation. BLS classifies this preparation as long-term on-the-job training.

**Table 4: Computer science and math bachelor's-level occupations**

Occupation	Projected job openings, 2010-20	Median annual wage, 2012	On-the-job training	Work experience
Computer systems analysts	222,500	79,680	None	None
Software developers, applications	197,900	90,060	None	None
Software developers, systems software	168,000	99,000	None	None
Network and computer systems administrators	155,300	72,560	None	None
Computer programmers	128,000	74,280	None	None
Information security analysts, Web developers, and computer network architects	110,300	86,170, 62,500, and 91,000	None	1 to 5 years
Database administrators	52,700	77,080	None	1 to 5 years
Operations research analysts	30,000	72,100	None	None
Actuaries	18,900	93,680	Long-term	None

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).

For several of the occupations in the table, prospective workers usually need experience to get an entry-level job. Database administrators, for example, typically have 1 to 5 years of experience in a related occupation such as financial analyst, market research analyst, or operations research analyst. And computer network architects usually have at least 5 to 10 years of experience working in network administration or a similar field.

**Arts, media, and related.** BLS projects about 623,000 job openings between 2010 and 2020 in the occupations shown in table 5. This group includes arts, design, entertainment, sports, and media occupations.

Workers in these occupations are generally creative and enjoy interacting with people or developing ideas. Jobs may require artistic or musical ability. Good communication skills are important for some occupations in this

group. Others jobs typically need technical or computer skills.

People interested in arts, media, and related occupations often forge their own career path by working for themselves. Writers and authors, music directors and composers, and interior designers are among the occupations with a high percentage of self-employed workers, according to BLS.

Of the occupations in the table, graphic designers and public relations specialists are projected to have the most job openings between 2010 and 2020. In May 2012, median annual wages for the occupations in this group ranged from \$28,020 for radio and television announcers to \$80,880 for art directors.

On-the-job training is important for some of the occupations in the table, including writers and authors, interpreters and translators, and multimedia artists and animators.

**Table 5: Arts, media, and related bachelor’s-level occupations**

Occupation	Projected job openings, 2010-20	Median annual wage, 2012	On-the-job training	Work experience
Public relations specialists	127,200	\$54,170	Moderate-term	None
Graphic designers	123,800	44,150	None	None
Producers and directors	49,700	71,350	None	1 to 5 years
Writers and authors	47,600	55,940	Long-term	None
Interpreters and translators	40,300	45,430	Long-term	None
Editors	37,000	53,880	None	1 to 5 years
Music directors and composers	32,200	47,350	None	1 to 5 years
Interior designers	28,400	47,600	None	None
Art directors	24,300	80,880	None	1 to 5 years
Multimedia artists and animators	21,400	61,370	Moderate-term	None
Reporters and correspondents	18,400	35,870	None	None
Technical writers	18,300	65,500	Short-term	1 to 5 years
Radio and television announcers	17,200	28,020	None	None
Commercial and industrial designers	16,900	59,610	None	None
Film and video editors	7,300	51,300	None	1 to 5 years
Camera operators, television, video, and motion picture	5,400	40,300	Moderate-term	None
Set and exhibit designers	4,800	50,300	None	None
Broadcast news analysts	3,000	55,380	None	None

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).

**Table 6: Architecture and engineering bachelor's-level occupations**

Occupation	Projected job openings, 2010-20	Median annual wage, 2012	On-the-job training	Work experience
Civil engineers	104,400	79,340	None	None
Mechanical engineers	99,600	80,580	None	None
Industrial engineers	57,500	78,860	None	None
Architects, except landscape and naval	50,900	73,090	Internship/residency	None
Electrical engineers	47,800	87,920	None	None
Electronics engineers, except computer	40,600	91,820	None	None
Surveyors	24,200	56,230	None	None
Computer hardware engineers	22,900	100,920	None	None
Environmental engineers	22,600	80,890	None	None
Aerospace engineers	21,800	103,720	None	None
Biomedical engineers	13,100	86,960	None	None
Petroleum engineers	11,800	130,280	None	None
Chemical engineers	11,400	94,350	None	None
Health and safety engineers, except mining safety engineers and inspectors	8,200	76,830	None	None
Materials engineers	8,100	85,150	None	None
Landscape architects	7,800	64,180	Internship/residency	None
Nuclear engineers	6,200	104,270	None	None
Cartographers and photogrammetrists	6,100	57,440	None	None
Marine engineers and naval architects	2,300	88,100	None	None
Mining and geological engineers, including mining safety engineers	2,000	84,320	None	None
Agricultural engineers	800	74,000	None	None

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).

For example, an entry-level public relations specialist might learn on the job by helping experienced staff members assemble information for speeches, news releases, or articles. These specialists may work in this role for 1 to 12 months before being assigned to write the products independently.

Some occupations typically require 1 to 5 years of experience in a related occupation in addition to a bachelor's degree. Producers, for example, might have experience as a business manager, assistant producer, or director.

**Architecture and engineering.** From 2010 to 2020, about 570,000 job openings are projected in the occupations shown in table 6. Most of these are engineering occupations.

People who pursue these occupations usually like math, analysis, and problem-solving. Communication, project management, creative, and technical skills are also valued in some engineering or architecture occupations. Mechanical ability and visualization skills may be required too.

Of the occupations in the table, BLS projects civil and mechanical engineers to have the most job openings between 2010 and 2020. In May 2012, median annual wages for the occupations in this group ranged from \$56,230 for surveyors to \$130,280 for petroleum engineers.

Prospective architects usually must have at least 3 years of training before they are

eligible to take the licensing exam that is required to work in the occupation. Most people meet this training requirement through an internship at an architectural firm after earning their degree, although college internships may also count toward the required time.

Some engineers, such as those who sell their services directly to the public, need a license. However, people don't typically need on-the-job training or work experience to be competent in, or to get entry-level jobs in, engineering occupations.

**Healthcare and community and social service.** The occupations in table 7 are projected to have about 533,000 job openings between 2010 and 2020.

People who do these jobs usually enjoy helping others. They need good communication and interpersonal skills. And some jobs require workers to have attributes such as critical thinking, problem-solving, or decision-making ability.

Child, family, and school social workers and clergy are the occupations in the table that BLS projects to have the most job openings from 2010 to 2020. In May 2012, median annual wages for the occupations in this table



*Most healthcare and community and social service workers enjoy helping others.*

**Table 7: Healthcare and community and social service bachelor's-level occupations**

Occupation	Projected job openings, 2010-20	Median annual wage, 2012	On-the-job training	Work experience
Child, family, and school social workers	128,300	41,530	None	None
Clergy	79,900	44,060	Moderate-term	None
Mental health and substance abuse social workers	69,400	39,980	None	None
Medical and clinical laboratory technologists	52,100	57,580	None	None
Directors, religious activities and education	44,500	37,280	None	1 to 5 years
Probation officers and correctional treatment specialists	37,300	48,190	Short-term	None
Health educators	36,900	48,790	None	None
Dietitians and nutritionists	35,400	55,240	Internship/residency	None
Occupational health and safety specialists	25,700	66,790	Moderate-term	None
Recreational therapists	11,900	42,280	None	None
Athletic trainers	11,900	42,090	None	None

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).

ranged from \$37,280 for religious activities and education directors to \$66,790 for occupational health and safety specialists.

On-the-job training is typically required in several of the occupations in the table. Probation officers and correctional treatment specialists, for example, often must complete a training program offered by their state government or the federal government and then pass a certification test. Dietitians and nutritionists typically need to complete an internship, which involves several hundred hours of supervised training; many states also require that these workers are licensed.

The only occupation in the table that usually requires experience is religious activities and education director. People in this occupation typically have worked 1 to 5 years in a related occupation, such as teacher.

***Life, physical, and social science.*** About 193,000 job openings are projected for the occupations in table 8 between 2010 and 2020.

Most of these projected job openings are in the life and physical sciences.

People in these occupations usually like researching and solving problems. They need good critical-thinking ability. Communication skills, the ability to work well as part of a team, and an aptitude for math or technical subjects are also helpful.

Of the occupations in the table, BLS projects environmental scientists and specialists, including health scientists, and biological technicians to have the most job openings between 2010 and 2020. Wages for the occupations in the table ranged from \$39,750 for biological technicians to \$91,860 for economists in May 2012.

A bachelor's degree is usually enough preparation for entry-level jobs in these occupations. An exception is forensic science technicians, who typically also need moderate-term on-the-job training.

**Table 8: Life, physical, and social science bachelor's-level occupations**

Occupation	Projected job openings, 2010-20	Median annual wage, 2012	On-the-job training	Work experience
Environmental scientists and specialists, including health	43,200	63,570	None	None
Biological technicians	37,900	39,750	None	None
Chemists	29,900	71,770	None	None
Geoscientists, except hydrologists and geographers	17,100	90,890	None	None
Survey researchers	9,900	45,050	None	None
Soil and plant scientists	8,600	58,740	None	None
Forensic science technicians	7,900	52,840	Moderate-term	None
Microbiologists	7,200	66,260	None	None
Food scientists and technologists	6,800	58,070	None	None
Zoologists and wildlife biologists	5,900	57,710	None	None
Economists	5,800	91,860	None	None
Conservation scientists	4,000	61,100	None	None
Materials scientists	3,700	88,990	None	None
Atmospheric and space scientists	2,100	89,260	None	None
Foresters	1,900	55,950	None	None
Geographers	1,300	74,760	None	None

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).

**Other occupations.** BLS projects about 197,000 job openings between 2010 and 2020 in the occupations shown in table 9. These diverse occupations include workers from farming, fishing, and forestry; legal, office and administrative support; personal care and service; and transportation occupation groups.

Necessary skills for these workers vary. Attention to detail is important for proofreaders, for example, but ship engineers need mechanical ability.

Of the occupations in the table, recreation workers and airline pilots, copilots, and flight engineers are projected to have the most job openings between 2010 and 2020. In May 2012, median annual wages for the occupations in the tables ranged from \$22,240 for recreation workers to \$114,200 for airline pilots, copilots, and flight engineers.

More than half of the occupations in the table typically require moderate-term on-the-job training. Some of these occupations also may require experience in a related occupation.

Airline pilots, for example, typically receive 6 to 8 weeks of ground school training and additional flight time from their employers after being hired. In addition, all pilots who are paid to transport passengers or cargo need a commercial pilot's license



*Airline pilots have high wages but also need work experience and on-the-job training.*

**Table 9: Other bachelor's-level occupations**

Occupation	Projected job openings, 2010-20	Median annual wage, 2012	On-the-job training	Work experience
Recreation workers	118,600	\$22,240	None	None
Airline pilots, copilots, and flight engineers	31,300	114,200	Moderate-term	1 to 5 years
Captains, mates, and pilots of water vessels	20,700	66,150	None	None
Ship engineers	6,200	70,890	None	None
Agricultural inspectors	6,000	42,160	Moderate-term	None
Statistical assistants	4,100	39,840	None	None
Administrative law judges, adjudicators, and hearing officers	3,700	87,240	Moderate-term	1 to 5 years
Proofreaders and copy markers	3,300	32,780	Moderate-term	None
Arbitrators, mediators, and conciliators	3,200	61,280	Moderate-term	1 to 5 years

Source: U.S. Bureau of Labor Statistics (job openings, Employment Projections program; median annual wages, Occupational Employment Statistics program).

and an instrument rating. These workers also typically need flight experience, such as that gained by flying planes in the military or having worked as a commercial pilot.

## How to use this information in career planning

There are many things to consider when choosing a career. In addition to data—such

as unemployment rates and projections of job openings—you should also take into account your interests and abilities, what workers in an occupation do, and more.

The projections data in this article provide information about future job openings. But for most occupations, many factors influence the job market and a college graduate's ability to get a job in it. If you complete an internship while in school, for example, you may have an advantage over jobseekers who did not.

Also keep in mind that people with a bachelor's degree can work in occupations

## Management occupations that typically require a bachelor's degree

Management occupations are often high paying—and most require a degree. But to become a manager, you'll probably need experience, too. In fact, of the management occupations that BLS classifies as typically needing a bachelor's degree, only medical and health services managers qualify for entry-level jobs without experience.

Between 2010 and 2020, BLS projects over 1 million job openings in management occupations that typically require a bachelor's degree. Of these, 15 occupations had median annual wages of more than \$80,000.

Managers usually like working with people and directing activities. Most need strong communication and interpersonal skills. Expertise related to the tasks that managers oversee is also important. For example, human resources managers usually have experience working with compensation and benefits plans, training and development, labor relations, or recruitment.

### One to 5 years of experience

The following management occupations typically require that workers have 1 to 5 years of related experience. Of these occupations, only emergency management directors usually require on-the-job training in addition to experience.

- Advertising and promotions managers
- Compensation and benefits managers
- Emergency management directors
- Human resources managers
- Industrial production managers
- Legislators
- Marketing managers
- Preschool and childcare center or program education administrators
- Public relations and fundraising managers
- Sales managers
- Social and community service managers
- Training and development managers

### More than 5 years of experience

In these management occupations, workers typically need more than 5 years of related experience:

- Architectural and engineering managers
- Chief executives
- Computer and information systems managers
- Financial managers
- Natural sciences managers
- Purchasing managers

other than those shown here. This analysis looks only at occupations that BLS classifies as typically requiring a bachelor's degree for entry. Other occupations aren't discussed because they are classified as typically needing another level of education, such as an associate's or doctoral degree.

BLS assigns occupations to education and training categories based on what economists in the Occupational Employment Projections program determine is a typical path for people to take to enter an occupation. However, many occupations have multiple paths to entry.

For example, registered nurses often have a bachelor's degree, and BLS projects more than 700,000 job openings between 2010 and 2020 for registered nurses. But BLS classifies this occupation as typically requiring an associate's degree, because analysts have determined an associate's degree to be the minimal requirement for entry-level jobs. After they are hired, many registered nurses complete additional levels of education. Jobseekers with a bachelor's degree may apply for entry-level jobs, even if applicants do not typically need more than an associate's degree, and some employers may prefer to hire candidates who have more education than what is typical.

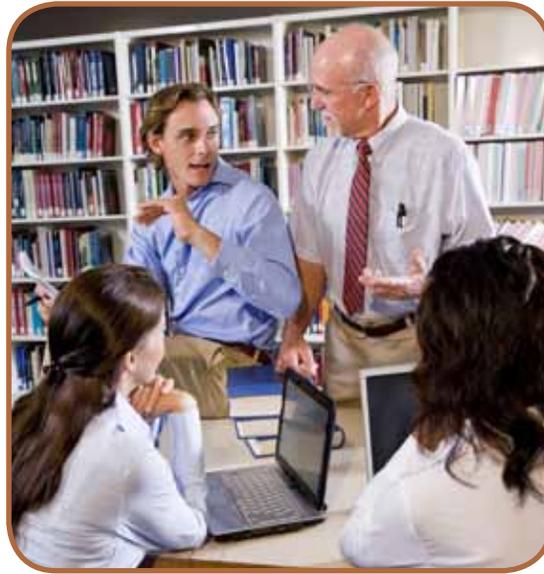
Before choosing a college major or thinking about a career, learn about occupations that interest you and identify the types of education and training commonly required. Talking to a career counselor and researching occupations are also helpful.

## For more information

The *Occupational Outlook Handbook (OOH)* is published by BLS and has lots of information about careers. Search hundreds of occupations based on entry-level education, projected number of jobs, wages, and more at [www.bls.gov/ooh](http://www.bls.gov/ooh).

Find the latest employment and wage data from the BLS Occupational Employment Statistics program at [www.bls.gov/oes](http://www.bls.gov/oes).

The education and training page on the BLS employment projections website, [www.bls.gov/emp/](http://www.bls.gov/emp/)



[ep\\_education\\_training\\_system.htm](#), has detailed information about the education and training categories presented in this article.

The *Occupational Outlook Quarterly* also has several articles related to education and training:

- “Paying for college: Strategies to afford higher education today,” in the spring 2013 issue, online at [www.bls.gov/ooq/2013/spring/art01.pdf](http://www.bls.gov/ooq/2013/spring/art01.pdf)
- “Certificates: A fast track to careers,” in the winter 2012–13 issue, online at [www.bls.gov/ooq/2012/winter/art01.pdf](http://www.bls.gov/ooq/2012/winter/art01.pdf)
- “High wages after high school—without a bachelor's degree,” in the summer 2012 issue, online at [www.bls.gov/ooq/2012/summer/art03.pdf](http://www.bls.gov/ooq/2012/summer/art03.pdf)
- “Paving the occupational path: A new system for assigning education and training,” in the fall 2011 issue, online at [www.bls.gov/ooq/2011/fall/art02.pdf](http://www.bls.gov/ooq/2011/fall/art02.pdf)

Older *Quarterly* articles explore options for business and liberal arts majors. You can find those and other college-related articles in the online index at [www.bls.gov/ooq/ooqindex.htm](http://www.bls.gov/ooq/ooqindex.htm).

State employment projections can help you to gauge an occupation's prospects near where you live. Access this information from [www.projectionscentral.com](http://www.projectionscentral.com).

