

Occupational Projections Data Definitions*

The Occupational Projections presents data on historical and projected employment by occupation, projections of separations from occupations that will result in openings for new workers, and educational and training requirements for detailed occupations. This page provides definitions for these data elements.

Employment Data Definitions

Employment. Employment information is a useful starting point for assessing opportunities, because large occupations usually have more openings than small ones have, regardless of growth or replacement needs.

Employment change, number. The numerical change in employment measures the projected number of job gains or losses.

Employment change, percent. The percent change in employment measures the projected rate of change of employment in an occupation. A rapidly growing occupation may indicate favorable prospects for employment. However, even modest employment growth in a large occupation can result in many more job openings due to growth than openings resulting from rapid employment growth in a small occupation.

Median annual wages. These are data on median annual wages for wage and salary employees in each occupation.

Separations Data Definitions

Occupational openings. Occupational openings are the projected number of openings (positions) for workers entering the occupation. Defined as the sum of net occupational employment change and occupational separations. Workers who change jobs within an occupation do not generate openings since there is no net change in openings from this movement.

Occupational separations. Occupational separations are the projected number of workers permanently leaving an occupation. Defined as the sum of labor force exits and occupational transfers. In most occupations, separations result in openings for new workers to enter the occupation, but in declining occupation, not all separations result in openings.

Labor force exits. Labor force exits are the projected number of workers leaving an occupation and exiting the labor force entirely. Labor force exits are more common at older ages as workers retire, but can occur at any age. Labor force exits are not necessarily permanent exits from the labor force; for example, some workers exit the labor force to pursue additional education with the intention of returning to the labor force. They do represent permanent separations from an occupation.

Occupational transfers. Occupational transfers are the projected number of workers leaving an occupation and transferring to a different occupation. Transfers represent permanent separations from an occupation, not temporary movements where the worker is expected to return to the same occupation in the future.

Education and Training Data Definitions

The Bureau of Labor Statistics (BLS) education and training classification system consists of three categories of information that BLS have assigned to each detailed occupation. The categories are: 1) typical education needed for entry, 2) commonly required work experience in a related occupation, and 3) typical on-the-job training needed to obtain competency in the occupation. Each category and its related choice selections are defined below.

Typical education needed for entry. This category best describes the typical level of education that most workers need to enter the occupation. Occupations are assigned one of the following eight education levels:

Doctoral or professional degree. Completion of a doctoral degree (Ph.D.) usually requires at least 3 years of full-time academic work beyond a bachelor's degree. Completion of a professional degree usually requires at least 3 years of full-time academic study beyond a bachelor's degree. Examples of occupations for which a doctoral or professional degree is the typical form of entry-level education include lawyers, physicists, and dentists.

Master's degree. Completion of this degree usually requires 1 or 2 years of full-time academic study beyond a bachelor's degree. Examples of occupations in this category include statisticians, physician assistants, and educational, guidance, school, and vocational counselors.

Bachelor's degree. Completion of this degree generally requires at least 4 years, but not more than 5 years, of full-time academic study beyond high school. Examples of occupations in this category include budget analysts, dietitians and nutritionists, and civil engineers.

Associate's degree. Completion of this degree usually requires at least 2 years but not more than 4 years of full-time academic study beyond high school. Examples of occupations in this category include mechanical drafters, respiratory therapists, and dental hygienists.

Postsecondary nondegree award. These programs lead to a certificate or other award, but not a degree. The certificate is awarded by the educational institution and is the result of completing formal postsecondary schooling. Certification, issued by a professional organization or certifying body, is not included here. Some postsecondary nondegree award programs last only a few weeks, while others may last 1 to 2 years. Examples of occupations in this category include nursing assistants, emergency medical technicians (EMT's) and paramedics, and hairstylists.

Some college, no degree. This category signifies the achievement of a high school diploma or equivalent plus the completion of one or more postsecondary courses that did not result in a degree or award. An example of an occupation in this category is actors.

High school diploma or equivalent. This category indicates the completion of high school or an equivalent program resulting in the award of a high school diploma or an equivalent, such as the General Education Development (GED) credential. Examples of occupations in this category include social and human service assistants, carpenters, and pharmacy technicians.

No formal educational credential. This category signifies that a formal credential issued by an educational institution, such as a high school diploma or postsecondary certificate, is not typically needed for entry into the occupation. Examples of occupations in this category include janitors and cleaners, cashiers, and agricultural equipment operators.

Work experience in a related occupation. For some occupations, work experience in a related occupation may be a typical method of entry. The majority of occupations in this category are first-line supervisors of service, sales, and production occupations or managers of all occupations. Although work experience in a related occupation is beneficial for all occupations, this metric captures work experience that is commonly considered necessary by employers, or is a commonly accepted substitute for other, more formal types of training or education. Occupations are assigned one of the following three categories that deal with length of time spent gaining related work experience:

5 years or more. This is assigned to occupations if 5 or more years of work experience in a related occupation is typically needed for entry. Examples include financial managers and computer and information systems managers.

Less than 5 years. To enter occupations in this category, workers typically need less than 5 years of work experience in a related occupation. Examples include food service managers and information security analysts.

None. No work experience in a related occupation is typically needed. Examples are audiologists and actuaries.

Typical on-the-job training needed to attain competency in the occupation. This category encompasses any additional training or preparation that is typically needed, once employed in an occupation, to attain competency in the skills needed in that occupation. Training is occupation-specific rather than job-specific; skills learned can be transferred to another job in the same occupation. Occupations are assigned one of the following six training categories:

Internship/residency. An internship or residency is a formal period of training during which individuals work under the supervision of experienced workers in a professional setting, such as a hospital. Internships and residencies occur after the completion of a formal postsecondary degree program and generally are required for state licensure or certification in fields including medicine, counseling, and architecture. During an internship or residency, trainees may be restricted from independently performing all of the functions of the occupation. Examples of occupations in the internship or residency category include physicians and surgeons and marriage and family therapists. This category does not include internships that are suggested for advancement in one's career, such as a marketing internship, or internships that take place as part of a formal degree program.

Apprenticeship. An apprenticeship is a formal relationship between a worker and sponsor that consists of a combination of on-the-job training and related occupation-specific technical instruction in which the worker learns the practical and theoretical aspects of an occupation. Apprenticeship programs are sponsored by individual employers, joint employer-and-labor groups, and employer associations. The typical apprenticeship program provides at least 144 hours of occupation-specific technical instruction and 2,000 hours of on-the-job training per year, over a 3- to 5-year period. Examples of occupations in the apprenticeship category include electricians and structural iron and steel workers.

Long-term on-the-job training. More than 12 months of on-the-job training or, alternatively, combined work experience and formal classroom instruction, is needed for workers to develop the skills to attain competency. Training is occupation-specific rather than job-specific; therefore, skills learned can be transferred to another job in the same occupation. This on-the-job training category also includes

employer-sponsored training programs. Such programs include those offered by fire academies and schools for air traffic controllers. In other occupations—nuclear power reactor operators, for example—trainees take formal courses, often provided at the jobsite, to prepare for the required licensing exams. Also included in the long-term on-the-job training category are occupations in which workers typically need to possess a natural ability or talent—including musicians and singers, athletes, dancers, photographers, and actors—and that ability or talent must be cultivated over several years, sometimes in a nonwork setting. This category excludes apprenticeships. Examples of occupations in the long-term on-the-job training category include opticians, dancers, and power plant operators.

Moderate-term on-the-job training. More than 1 month and up to 12 months of combined on-the-job experience and informal training is needed for workers to develop the skills needed to attain competency. Training is occupation-specific rather than job-specific; therefore, skills learned can be transferred to another job in the same occupation. This on-the-job training category also includes employer-sponsored training programs. Examples of occupations in the moderate-term on-the-job training category include transit and intercity bus drivers and advertising sales agents.

Short-term on-the-job training. The skills needed for a worker to attain competency in an occupation can be acquired during 1 month or less of on-the-job experience and informal training. Training is occupation-specific rather than job-specific; therefore, skills learned can be transferred to another job in the same occupation. This on-the-job training category also includes employer-sponsored training programs. Examples of occupations in the short-term on-the-job training category include retail salespersons and maids and housekeeping cleaners.

None. There is no additional occupation-specific training or preparation typically required to attain competency in the occupation. Examples of occupations that do not require occupation-specific on-the-job training include geographers and pharmacists.

*Source: US Bureau of Labor Statistics, Employment Projections.