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EMPLOYMENT PROJECTIONS — 2012-2022

Occupations and industries related to healthcare are projected to add the most new jobs between 2012 and 2022, the U.S. Bureau of Labor Statistics (BLS) reported today. Total employment is projected to increase 10.8 percent, or 15.6 million, during the decade.

In addition to projecting employment for each detailed occupation, BLS depicts the education, related work experience, and on-the-job training typically needed for occupations. Occupations that typically require postsecondary education for entry are expected, on average, to grow faster than occupations that require a high school diploma or less.

This news release focuses on several areas of projections data: labor force and the aggregate economy, industry employment, occupation employment, education and training, and replacement needs.

Labor force and the aggregate economy

Projections of the labor force and the aggregate economy serve as the basis for employment projections. Slower projected growth in the civilian noninstitutional population and declining labor force participation rates limit growth in the labor force, which in turn limits economic growth.

- The labor force is projected to grow 0.5 percent per year from 2012 to 2022, compared with an annual growth rate of 0.7 percent during the 2002-12 decade. Due to the aging baby-boom generation, workers ages 55 and older are expected to make up over one-quarter of the labor force in 2022. (See table 1.)
- Projected declines in the labor force participation rates for both men and women are expected to slow labor force growth. The overall labor force participation rate is projected to decline from 63.7 percent in 2012 to 61.6 percent in 2022, continuing the trend from the past decade. (See table 2.)
- Slower labor force growth is expected to limit potential economic growth. Gross domestic product (GDP) is projected to increase by 2.6 percent annually from 2012 to 2022, slower than the 3 percent or higher rate often posted from the mid-1990s through mid-2000s.

Chart 1. Projected annual employment rate of change by major industry sector, 2012-22

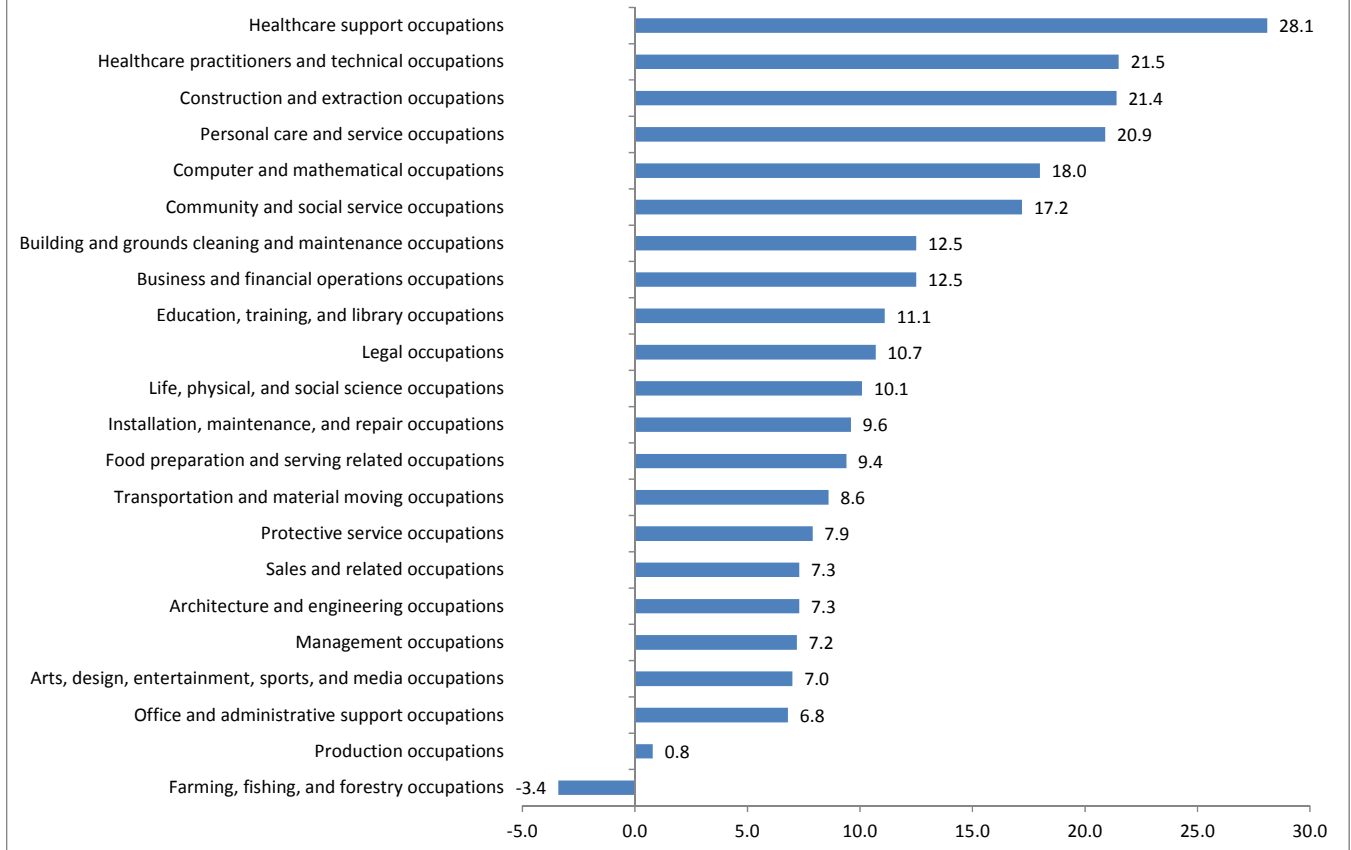


Industry employment

BLS analyzes future demand for different types of goods and services, and then projects the employment necessary to produce them. Most of the 10.8 percent employment growth is projected to be in service-providing industries.

- The health care and social assistance sector is projected to grow at an annual rate of 2.6 percent, adding 5.0 million jobs between 2012 and 2022. This accounts for nearly one-third of the total projected increase in jobs. The growth reflects, in part, the demand for healthcare workers to address the needs of an aging population. (See table 3 and chart 1.)
- Employment in the construction sector is projected to grow 2.6 percent annually. This equates to 1.6 million new jobs over the 2012-22 decade, the most among goods-producing sectors and third most among all major industry sectors. (See table 3 and chart 1.) Despite expected fast growth, construction sector employment in 2022 is projected to be below the peak level (7.7 million; 2006).
- Five industry sectors are projected to have decreases in employment: manufacturing (-549,500); federal government (-407,500); agriculture, forestry, fishing, and hunting (-223,500); information (-65,200); and utilities (-56,400). (See table 3.)

Chart 2. Projected rate of employment change by major occupational group, 2012-22



Occupation employment

Projected industry employment is distributed among occupations based on how industries are expected to use those occupations.

- Of the 30 occupations projected to have the largest percentage increase between 2012 and 2022, 14 are related to healthcare and 5 are related to construction. (See table 4.)
- The 30 occupations with the largest projected increase in employment from 2012 to 2022 will account for 7.4 million new jobs, almost half of the total projected employment growth. (See table 5.)
- Four major occupational groups are projected to grow more than 20 percent—nearly double the overall growth—from 2012 to 2022: healthcare support occupations (28.1 percent), healthcare practitioners and technical occupations (21.5 percent), construction and extraction occupations (21.4 percent), and personal care and service occupations (20.9 percent). (See table 6 and chart 2.)
- Every major occupational group except farming, fishing, and forestry occupations is projected to gain jobs between 2012 and 2022. (See table 6 and chart 2.)

Education and training

In addition to projecting employment for each detailed occupation, BLS depicts the education, related work experience, and on-the-job training typically needed for occupations.

- Nineteen of the 30 occupations projected to grow fastest from 2012 to 2022 typically require some form of postsecondary education for entry. (See table 4.)
- Two-thirds of the 30 occupations with the largest projected employment increase from 2012 to 2022 typically do not require postsecondary education for entry. (See table 5.)
- Occupations typically requiring postsecondary education for entry generally had higher median wages (\$57,770) in 2012 and are projected to grow faster (14.0 percent) between 2012 and 2022 than occupations that typically require a high school diploma or less (\$27,670 and 9.1 percent). (See table 7.)
- Occupations that do not typically require postsecondary education are projected to add 8.8 million jobs between 2012 and 2022, accounting for more than half of all new jobs. These occupations employed nearly two-thirds of workers in 2012. (See table 7.)
- Occupations that typically require an apprenticeship are projected to grow 22.2 percent from 2012 to 2022, faster than any other on-the-job training assignment. (See table 7.)

Replacement needs

Employment growth is not the only source of job openings. BLS also projects job openings resulting from the need to replace workers who retire or otherwise permanently leave an occupation. Job openings due to replacement needs are expected in every occupation, even in those projected to decline in employment.

- Over the 2012-22 decade, 50.6 million total job openings are expected. While growth will lead to many openings, more than two-thirds—67.2 percent—are projected to come from replacement needs.
- In more than 4 out of 5 occupations, openings from replacement needs are projected to exceed openings from growth.
- Nearly two-thirds of all job openings are expected to be in occupations that typically do not require postsecondary education for entry. (See table 7.)
- Twenty-two of the 30 occupations with the largest number of projected job openings are classified as not typically requiring postsecondary education. (See table 8.)

More information

The BLS projections are used by high school students and their teachers and parents, college students, career changers, and career development and guidance specialists. The projections are the foundation of the BLS *Occupational Outlook Handbook*, one of the nation's most widely used career information resources. The projections are also used by state workforce agencies to prepare state and area projections

that, together with the national projections, are widely used by policymakers and education and training officials to make decisions about education and training policy, funding, and program offerings. In addition, other federal agencies, researchers, and academics use the projections to understand trends in the economy and labor market. New projections are released every 2 years.

More detailed information on the 2012-22 projections appears in five articles in the *Monthly Labor Review*. Links to these articles are available at www.bls.gov/emp/publications.htm.

Tables with projections data, including but not limited to what was highlighted in this release, are available online at www.bls.gov/emp/tables.htm. Detailed information about the projections methods is available at www.bls.gov/emp/ep_projections_methods.htm. More information about the education and training system is available at www.bls.gov/emp/ep_education_training_system.htm.

A graphic representation of projections highlights appears in the Winter 2013-14 issue of the *Occupational Outlook Quarterly*, available online at www.bls.gov/ooq.

The 2014-15 edition of the *Occupational Outlook Handbook (OOH)* will feature the 2012-22 projections. The *OOH* includes information about work activities, wages, education and training requirements, job outlook, and more for 580 detailed occupations in 334 profiles. The updated *OOH* will be available online on January 8, 2014, at www.bls.gov/ooh.

Information from this release will be made available to sensory impaired individuals upon request. Voice phone: (202) 691-5200; Federal Relay Services: (800) 877-8339.

Table 1. Civilian labor force by age, sex, race, and ethnicity, 1992, 2002, 2012, and projected 2022

[Numbers in thousands]

Group	Level				Change			Percent change			Percent distribution				Annual growth rate (percent)		
	1992	2002	2012	2022	1992-2002	2002-2012	2012-2022	1992-2002	2002-2012	2012-2022	1992	2002	2012	2022	1992-2002	2002-2012	2012-2022
Total, 16 years and older	128,105	144,863	154,975	163,450	16,758	10,112	8,475	13.1	7.0	5.5	100.0	100.0	100.0	100.0	1.2	0.7	0.5
Age, years:																	
16 to 24	21,617	22,366	21,285	18,462	749	-1,081	-2,823	3.5	-4.8	-13.3	16.9	15.4	13.7	11.3	0.3	-0.5	-1.4
25 to 54	91,429	101,720	101,253	103,195	10,292	-467	1,942	11.3	-0.5	1.9	71.4	70.2	65.3	63.1	1.1	-0.0	0.2
55 and older	15,060	20,777	32,437	41,793	5,717	11,660	9,356	38.0	56.1	28.8	11.8	14.3	20.9	25.6	3.3	4.6	2.6
Sex:																	
Men	69,964	77,500	82,327	86,913	7,536	4,827	4,586	10.8	6.2	5.6	54.6	53.5	53.1	53.2	1.0	0.6	0.5
Women	58,141	67,364	72,648	76,537	9,223	5,284	3,889	15.9	7.8	5.4	45.4	46.5	46.9	46.8	1.5	0.8	0.5
Race:																	
White	108,837	120,150	123,684	126,923	11,313	3,534	3,239	10.4	2.9	2.6	85.0	82.9	79.8	77.7	1.0	0.3	0.3
Black	14,162	16,565	18,400	20,247	2,403	1,835	1,847	17.0	11.1	10.0	11.1	11.4	11.9	12.4	1.6	1.1	1.0
Asian	5,106	6,604	8,188	10,135	1,498	1,584	1,947	29.3	24.0	23.8	4.0	4.6	5.3	6.2	2.6	2.2	2.2
All other groups ¹	-	1,544	4,703	6,145	-	3,159	1,442	-	204.6	30.7	-	1.1	3.0	3.8	-	11.8	2.7
Ethnicity:																	
Hispanic origin	11,338	17,943	24,391	31,179	6,605	6,448	6,788	58.3	35.9	27.8	8.9	12.4	15.7	19.1	4.7	3.1	2.5
Other than Hispanic origin	116,767	126,920	130,584	132,271	10,153	3,664	1,687	8.7	2.9	1.3	91.1	87.6	84.3	80.9	0.8	0.3	0.1
White non-Hispanic	98,724	103,349	101,892	99,431	4,625	-1,457	-2,461	4.7	-1.4	-2.4	77.1	71.3	65.7	60.8	0.5	-0.1	-0.2
Age of baby boomers	28 to 46	38 to 56	48 to 66	58 to 76													

¹ The "all other groups" category includes (1) those classified as being of multiple racial origin and (2) the race categories of (2a) American Indian and Alaska Native and (2b) Native Hawaiian and Other Pacific Islanders.

Note: Dash indicates no data collected for category. Details may not sum to totals because of rounding.

Table 2. Civilian labor force participation rates by age, sex, race, and ethnicity, 1992, 2002, 2012, and projected 2022

[In percent]

Group	Participation rate				Percentage-point change			Annual growth rate		
	1992	2002	2012	2022	1992-2002	2002-2012	2012-2022	1992-2002	2002-2012	2012-2022
Total, 16 years and older	66.4	66.6	63.7	61.6	0.2	-2.9	-2.1	0.0	-0.4	-0.3
Age, years:										
16 to 24	66.1	63.3	54.9	49.6	-2.9	-8.4	-5.3	-0.4	-1.4	-1.0
25 to 54	83.6	83.3	81.4	81.0	-0.3	-1.9	-0.4	-0.0	-0.2	-0.1
55 and older	29.7	34.5	40.5	41.5	4.9	6.0	1.0	1.5	1.6	0.3
Sex:										
Men	75.8	74.1	70.2	67.6	-1.7	-3.9	-2.6	-0.2	-0.5	-0.4
Women	57.8	59.6	57.7	56.0	1.8	-1.9	-1.7	0.3	-0.3	-0.3
Race:										
White	66.8	66.8	64.0	61.7	0.0	-2.8	-2.3	0.0	-0.4	-0.4
Black	63.9	64.8	61.5	59.8	0.9	-3.3	-1.7	0.1	-0.5	-0.3
Asian	66.5	67.2	63.9	63.2	0.7	-3.3	-0.7	0.1	-0.5	-0.1
All other groups ¹	-	-	63.9	63.2	-	-	-0.7	-	-	-
Ethnicity:										
Hispanic origin	66.8	69.1	66.4	65.9	2.3	-2.7	-0.5	0.3	-0.4	-0.1
Other than Hispanic origin	66.4	66.2	63.2	60.7	-0.2	-3.0	-2.5	-0.0	-0.5	-0.4
White non-Hispanic	66.7	66.5	63.5	60.8	-0.2	-3.0	-2.7	-0.0	-0.5	-0.4

¹ The "all other groups" category includes (1) those classified as being of multiple racial origin and (2) the race categories of (2a) American Indian and Alaska Native and (2b) Native Hawaiian and Other Pacific Islanders.

Note: Dash indicates no data collected for category. Details may not sum to totals because of rounding.

Table 3. Employment by major industry sector, 2002, 2012, and projected 2022

Industry sector	Thousands of jobs			Change		Percent distribution			Annual growth rate (percent)	
	2002	2012	2022	2002- 2012	2012- 2022	2002	2012	2022	2002- 2012	2012- 2022
Total ¹	142,294.9	145,355.8	160,983.7	3,060.9	15,627.9	100.0	100.0	100.0	0.2	1.0
Nonagriculture wage and salary ²	131,028.3	134,427.6	149,751.3	3,399.3	15,323.7	92.1	92.5	93.0	0.3	1.1
Goods-producing, excluding agriculture	22,486.7	18,360.3	19,554.2	-4126.4	1,193.9	15.8	12.6	12.1	-2.0	0.6
Mining	512.3	800.5	921.7	288.2	121.2	0.4	0.6	0.6	4.6	1.4
Construction	6,715.7	5,640.9	7,263.0	-1074.8	1,622.1	4.7	3.9	4.5	-1.7	2.6
Manufacturing	15,258.7	11,918.9	11,369.4	-3339.8	-549.5	10.7	8.2	7.1	-2.4	-0.5
Services-providing	108,541.6	116,067.3	130,197.1	7,525.7	14,129.8	76.3	79.9	80.9	0.7	1.2
Utilities	596.3	554.2	497.8	-42.1	-56.4	0.4	0.4	0.3	-0.7	-1.1
Wholesale trade	5,652.4	5,672.8	6,143.2	20.4	470.4	4.0	3.9	3.8	0.0	0.8
Retail trade	15,025.1	14,875.3	15,966.2	-149.8	1,090.9	10.6	10.2	9.9	-0.1	0.7
Transportation and warehousing	4,223.8	4,414.7	4,742.0	190.9	327.3	3.0	3.0	2.9	0.4	0.7
Information	3,394.6	2,677.6	2,612.4	-717.0	-65.2	2.4	1.8	1.6	-2.3	-0.2
Financial activities	7,847.1	7,786.3	8,537.3	-60.8	751.0	5.5	5.4	5.3	-0.1	0.9
Professional and business services	15,976.2	17,930.2	21,413.0	1,954.0	3,482.8	11.2	12.3	13.3	1.2	1.8
Educational services	2,642.8	3,346.9	4,022.2	704.1	675.3	1.9	2.3	2.5	2.4	1.9
Health care and social assistance	13,555.6	16,971.8	21,965.9	3,416.2	4,994.1	9.5	11.7	13.6	2.3	2.6
Leisure and hospitality	11,986.0	13,745.8	15,035.0	1,759.8	1,289.2	8.4	9.5	9.3	1.4	0.9
Other services	6,129.0	6,174.5	6,823.4	45.5	648.9	4.3	4.2	4.2	0.1	1.0
Federal government	2,766.0	2,814.0	2,406.5	48.0	-407.5	1.9	1.9	1.5	0.2	-1.6
State and local government	18,746.7	19,103.2	20,032.2	356.5	929.0	13.2	13.1	12.4	0.2	0.5
Agriculture, forestry, fishing, and hunting ³	2,245.4	2,112.7	1,889.2	-132.7	-223.5	1.6	1.5	1.2	0.6	-1.1
Agriculture wage and salary	1,217.4	1,306.9	1,281.8	89.5	-25.1	0.9	0.9	0.8	0.7	-0.2
Agriculture self-employed and unpaid family workers	1,028.0	805.8	607.4	-222.2	-198.4	0.7	0.6	0.4	-2.4	-2.8
Nonagriculture self-employed and unpaid family workers	9,021.2	8,815.5	9,343.2	-205.7	527.7	6.3	6.1	5.8	-0.2	0.6

¹ Employment data for wage and salary workers are from the BLS Current Employment Statistics survey, which counts jobs, whereas self-employed, unpaid family workers, and agriculture, forestry, fishing, and hunting are from the Current Population Survey (household survey), which counts workers.

² Includes wage and salary data from the Current Employment Statistics survey, except private households, which is from the Current Population Survey. Logging workers are excluded.

³ Includes agriculture, forestry, fishing, and hunting data from the Current Population Survey, except logging, which is from Current Employment Statistics survey. Government wage and salary workers are excluded.

Table 4. Fastest growing occupations, 2012 and projected 2022

[Employment in thousands]

2012 National Employment Matrix title	Employment		Change, 2012-22		Median annual wage, 2012 ¹	Typical education needed for entry	Work experience in a related occupation	Typical on-the-job training needed to attain competency in the occupation
	2012	2022	Number	Percent				
Total, all occupations	145,355.8	160,983.7	15,628.0	10.8	\$34,750	N/A	N/A	N/A
Industrial-organizational psychologists	1.6	2.5	0.9	53.4	83,580	Master's degree	None	Internship/residency
Personal care aides	1,190.6	1,771.4	580.8	48.8	19,910	Less than high school	None	Short-term on-the-job training
Home health aides	875.1	1,299.3	424.2	48.5	20,820	Less than high school	None	Short-term on-the-job training
Insulation workers, mechanical	28.9	42.4	13.5	46.7	39,170	High school diploma or equivalent	None	Apprenticeship
Interpreters and translators	63.6	92.9	29.3	46.1	45,430	Bachelor's degree	None	Short-term on-the-job training
Diagnostic medical sonographers	58.8	85.9	27.0	46.0	65,860	Associate's degree	None	None
Helpers--brickmasons, blockmasons, stonemasons, and tile and marble setters	24.4	34.9	10.5	43.0	28,220	Less than high school	None	Short-term on-the-job training
Occupational therapy assistants	30.3	43.2	12.9	42.6	53,240	Associate's degree	None	None
Genetic counselors	2.1	3.0	0.9	41.2	56,800	Master's degree	None	None
Physical therapist assistants	71.4	100.7	29.3	41.0	52,160	Associate's degree	None	None
Physical therapist aides	50.0	70.1	20.1	40.1	23,880	High school diploma or equivalent	None	Short-term on-the-job training
Skincare specialists	44.4	62.0	17.7	39.8	28,640	Postsecondary non-degree award	None	None
Physician assistants	86.7	120.0	33.3	38.4	90,930	Master's degree	None	None
Segmental pavers	1.8	2.4	0.7	38.1	33,720	High school diploma or equivalent	None	Moderate-term on-the-job training
Helpers--electricians	60.8	83.3	22.4	36.9	27,670	High school diploma or equivalent	None	Short-term on-the-job training
Information security analysts	75.1	102.5	27.4	36.5	86,170	Bachelor's degree	Less than 5 years	None
Occupational therapy aides	8.4	11.4	3.0	36.2	26,850	High school diploma or equivalent	None	Short-term on-the-job training
Health specialties teachers, postsecondary	190.0	258.6	68.6	36.1	81,140	Doctoral or professional degree	Less than 5 years	None
Medical secretaries	525.6	714.9	189.2	36.0	31,350	High school diploma or equivalent	None	Moderate-term on-the-job training
Physical therapists	204.2	277.7	73.5	36.0	79,860	Doctoral or professional degree	None	None
Orthotists and prosthetists	8.5	11.5	3.0	35.5	62,670	Master's degree	None	Internship/residency
Brickmasons and blockmasons	71.0	96.2	25.2	35.5	46,440	High school diploma or equivalent	None	Apprenticeship
Nursing instructors and teachers, postsecondary	67.8	91.8	24.0	35.4	64,850	Master's degree	Less than 5 years	None
Nurse practitioners	110.2	147.3	37.1	33.7	89,960	Master's degree	None	None
Audiologists	13.0	17.3	4.3	33.6	69,720	Doctoral or professional degree	None	None
Dental hygienists	192.8	256.9	64.2	33.3	70,210	Associate's degree	None	None
Meeting, convention, and event planners	94.2	125.4	31.3	33.2	45,810	Bachelor's degree	None	None
Therapists, all other	28.8	37.9	9.1	31.7	53,210	Bachelor's degree	None	None
Market research analysts and marketing specialists	415.7	547.2	131.5	31.6	60,300	Bachelor's degree	None	None
Substance abuse and behavioral disorder counselors	89.6	117.7	28.2	31.4	38,520	High school diploma or equivalent	None	Moderate-term on-the-job training

¹ Data are from the Occupational Employment Statistics program, U.S. Department of Labor, U.S. Bureau of Labor Statistics.

Table 5. Occupations with the most job growth, 2012 and projected 2022

[Employment in thousands]

2012 National Employment Matrix title	Employment		Change, 2012-22		Median annual wage, 2012 ¹	Typical education needed for entry	Work experience in a related occupation	Typical on-the-job training needed to attain competency in the occupation
	2012	2022	Number	Percent				
Total, all occupations	145,355.8	160,983.7	15,628	10.8	\$34,750	N/A	N/A	N/A
Personal care aides	1,190.6	1,771.4	580.8	48.8	19,910	Less than high school	None	Short-term on-the-job training
Registered nurses	2,711.5	3,238.4	526.8	19.4	65,470	Associate's degree	None	None
Retail salespersons	4,447.0	4,881.7	434.7	9.8	21,110	Less than high school	None	Short-term on-the-job training
Home health aides	875.1	1,299.3	424.2	48.5	20,820	Less than high school	None	Short-term on-the-job training
Combined food preparation and serving workers, including fast food	2,969.3	3,391.2	421.9	14.2	18,260	Less than high school	None	Short-term on-the-job training
Nursing assistants	1,479.8	1,792.0	312.2	21.1	24,420	Postsecondary non-degree award	None	None
Secretaries and administrative assistants, except legal, medical, and executive	2,324.4	2,632.3	307.8	13.2	32,410	High school diploma or equivalent	None	Short-term on-the-job training
Customer service representatives	2,362.8	2,661.4	298.7	12.6	30,580	High school diploma or equivalent	None	Short-term on-the-job training
Janitors and cleaners, except maids and housekeeping cleaners	2,324.0	2,604.0	280.0	12.1	22,320	Less than high school	None	Short-term on-the-job training
Construction laborers	1,071.1	1,331.0	259.8	24.3	29,990	Less than high school	None	Short-term on-the-job training
General and operations managers	1,972.7	2,216.8	244.1	12.4	95,440	Bachelor's degree	Less than 5 years	None
Laborers and freight, stock, and material movers, hand	2,197.3	2,439.2	241.9	11.0	23,890	Less than high school	None	Short-term on-the-job training
Carpenters	901.2	1,119.4	218.2	24.2	39,940	High school diploma or equivalent	None	Apprenticeship
Bookkeeping, accounting, and auditing clerks	1,799.8	2,004.5	204.6	11.4	35,170	High school diploma or equivalent	None	Moderate-term on-the-job training
Heavy and tractor-trailer truck drivers	1,701.5	1,894.1	192.6	11.3	38,200	Postsecondary non-degree award	None	Short-term on-the-job training
Medical secretaries	525.6	714.9	189.2	36.0	31,350	High school diploma or equivalent	None	Moderate-term on-the-job training
Childcare workers	1,312.7	1,496.8	184.1	14.0	19,510	High school diploma or equivalent	None	Short-term on-the-job training
Office clerks, general	2,983.5	3,167.6	184.1	6.2	27,470	High school diploma or equivalent	None	Short-term on-the-job training
Maids and housekeeping cleaners	1,434.6	1,618.0	183.4	12.8	19,570	Less than high school	None	Short-term on-the-job training
Licensed practical and licensed vocational nurses	738.4	921.3	182.9	24.8	41,540	Postsecondary non-degree award	None	None
First-line supervisors of office and administrative support workers	1,418.1	1,589.6	171.5	12.1	49,330	High school diploma or equivalent	Less than 5 years	None
Elementary school teachers, except special education	1,361.2	1,529.1	167.9	12.3	53,400	Bachelor's degree	None	Internship/residency
Accountants and auditors	1,275.4	1,442.2	166.7	13.1	63,550	Bachelor's degree	None	None
Medical assistants	560.8	723.7	162.9	29.0	29,370	Postsecondary non-degree award	None	None
Cooks, restaurant	1,024.1	1,174.2	150.1	14.7	22,030	Less than high school	Less than 5 years	Moderate-term on-the-job training
Software developers, applications	613.0	752.9	139.9	22.8	90,060	Bachelor's degree	None	None
Landscaping and groundskeeping workers	1,124.9	1,264.0	139.2	12.4	23,570	Less than high school	None	Short-term on-the-job training
Receptionists and information clerks	1,006.7	1,142.6	135.9	13.5	25,990	High school diploma or equivalent	None	Short-term on-the-job training
Management analysts	718.7	852.5	133.8	18.6	78,600	Bachelor's degree	Less than 5 years	None
Sales representatives, wholesale and manufacturing, except technical and scientific products	1,480.7	1,612.8	132.0	8.9	54,230	High school diploma or equivalent	None	Moderate-term on-the-job training

¹ Data are from the Occupational Employment Statistics program, U.S. Department of Labor, U.S. Bureau of Labor Statistics.

Table 6. Employment by major occupational group, 2012 and projected 2022

[Employment in thousands]

2012 National Employment Matrix title and code		Employment		Change, 2012-22	
		2012	2022	Number	Percent
Total, all occupations	00-0000	145,355.8	160,983.7	15,628.0	10.8
Management occupations	11-0000	8,861.5	9,498.0	636.6	7.2
Business and financial operations occupations	13-0000	7,167.6	8,065.7	898.1	12.5
Computer and mathematical occupations	15-0000	3,814.7	4,500.5	685.8	18.0
Architecture and engineering occupations	17-0000	2,474.5	2,654.0	179.6	7.3
Life, physical, and social science occupations	19-0000	1,249.1	1,374.8	125.7	10.1
Community and social service occupations	21-0000	2,374.7	2,783.4	408.8	17.2
Legal occupations	23-0000	1,247.0	1,379.9	132.9	10.7
Education, training, and library occupations	25-0000	9,115.9	10,131.7	1,015.8	11.1
Arts, design, entertainment, sports, and media occupations	27-0000	2,570.9	2,751.6	180.6	7.0
Healthcare practitioners and technical occupations	29-0000	8,049.7	9,782.6	1,732.9	21.5
Healthcare support occupations	31-0000	4,110.2	5,266.0	1,155.8	28.1
Protective service occupations	33-0000	3,325.3	3,588.3	263.0	7.9
Food preparation and serving related occupations	35-0000	11,780.1	12,882.0	1,101.8	9.4
Building and grounds cleaning and maintenance occupations	37-0000	5,522.3	6,213.3	691.0	12.5
Personal care and service occupations	39-0000	5,375.6	6,498.5	1,122.9	20.9
Sales and related occupations	41-0000	15,105.0	16,200.5	1,095.5	7.3
Office and administrative support occupations	43-0000	22,470.1	24,004.1	1,534.0	6.8
Farming, fishing, and forestry occupations	45-0000	947.2	915.0	-32.2	-3.4
Construction and extraction occupations	47-0000	6,092.2	7,394.1	1,301.9	21.4
Installation, maintenance, and repair occupations	49-0000	5,514.8	6,046.0	531.2	9.6
Production occupations	51-0000	8,941.9	9,017.5	75.6	0.8
Transportation and material moving occupations	53-0000	9,245.7	10,036.4	790.6	8.6

Table 7. Employment by summary education and training assignment, 2012 and projected 2022

[Employment and job openings in thousands]

Education, work experience, and on-the-job training	Employment		Change, 2012-22		Job openings due to growth and replacement needs, 2012-22	Median annual wage, 2012 ¹
	2012	2022	Number	Percent		
Typical education needed for entry						
Total, all occupations	145,355.8	160,983.7	15,628.0	10.8	50,557.3	\$34,750
Postsecondary education	48,963.8	55,802.6	6,838.7	14.0	16,975.6	57,770
Doctoral or professional degree	4,002.4	4,640.8	638.4	16.0	1,426.8	96,420
Master's degree	2,432.2	2,880.7	448.5	18.4	950.8	63,400
Bachelor's degree	26,033.0	29,176.7	3,143.6	12.1	8,618.7	67,140
Associate's degree	5,954.9	7,000.9	1,046.0	17.6	2,269.5	57,590
Postsecondary non-degree award	8,554.2	9,891.2	1,337.1	15.6	3,067.2	34,760
Some college, no degree	1,987.2	2,212.2	225.0	11.3	642.6	28,730
No postsecondary education	96,392.0	105,181.2	8,789.2	9.1	33,581.7	27,670
High school diploma or equivalent	58,264.4	62,895.2	4,630.8	7.9	17,667.4	35,170
Less than high school	38,127.6	42,286.0	4,158.4	10.9	15,914.3	20,110
Work experience in a related occupation						
Total, all occupations	145,355.8	160,983.7	15,628.0	10.8	50,557.3	34,750
5 years or more	4,831.9	5,091.8	259.9	5.4	1,330.9	90,760
Less than 5 years	16,167.7	17,663.5	1,495.9	9.3	4,863.4	52,270
None	124,356.2	138,228.4	13,872.2	11.2	44,363.0	32,260
Typical on-the-job training needed to attain competency						
Total, all occupations	145,355.8	160,983.7	15,628.0	10.8	50,557.3	34,750
Internship/residency	5,989.1	6,658.9	669.8	11.2	1,997.8	53,570
Apprenticeship	2,336.9	2,855.2	518.3	22.2	879.8	45,440
Long-term on-the-job training	6,876.5	7,448.7	572.2	8.3	2,163.7	41,810
Moderate-term on-the-job training	23,057.8	24,968.5	1,910.8	8.3	6,841.0	36,950
Short-term on-the-job training	58,928.4	64,673.7	5,745.3	9.7	22,273.7	22,960
None	48,167.2	54,378.8	6,211.6	12.9	16,401.3	56,970

¹ Data are from the Occupational Employment Statistics program, U.S. Department of Labor, U.S. Bureau of Labor Statistics.

Table 8. Occupations with the largest projected number of job openings due to growth and replacement needs, 2012 and projected 2022

[Employment and job openings in thousands]

2012 National Employment Matrix title	Employment		Change, 2012-22		Job openings due to growth and replacement needs, 2012-22	Median annual wage, 2012 ¹	Typical education needed for entry	Work experience in a related occupation	Typical on-the-job training needed to attain competency in the occupation
	2012	2022	Number	Percent					
Total, all occupations	145,355.8	160,983.7	15,628.0	10.8	50,557.3	\$34,750	N/A	N/A	N/A
Retail salespersons	4,447.0	4,881.7	434.7	9.8	1,955.7	21,110	Less than high school	None	Short-term on-the-job training
Combined food preparation and serving workers, including fast food	2,969.3	3,391.2	421.9	14.2	1,555.7	18,260	Less than high school	None	Short-term on-the-job training
Cashiers	3,338.9	3,425.4	86.5	2.6	1,530.0	18,970	Less than high school	None	Short-term on-the-job training
Waiters and waitresses	2,362.2	2,494.0	131.8	5.6	1,268.3	18,540	Less than high school	None	Short-term on-the-job training
Registered nurses	2,711.5	3,238.4	526.8	19.4	1,052.6	65,470	Associate's degree	None	None
Customer service representatives	2,362.8	2,661.4	298.7	12.6	941.6	30,580	High school diploma or equivalent	None	Short-term on-the-job training
Laborers and freight, stock, and material movers, hand	2,197.3	2,439.2	241.9	11.0	922.5	23,890	Less than high school	None	Short-term on-the-job training
Office clerks, general	2,983.5	3,167.6	184.1	6.2	810.9	27,470	High school diploma or equivalent	None	Short-term on-the-job training
Janitors and cleaners, except maids and housekeeping cleaners	2,324.0	2,604.0	280.0	12.1	717.3	22,320	Less than high school	None	Short-term on-the-job training
Personal care aides	1,190.6	1,771.4	580.8	48.8	666.0	19,910	Less than high school	None	Short-term on-the-job training
General and operations managers	1,972.7	2,216.8	244.1	12.4	613.1	95,440	Bachelor's degree	Less than 5 years	None
Nursing assistants	1,479.8	1,792.0	312.2	21.1	593.6	24,420	Postsecondary non-degree award	None	None
Home health aides	875.1	1,299.3	424.2	48.5	590.7	20,820	Less than high school	None	Short-term on-the-job training
Secretaries and administrative assistants, except legal, medical, and executive	2,324.4	2,632.3	307.8	13.2	587.6	32,410	High school diploma or equivalent	None	Short-term on-the-job training
Childcare workers	1,312.7	1,496.8	184.1	14.0	570.0	19,510	High school diploma or equivalent	None	Short-term on-the-job training
Stock clerks and order fillers	1,807.2	1,801.2	-6.0	-0.3	546.0	22,050	Less than high school	None	Short-term on-the-job training
Accountants and auditors	1,275.4	1,442.2	166.7	13.1	544.2	63,550	Bachelor's degree	None	None
First-line supervisors of office and administrative support workers	1,418.1	1,589.6	171.5	12.1	508.0	49,330	High school diploma or equivalent	Less than 5 years	None
Construction laborers	1,071.1	1,331.0	259.8	24.3	489.1	29,990	Less than high school	None	Short-term on-the-job training
Maids and housekeeping cleaners	1,434.6	1,618.0	183.4	12.8	467.7	19,570	Less than high school	None	Short-term on-the-job training
Elementary school teachers, except special education	1,361.2	1,529.1	167.9	12.3	467.4	53,400	Bachelor's degree	None	Internship/residency
Heavy and tractor-trailer truck drivers	1,701.5	1,894.1	192.6	11.3	464.7	38,200	Postsecondary non-degree award	None	Short-term on-the-job training
Landscaping and groundskeeping workers	1,124.9	1,264.0	139.2	12.4	422.7	23,570	Less than high school	None	Short-term on-the-job training
Sales representatives, wholesale and manufacturing, except technical and scientific products	1,480.7	1,612.8	132.0	8.9	420.7	54,230	High school diploma or equivalent	None	Moderate-term on-the-job training
First-line supervisors of retail sales workers	1,603.3	1,674.2	70.9	4.4	419.8	36,820	High school diploma or equivalent	Less than 5 years	None
Receptionists and information clerks	1,006.7	1,142.6	135.9	13.5	406.9	25,990	High school diploma or equivalent	None	Short-term on-the-job training
Teacher assistants	1,223.4	1,328.5	105.0	8.6	382.6	23,640	Some college, no degree	None	None
Maintenance and repair workers, general	1,325.1	1,450.3	125.2	9.4	379.7	35,210	High school diploma or equivalent	None	Long-term on-the-job training
Bookkeeping, accounting, and auditing clerks	1,799.8	2,004.5	204.6	11.4	370.0	35,170	High school diploma or equivalent	None	Moderate-term on-the-job training
Licensed practical and licensed vocational nurses	738.4	921.3	182.9	24.8	363.1	41,540	Postsecondary non-degree award	None	None

¹ Data are from the Occupational Employment Statistics program, U.S. Department of Labor, U.S. Bureau of Labor Statistics.