



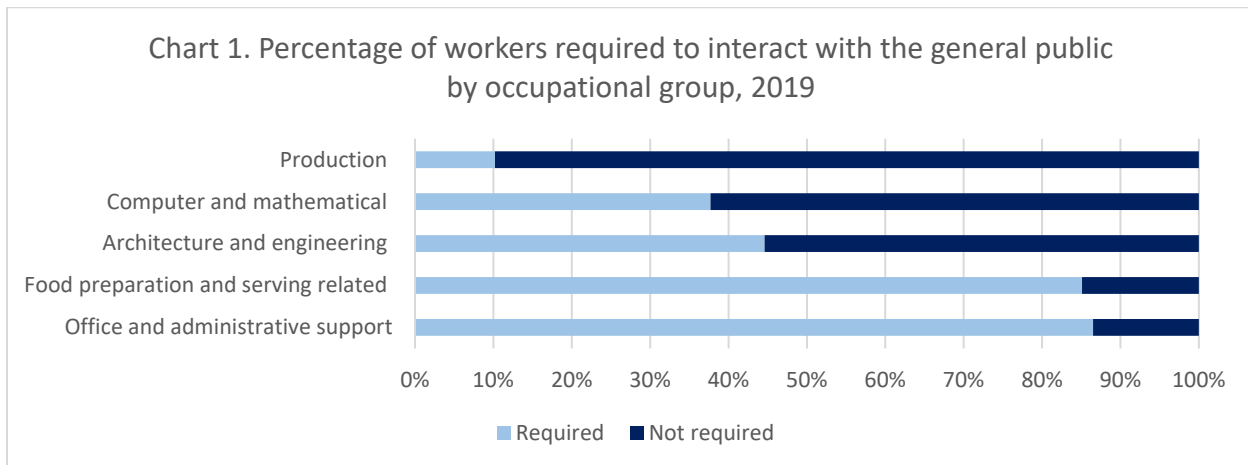
**For release on 10:00 a.m. (EDT) Thursday, May 28, 2020**

USDL-20-1102

Technical Information: (202) 691-6199 • [ORSinfo@bls.gov](mailto:ORSinfo@bls.gov) • [www.bls.gov/ors](http://www.bls.gov/ors)  
Media Contact : (202) 691-5902 • [PressOffice@bls.gov](mailto:PressOffice@bls.gov)

## **OCCUPATIONAL REQUIREMENTS IN THE UNITED STATES – 2019**

Interaction with the general public was required for 75.3 percent of civilian workers in 2019, the Bureau of Labor Statistics (BLS) reported today. For workers in office and administrative support occupations, 86.5 percent were required to interact with the general public. Within this occupational group, 61.3 percent of payroll and timekeeping clerks and 100 percent of bill and account collectors had this requirement. (See chart 1 and table 1.)



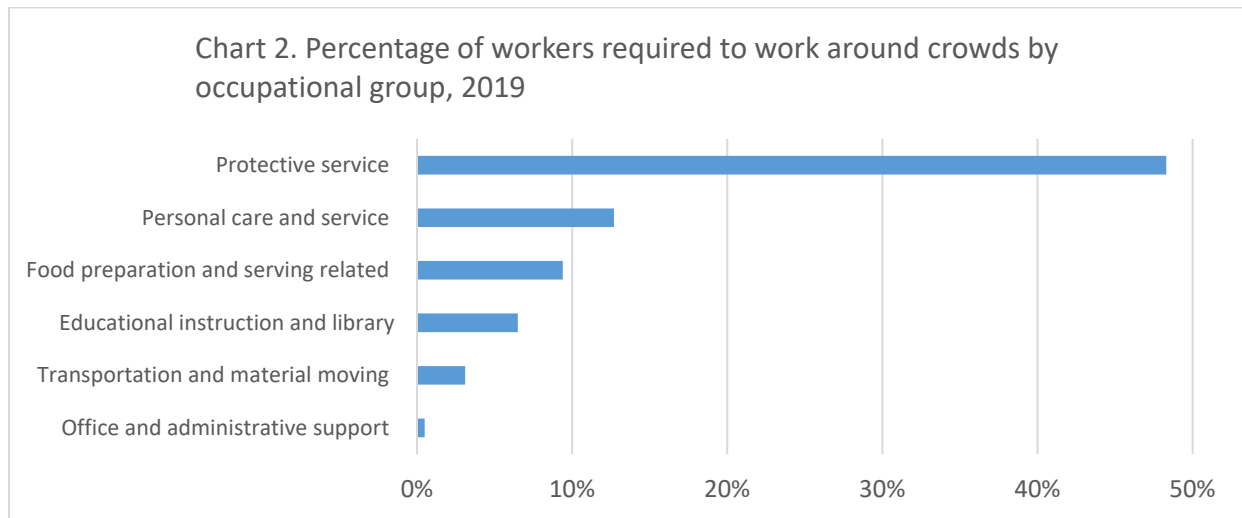
This release features cognitive and mental job requirements in the U.S. economy. These requirements refer to the ability to pause work, ability to telework, pace and control of workload, how often work is checked, interpersonal skills, problem solving, supervision of others, whether a supervisor is on-site, verbal interactions, interactions with the public, and working around crowds.

For workers in food preparation and serving related occupations, 85.1 percent were required to interact with the general public. Within this occupational group, 28.1 percent of restaurant cooks and 100 percent of bartenders had this requirement.

Interaction with the general public was not required for 24.7 percent of civilian workers. Interaction with the general public was also not required for 77.9 percent of software developers and 83.5 percent of industrial truck and tractor operators.

Beginning with this release the Occupational Requirements Survey estimates will no longer be published at the 8-digit occupation detail. The 2018 Standard Occupational Classification (SOC) system was used to calculate these estimates. Further information is available at [www.bls.gov/ors/notices/2020/implementing-2018-soc.htm](http://www.bls.gov/ors/notices/2020/implementing-2018-soc.htm).

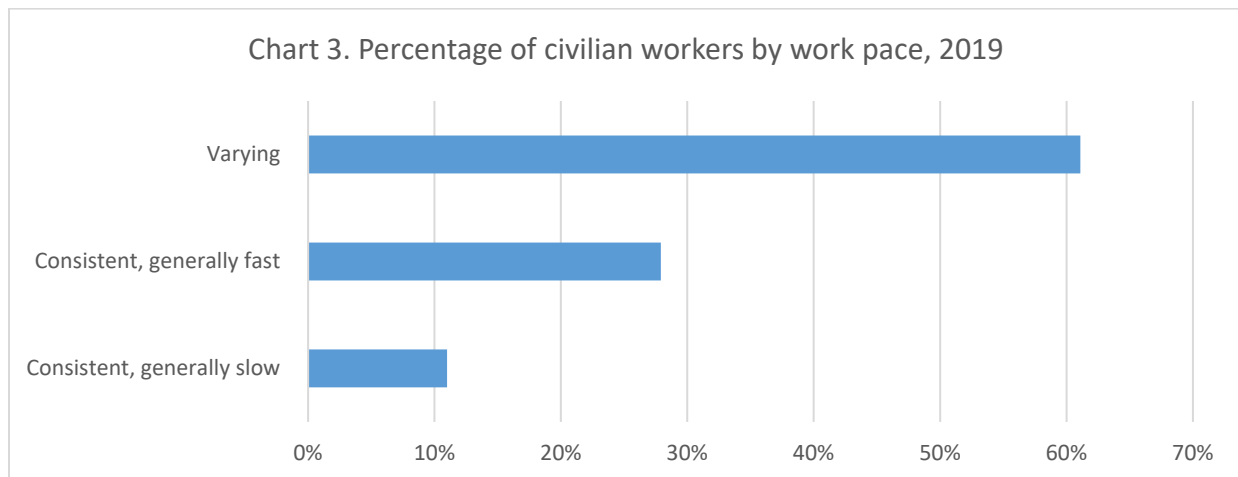
Working around crowds was required for 4.3 percent of civilian workers and 48.3 percent of workers in protective service occupations. (See chart 2 and table 2.)



Within the protective services occupational group, 37.9 percent of correctional officers and jailers, 39.2 percent of security guards, 69.4 percent of firefighters, and 81.5 percent of police and sheriff's patrol officers were required to work around crowds.

One hundred percent of compliance officers, industrial engineers, web developers, healthcare social workers, carpenters, and tellers were not required to work around crowds.

A varying work pace was required for 61.1 percent of civilian workers. (See chart 3 and table 3.)



A consistent, generally fast work pace was required for 47.2 percent of workers in production occupations. Within this occupational group, 67.3 percent of team assemblers and 90.4 percent of packaging and filling machine operators and tenders had a consistent, generally fast work pace requirement.

A consistent, generally slow work pace was required for 24.7 percent of workers in healthcare support occupations and a consistent, generally fast, work pace was required for 21.9 percent.

**Education, training, and experience** - This requirement includes the minimum formal education, credentials, on-the-job training, and prior work experience necessary for average job performance. These requirements are combined to calculate the specific vocational preparation (SVP), which refers to the amount of preparation time required for a typical worker to learn the techniques, acquire the information, and develop the skill needed for average performance.

Civilian workers

- A bachelor's degree was required for 18.1 percent of workers. No minimum formal education was required for 31.0 percent of workers and a high school diploma was required for 40.0 percent.
- On-the-job training was required for 80.1 percent of workers with a median of 14 days.

By occupation

- A high school diploma was required for 100 percent of phlebotomists. Prior work experience was not required for 70.7 percent and credentials were required for 48.7 percent of phlebotomists.

**Environmental conditions** - These requirements include the various tangible or concrete hazards or difficulties that are in the vicinity of where a job's critical tasks are performed.

Civilian workers

- Exposure to the outdoors was required for 33.4 percent of workers, where 4.2 percent had constant exposure and 14.5 percent had occasional exposure.
- A loud noise intensity level was present for 8.6 percent of workers, a quiet noise intensity level was present for 14.2 percent, and a moderate noise intensity level was present for 76.9 percent.

By occupation

- All construction laborers (100 percent) were exposed to the outdoors, where 67.7 percent had constant outdoor exposure. A loud noise intensity level was present for 28.4 percent of these workers while a moderate noise intensity level was present for 71.2 percent.

**Physical demands** - These requirements include the physical activities workers are required to perform for critical job tasks. The presence and, in some cases, duration of these requirements are published.

Civilian workers

- Keyboarding was required for 64.4 percent of workers and 30.6 percent were required to keyboard occasionally.
- A median maximum weight of 20 pounds was lifted or carried by workers in support of critical tasks. A sedentary strength level was required for 27.0 percent of workers, medium strength level was required for 28.5 percent, and a light strength level was required for 33.8 percent.

By occupation

- Keyboarding was required for 99.9 percent of physical therapists and 82.4 percent were required to keyboard occasionally. The median maximum weight lifted or carried was 50 pounds and a medium strength level was required for 63.5 percent of physical therapists.

Table 1. Percentage of civilian workers required to interact with the general public, 2019

Occupation and occupational group	Required	Not required	Standard error
All workers	75.3	24.7	0.7
Management occupations	82.2	17.8	2.0
General and operations managers	80.3	19.7	4.3
Financial managers	70.1	29.9	5.6
Industrial production managers	51.6	48.4	8.4
Human resources managers	82.9	17.1	4.9
Architectural and engineering managers	47.1	52.9	10.5
Medical and health services managers	89.8	10.2	2.7
Business and financial operations occupations	72.5	27.5	2.8
Training and development specialists	57.8	42.2	8.0
Market research analysts and marketing specialists	39.2	60.8	5.3
Accountants and auditors	61.8	38.2	6.5
Budget analysts	44.5	55.5	9.6
Financial and investment analysts	31.2	68.8	9.1
Computer and mathematical occupations	37.7	62.3	3.9
Computer systems analysts	45.2	54.8	10.3
Computer network support specialists	31.4	68.6	6.3
Computer user support specialists	59.6	40.4	6.6
Network and computer systems administrators	40.2	59.8	8.8
Architecture and engineering occupations	44.6	55.4	4.8
Industrial engineers	45.2	54.8	13.3
Mechanical engineers	53.1	46.9	8.4
Life, physical, and social science occupations	57.8	42.2	11.8
Arts, design, entertainment, sports, and media occupations	86.5	13.5	2.7
Graphic designers	72.5	27.5	7.6
Food preparation and serving related occupations	85.1	14.9	1.6
Cooks, institution and cafeteria	66.9	33.1	4.2
Cooks, restaurant	28.1	71.9	8.4
Food preparation workers	69.6	30.4	8.7
Building and grounds cleaning and maintenance occupations	60.7	39.3	6.6
Janitors and cleaners, except maids and housekeeping cleaners	52.5	47.5	8.5
Landscaping and groundskeeping workers	44.2	55.8	10.3

Table 1. Percentage of civilian workers required to interact with the general public, 2019 -- continued			
Occupation and occupational group	Required	Not required	Standard error
Office and administrative support occupations	86.5	13.5	1.9
First-line supervisors of office and administrative support workers	81.6	18.4	5.2
Bookkeeping, accounting, and auditing clerks	66.7	33.3	3.5
Production, planning, and expediting clerks	74.5	25.5	7.4
Shipping, receiving, and inventory clerks	49.5	50.5	6.3
Office clerks, general	84.7	15.3	3.9
Construction and extraction occupations	42.8	57.2	3.8
First-line supervisors of construction trades and extraction workers	78.5	21.5	5.3
Installation, maintenance, and repair occupations	63.5	36.5	3.0
Maintenance and repair workers, general	71.6	28.4	5.5
Production occupations	10.2	89.8	2.1
Bakers	50.1	49.9	10.5
Water and wastewater treatment plant and system operators	47.9	52.1	8.8
Inspectors, testers, sorters, samplers, and weighers	15.2	84.8	4.1
Transportation and material moving occupations	58.8	41.2	3.1
First-line supervisors of material-moving machine and vehicle operators	50.7	49.3	11.0
Heavy and tractor-trailer truck drivers	83.7	16.3	2.6
Industrial truck and tractor operators	16.5	83.5	3.8
Packers and packagers, hand	22.0	78.0	5.7
Stockers and order fillers	70.1	29.9	7.2
Note: Due to rounding, sum of estimates may not equal 100 percent.			
Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey			

Table 2. Percentage of civilian workers required to work around crowds, 2019

Occupation and occupational group	Required	Not required	Standard error
All workers	4.3	95.7	[1]
Educational instruction and library occupations	6.5	93.5	0.7
Secondary school teachers, except special and career/technical education	16.2	83.8	4.1
Protective service occupations	48.3	51.7	2.7
Firefighters	69.4	30.6	5.9
Correctional officers and jailers	37.9	62.1	8.7
Police and sheriff's patrol officers	81.5	18.5	5.4
Security guards	39.2	60.8	7.5
Food preparation and serving related occupations	9.4	90.6	1.0
Waiters and waitresses	29.1	70.9	4.8
Building and grounds cleaning and maintenance occupations	3.7	96.3	0.9
Janitors and cleaners, except maids and housekeeping cleaners	7.6	92.4	1.8
Personal care and service occupations	12.7	87.3	2.6
Office and administrative support occupations	0.5	99.5	[1]
Transportation and material moving occupations	3.1	96.9	0.6
[1] Standard error is less than 0.5. Due to rounding, estimates may not sum to 100 percent.			
Note: Due to rounding, sum of estimates may not equal 100 percent.			
Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey			

Table 3. Percentage of civilian workers by work pace, 2019

Occupation and occupational group	Consistent, generally slow		Consistent, generally fast		Varying	
	Estimate	Standard error	Estimate	Standard error	Estimate	Standard error
All workers	11.0	0.5	27.9	0.8	61.1	0.7
Management occupations	11.5	1.7	31.0	1.9	57.5	2.1
General and operations managers	11.1	2.9	40.4	5.7	48.5	6.6
Human resources managers	13.0	3.3	29.3	6.1	57.8	6.5
Business and financial operations occupations	11.0	1.2	28.7	3.8	60.3	3.5
Human resources specialists	8.3	2.2	27.9	7.3	63.8	7.8
Architecture and engineering occupations	13.2	3.0	26.4	3.8	60.5	3.5
Life, physical, and social science occupations	13.0	3.8	18.5	4.4	68.5	7.4
Community and social service occupations	13.3	3.8	28.6	5.3	58.1	7.3
Educational instruction and library occupations	16.5	2.1	23.5	2.1	60.0	2.8
Elementary school teachers, except special education	15.1	4.2	21.6	3.6	63.2	5.2
Secondary school teachers, except special and career/technical education	12.0	2.4	28.8	7.3	59.2	6.2
Teaching assistants, preschool, elementary, middle, and secondary school, except special education	13.4	3.3	29.2	5.4	57.4	5.8
Healthcare practitioners and technical occupations	7.0	1.5	35.4	3.6	57.6	3.3
Nuclear medicine technologists	5.7	1.3	44.9	10.7	49.4	10.7
Healthcare support occupations	24.7	4.6	21.9	3.2	53.3	4.3
Building and grounds cleaning and maintenance occupations	25.0	6.6	26.2	4.9	48.9	4.6
Janitors and cleaners, except maids and housekeeping cleaners	33.3	9.7	17.8	4.5	48.9	9.3
Maids and housekeeping cleaners	29.3	8.7	18.5	4.7	52.2	6.0
Personal care and service occupations	13.9	3.3	19.7	3.2	66.4	4.2
Sales and related occupations	5.9	1.5	14.5	1.3	79.5	1.4
Office and administrative support occupations	12.3	1.2	28.3	1.7	59.4	2.4
Bookkeeping, accounting, and auditing clerks	19.9	4.3	20.0	3.5	60.2	4.3
Receptionists and information clerks	12.4	3.6	17.7	5.0	69.9	5.9
Secretaries and administrative assistants, except legal, medical, and executive	12.5	2.7	17.9	4.2	69.5	3.4
Office clerks, general	19.4	5.7	27.7	4.6	52.8	5.1
Construction and extraction occupations	10.3	2.8	36.1	3.9	53.7	4.7
Installation, maintenance, and repair occupations	9.1	1.5	23.8	3.7	67.2	3.7
Production occupations	10.2	1.9	47.2	3.5	42.7	3.3
Transportation and material moving occupations	8.0	1.8	41.5	4.3	50.5	3.9
Heavy and tractor-trailer truck drivers	17.2	2.5	28.1	5.2	54.7	5.1

Note: Due to rounding, sum of estimates may not equal 100 percent.

Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey

## Technical Note

The Occupational Requirements Survey (ORS) provides job-related information about the physical demands; environmental conditions; education, training, and experience; as well as cognitive and mental requirements in the U.S. economy. Additional job requirement estimates are available at [www.bls.gov/web/ors/ors-complete-dataset.xlsx](http://www.bls.gov/web/ors/ors-complete-dataset.xlsx) and [www.bls.gov/ors/data.htm](http://www.bls.gov/ors/data.htm). For information on estimation concepts and methods see the Handbook of Methods at [www.bls.gov/opub/hom/ors/home.htm](http://www.bls.gov/opub/hom/ors/home.htm) and [www.bls.gov/ors/questions-and-answers.htm](http://www.bls.gov/ors/questions-and-answers.htm).

Sample size: The ORS is a nationally representative establishment-based survey. Estimates are produced from a probability sample of 10,000 establishments. There were 6,900 private industry and state and local government responding establishments that provided approximately 33,300 occupational observations. The 2019 estimates represent 141,915,000 civilian workers. These estimates are from one of five sample groups and are considered preliminary. Data from all five sample groups collected between September 2018 and July 2023 will be aggregated to produce the final estimates with an expected reference year of 2023.

Standard errors: To assist users in ascertaining the reliability of ORS estimates, standard errors are made available with the release. Standard errors provide users a measure of the precision of an estimate to ensure that it is within an acceptable range for their intended purpose. Collected and imputed data are included in the standard error calculation. For further information and how to use the standard errors see [www.bls.gov/ors/se.htm](http://www.bls.gov/ors/se.htm).

Major terms: Additional terminology and concepts are explained in the collection manual at [www.bls.gov/ors/information-for-survey-participants/pdf/occupational-requirements-survey-collection-manual-082018.pdf](http://www.bls.gov/ors/information-for-survey-participants/pdf/occupational-requirements-survey-collection-manual-082018.pdf) and the Handbook of Methods at [www.bls.gov/opub/hom/ors/home.htm](http://www.bls.gov/opub/hom/ors/home.htm).

**Critical job function** - This is the main purpose and the primary pay factor for the job. It consists of critical tasks that are integral to the job.

**Critical tasks** - Activities workers must perform to carry out their critical job function(s).

**Crowds** - Working around crowds is present when the following five conditions are met: (1) many unfamiliar people are present considering the space available, (2) movement is restricted, (3) any given arrangement of the crowd is temporary, (4) a certain level of disorganization is present, and (5) workers are not separated from unfamiliar people by counters, dividers, or other objects.

**General public** - Includes interacting with individuals other than coworkers to perform critical tasks.

**Strength levels** - Reflect the amount of weight workers are required to lift or carry, how often, and whether standing or walking is required to perform critical tasks in the workday. The strength levels indicate whether physical requirements are considered as sedentary, light work, medium work, heavy work, and very heavy work.