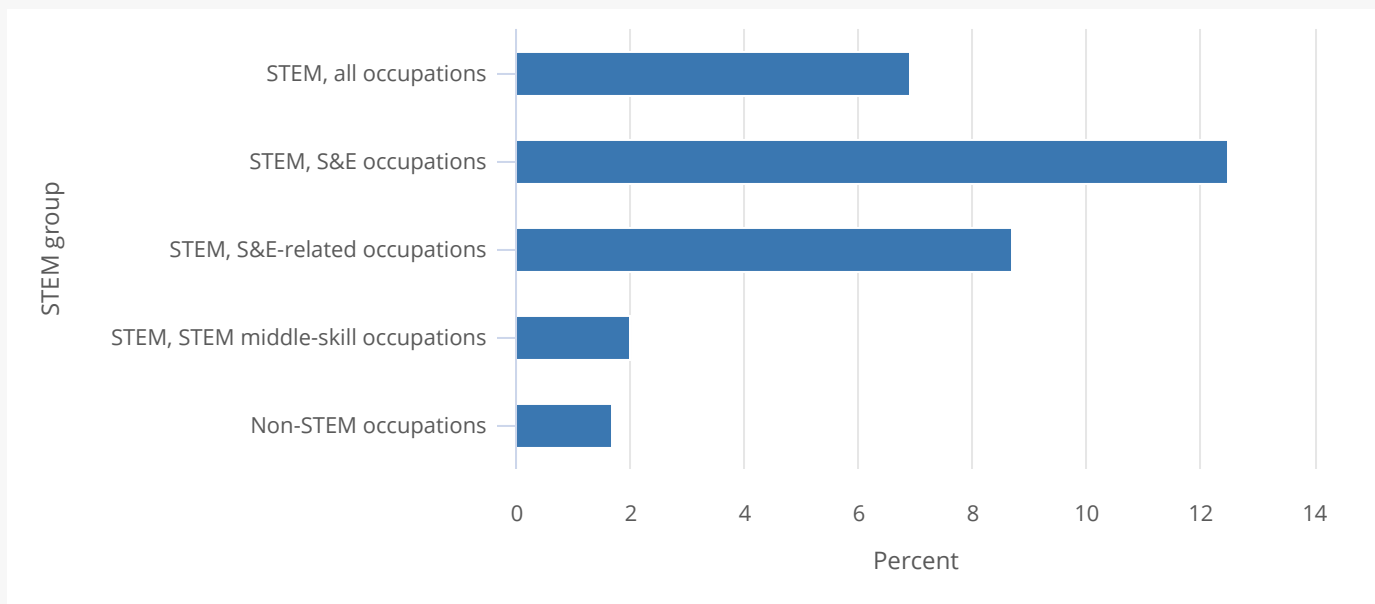


SIDEBAR

Projected Growth of Employment in STEM Occupations

According to Bureau of Labor Statistics (BLS) projections for 2022–32 (BLS 2022 Employment Projections), employment in science, technology, engineering, and mathematics (STEM) occupations* is expected to grow faster than in non-STEM occupations (7% vs. 2%) (Figure LBR-A).† While STEM middle-skill occupations are projected to have the largest number of STEM workers (Table SLBR-A), the fastest growth is expected among S&E occupations (12%), followed by S&E-related occupations (9%).

Figure LBR-A

Expected growth among STEM occupations: 2022–32

S&E = science and engineering; STEM = science, technology, engineering, and mathematics.

Note(s):

Estimates of current and projected employment for 2022–32 are from the Bureau of Labor Statistics (BLS) National Employment Matrix; estimates in the matrix are developed using data from the Occupational Employment and Wage Statistics (OEWS) program and the Current Population Survey (CPS). Together, these sources cover paid workers and self-employed workers in all industries, agriculture, and private households. Because data are derived from multiple sources, they can often differ from employment data provided by OEWS, CPS, or other employment surveys alone. BLS does not make projections for S&E occupations as a group, nor does it do so for some of the S&E and S&E-related occupational categories as defined by the National Center for Science and Engineering Statistics (NCSES); numbers in the figure are based on the sum of BLS projections for occupations that NCSES includes in the respective categories. The STEM classifications used here differ slightly from those used in the ACS due to additional occupation detail in the projections tabulations. A crosswalk will be provided upon request.

Source(s):

Bureau of Labor Statistics, special tabulations (2022) of the 2022–32 Employment Projections.

Science and Engineering Indicators

There are several ways to identify occupations with the greatest opportunity for employment in the next decade, such as by examining those with the fastest employment growth or those with the greatest expected job openings. The STEM occupations with the fastest expected growth were wind turbine service technicians (expected to grow 45% to 16,000 workers), nurse practitioners (expected to grow 45% to 385,000 workers), and data scientists (expected to grow 35% to 228,000 workers) (BLS 2022a, **Table 1.3**). In comparison, those occupations with the highest average job openings per year were registered nurses (193,000 openings), general maintenance and repair workers (152,000 openings), and software developers (136,000 openings) (BLS 2022a, **Table 1.10**).

The BLS projections also provide typical education requirements for these expected growth areas as well as related work experience or on-the-job training. While the majority of occupations with the greatest growth require at least a bachelor's degree, there are several that typically require less than a bachelor's degree, including wind turbine service technicians, solar photovoltaic installers, and computer numerically controlled tool programmers (BLS 2022a, **Table 1.7, Table 5.4**). All of these occupations are considered STEM middle-skill occupations. In contrast to projected growth, the STEM occupations with the fastest projected employment declines over the next decade were watch and clock repairers (30% decline to 1,000 workers) and refractory materials repairers, except brickmasons (21% decline to about 500 workers) (BLS 2022a, **Table 1.5**).

Job openings often result from a combination of factors, such as occupational growth (or increased demand for a particular job) and the replacement of workers leaving an occupation, either for retirement or a different job. About 62% of the registered nurses who leave their jobs, for example, are expected to also leave the labor force, while 32% of software developers who leave their jobs are expected to leave the labor force (BLS 2022a, **Table 1.10**). BLS publishes projected job openings by expected reason for job separation. The STEM occupations with the greatest percentage of workers leaving the labor force include acupuncturists, radiologists, and optometrists, while the STEM occupations with the greatest percentage of workers leaving for other occupations include atmospheric and space scientists, food scientists and technologists, and nuclear technicians (BLS 2022a, **Table 1.10**).

The BLS employment projections are developed using historical data and cover the 2022–32 period. The projections are long-term and intended to capture structural change in the economy, not cyclical fluctuations such as the impact of the recession that began in February 2020. Besides the immediate recessionary impact, the pandemic may have caused structural changes to the economy that would not be captured here. For more information on the BLS labor projections, see <https://www.bls.gov/emp/data/occupational-data.htm>.

* The STEM coding used for the Occupational Employment and Wage Statistics projections differs slightly from the occupations listed in Table SLBR-1 due to additional granularity of occupations available in the projections. Details will be provided upon request.

† BLS does not produce standard errors for projections, so statistical significance testing cannot be done for the numbers in this sidebar. All numbers in this sidebar are rounded to the nearest thousand.