

Employment of Mathematical Sciences Majors

Many of the responses to the following questions are based on the National Science Foundation's report *National Survey of College Graduates: 2021*. This report was published in November 2023. Links to this report and to prior and related reports can be found at:

<https://www.nsf.gov/statistics/grads/>

Central Questions

1. What sorts of jobs do mathematical sciences graduates get? What mathematical skills are required?

Several jobs are listed below with typical mathematical degree requirements.

Additional job description information (including general training requirements) is available in the Bureau of Labor Statistics Occupation Outlook Handbook (<https://www.bls.gov/ooh/>). Direct links to BLS job descriptions are included below.

Actuary: Bachelor's degree

Society of Actuaries (<https://www.beanactuary.org>).

BLS job description: <https://www.bls.gov/ooh/math/actuaries.htm>

Mathematician or Statistician: Masters degree in mathematics

BLS job description: <https://www.bls.gov/ooh/math/mathematicians-and-statisticians.htm>

Operations research analyst: Bachelor's degree

BLS job description: <https://www.bls.gov/ooh/math/operations-research-analysts.htm>

2. What proportions of recent graduates in the mathematical sciences find jobs in science and engineering related occupations?

Summary: Among recently employed mathematical sciences bachelor degree recipients, about 50% found S&E-related employment. For master's degree recipients, about 70% found S&E-related employment.

Source: Table 1.1 in [National Survey of College Graduates, 2021](#).

Related Questions

3. What sectors employ recipients of mathematical sciences degrees?

Summary: Of 654,000 employed mathematical scientists surveyed in 2021, 65% were employed by private industry and business, 9% were employed by government agencies, 26% were employed by educational institutions.

Source: Table 1-4 in [National Survey of College Graduates, 2021](#).

4. How do employment levels for recent mathematical sciences graduates compare to those for science and engineering students in general?

Summary: Among recent recipients of bachelor's degrees in the mathematical sciences, 70% were employed, 3.3% were unemployed, and 26.7% were not in the labor force (because of illness, family obligations, or additional schooling). For science and engineering graduates overall, 75.8% were employed, and 4.8% were unemployed, and 19.4% were not in the labor force.

Source: Table 1.1 in [National Survey of College Graduates, 2021](#).

Summary: Among recent recipients of master's degrees in the mathematical sciences, 75.4% were employed, the number of unemployed was not reported because of the small sample size, and 22.2% were not in the labor force. For science and engineering graduates overall, 78.2% were employed, and 3.8% were unemployed, and 18% were not in the labor force.

Source: Table 1.1 in [National Survey of College Graduates, 2021](#).