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: 2017*. This report was published in November 2019. The next update is expected in July 2022. Links to this report and to prior and related reports can be found at:

https://www.nsf.gov/statistics/2020/nsf20300

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 (http://www.beanactuary.com/college/preparing.cfm).

   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 34% found S&E-related employment. For master's degree recipients, about 64% found S&E-related employment.

   Source: Tables 9-13 and 9-14 in National Survey of College Graduates, 2017.

Related Questions

3. What sectors employ recipients of mathematical sciences degrees?

   Summary: Of 292,000 employed mathematical scientists surveyed in 2017, 43% were employed by private industry and business, 15% were employed by government agencies, 21% were employed by universities and 4-year colleges, 13% were employed by other educational institutions, and small numbers were self employed or worked for other non-profit organizations.

   Source: Table 9-19 in National Survey of College Graduates, 2017.

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, 8% were full time students, 86% were employed and 6% were unemployed. For science and engineering graduates overall, 18% were full time students, 74% were employed, and 8% were unemployed.

   Source: Table 9-13 in National Survey of College Graduates, 2017.

   Summary: Among recent recipients of master's degrees in the mathematical sciences, 14% were full time students, 79% were employed and and the number of unemployed was not reported because of the small sample size. For science and engineering graduates overall, 11% were full time students, 85% were employed, and 4% were unemployed.

   Source: Table 9-14 in National Survey of College Graduates, 2017.

5. What proportion of mathematical sciences majors attend graduate school?

   Summary: Of the recent mathematical sciences undergraduate degree recipients interviewed in the report, 8% were enrolled as full time students. Of recent masters recipients, 14% were enrolled as full time students.

   Source: Tables 9-13 and 9-14 in National Survey of College Graduates, 2017.