

# National Science Foundation

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## Activities of Recent S&E Graduates Vary Significantly by Field of Degree

Most recent science and engineering (S&E) graduates became employed after receiving their bachelor's or master's degrees, but a substantial number enrolled full time in graduate study programs. These recent graduates—about 643,200 bachelor's degree recipients and 136,600 master's degree recipients—received their degrees in 1988 and 1989. In 1990 about 75 percent of them were employed, 20 percent had elected to continue full-time study, and only a few were engaged in neither activity.

Because such data are of value to educators, employers, and policymakers, the National Science Foundation conducts a biennial survey of recent graduates.<sup>1</sup> The most current Survey of Recent Science, Social Science, and Engineering Graduates was conducted in 1990.

Science degree holders at both the bachelor's and master's levels were more likely to continue on to graduate study than were engineering graduates. Among science degree holders, physical scientists and life scientists were most likely to continue their education with full-time graduate study. The lowest rates of full-time graduate study were noted for degree recipients in industrial engineering and computer science, but high rates of employment in S&E occupations occurred among these degree recipients.

As might be expected, recipients of master's degrees were more likely to be employed in science and engineering than were recipients of bachelor's degrees. Approximately 44 percent

of recent S&E bachelor's degree recipients and 61 percent of recent master's degree recipients were employed in S&E occupations. Among engineering and computer science graduates, however, degree level had little if any effect on the likelihood of S&E employment.

Engineering degree graduates were more likely than science graduates to be working in an S&E-related occupation. Social science and psychology degree recipients were the least likely to be employed in S&E jobs. In fact, more than half of the social science and psychology bachelor's graduates and one-third of the master's graduates were employed in non-S&E-related occupations.

The median salaries of engineering degree recipients were higher than those of science degree recipients. Median salaries of graduates with bachelor's degrees ranged from \$18,600 for psychology graduates to \$34,000 for electrical/electronics engineering and mechanical engineering graduates. Among master's degree recipients, median salaries ranged from \$26,900 for graduates in the life sciences to \$46,500 for graduates with electrical/electronics engineering degrees.

<sup>1</sup>The information in this summary is drawn from data collected in the 1990 Survey of Recent Science, Social Science, and Engineering Graduates. The detailed statistical tables on *Recent Science and Engineering Graduates: 1990* will be available in the summer of 1992. For additional information, contact the National Science Foundation, Division of Science Resources Studies, Personnel Program, at (202) 634-4664.

**Selected characteristics of 1988 and 1989 bachelor's degree recipients in science and engineering (S&E): 1990**

| Field                  | Number of graduates | Full-time graduate students | Graduates employed |                        |              | Median salary |
|------------------------|---------------------|-----------------------------|--------------------|------------------------|--------------|---------------|
|                        |                     |                             | In S&E occupations | In non-S&E occupations | Not employed |               |
| Total S&E              | 643,200             | 20%                         | 44%                | 32%                    | 5%           | \$26,000      |
| Total, Sciences        | 494,500             | 22                          | 35                 | 38                     | 5            | 23,800        |
| Physical sciences      | 29,400              | 39                          | 38                 | 18                     | 5            | 25,100        |
| Math/Statistics        | 35,200              | 18                          | 50                 | 26                     | 6            | 23,600        |
| Computer science       | 69,300              | 6                           | 77                 | 13                     | 4            | 30,100        |
| Environmental sci      | 7,300               | 30                          | 49                 | 15                     | 5            | 23,700        |
| Life sciences          | 111,200             | 32                          | 34                 | 28                     | 6            | 21,000        |
| Psychology             | 85,700              | 21                          | 20                 | 54                     | 5            | 18,600        |
| Social sciences        | 156,400             | 20                          | 19                 | 55                     | 5            | 21,900        |
| Total, engineering     | 148,700             | 11                          | 73                 | 12                     | 3            | 33,000        |
| Civil                  | 15,200              | 10                          | 78                 | 9                      | 3            | 30,100        |
| Electrical/electronics | 55,500              | 11                          | 76                 | 10                     | 3            | 34,000        |
| Industrial             | 12,300              | 5                           | 72                 | 18                     | 5            | 31,100        |
| Mechanical             | 30,000              | 11                          | 76                 | 10                     | 4            | 34,000        |

NOTE: Because of rounding, percents may not add to 100.

SOURCE: National Science Foundation/SRS, *Characteristics of Recent Science and Engineering Graduates: 1990*

**Selected characteristics of 1988 and 1989 master's degree recipients in science and engineering (S&E): 1990**

| Field                  | Number of graduates | Full-time graduate students | Graduates employed |                        |              | Median salary |
|------------------------|---------------------|-----------------------------|--------------------|------------------------|--------------|---------------|
|                        |                     |                             | In S&E occupations | In non-S&E occupations | Not employed |               |
| Total S&E              | 136,600             | 23%                         | 61%                | 13%                    | 4%           | \$37,000      |
| Total, sciences        | 93,700              | 25                          | 55                 | 16                     | 4            | 33,800        |
| Physical sciences      | 9,200               | 41                          | 49                 | 8                      | 2            | 34,900        |
| Math/Statistics        | 10,600              | 18                          | 67                 | 13                     | 2            | 32,800        |
| Computer science       | 22,200              | 9                           | 78                 | 10                     | 3            | 42,100        |
| Environmental sci      | 5,200               | 21                          | 71                 | 6                      | 2            | 33,800        |
| Life sciences          | 19,300              | 35                          | 47                 | 15                     | 4            | 26,900        |
| Psychology             | 7,300               | 34                          | 36                 | 26                     | 4            | 32,000        |
| Social sciences        | 19,900              | 26                          | 37                 | 30                     | 7            | 31,000        |
| Total, engineering     | 42,900              | 17                          | 73                 | 6                      | 3            | 41,400        |
| Civil                  | 4,700               | 11                          | 85                 | 4                      | 0            | 35,200        |
| Electrical/electronics | 13,800              | 19                          | 72                 | 4                      | 5            | 46,500        |
| Industrial             | 2,600               | 8                           | 62                 | 23                     | 8            | 40,300        |
| Mechanical             | 8,000               | 15                          | 79                 | 5                      | 1            | 42,100        |

NOTE: Because of rounding, percents may not add to 100.

SOURCE: National Science Foundation/SRS, *Characteristics of Recent Science and Engineering Graduates: 1990*