

AN OVERVIEW OF SCIENCE, ENGINEERING, AND HEALTH GRADUATES: 2006

by Steven Proudfoot¹

In the 2006 National Survey of Recent College Graduates (NSRCG), the National Science Foundation collected data detailing the characteristics of individuals who received bachelor's or master's degrees in science, engineering, or health (SEH) fields² during the academic years 2003, 2004, and 2005. Degrees in the fields of social and related sciences, health, and psychology accounted for more than half of all those earned by this group of recent graduates (23%, 18%, and 15%, respectively) (table 1).

Employment

Overall, 85% of recent graduates were working in April 2006 (84% of bachelor's degree recipients and 90% of master's degree recipients). Business and industry was the largest employer of recent SEH graduates (65%), followed by educational institutions (24%) and government (11%). Recent computer and information sciences graduates—both bachelor's and master's degrees—were most likely to be employed in business and industry (82% and 76%, respectively); 77% (bachelor's)

TABLE 1. Recent SEH graduates, by field of degree: 2006

| Field of degree | All SEH bachelor's and masters degrees | | Bachelor's degrees | | Master's degrees | |
|---|--|---------|--------------------|---------|------------------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| All fields | 1,982,400 | 100 | 1,565,500 | 100 | 416,900 | 100 |
| Biological, agricultural, and environmental life sciences | 259,500 | 13 | 230,100 | 15 | 29,400 | 7 |
| Computer and information sciences | 216,300 | 11 | 164,000 | 10 | 52,300 | 13 |
| Mathematics and statistics | 55,800 | 3 | 44,000 | 3 | 11,800 | 3 |
| Physical and related sciences | 70,500 | 4 | 55,600 | 4 | 14,900 | 4 |
| Psychology | 303,300 | 15 | 252,700 | 16 | 50,600 | 12 |
| Social and related sciences | 459,200 | 23 | 413,500 | 26 | 45,700 | 11 |
| Engineering | 269,600 | 14 | 183,100 | 12 | 86,500 | 21 |
| Health | 348,200 | 18 | 222,500 | 14 | 125,700 | 30 |

SEH = science, engineering, and health.

NOTES: Recent SEH graduates are those who earned bachelor's or master's degrees in science, engineering, or health fields between 1 July 2002 and 30 June 2005. Detail may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, National Survey of Recent College Graduates, 2006.



and 72% (master's) of engineering graduates were also primarily employed in business and industry. Educational institutions were the largest employers of recent graduates with master's degrees in physical and related sciences, mathematics and statistics, and psychology (59%, 55%, and 51%, respectively) (table 2).

Approximately half of all employed recent bachelor's degree recipients with SEH degrees were working in non-S&E-related jobs. In contrast, only about one-fourth of employed recent SEH master's degree recipients were working in non-S&E-related jobs (table 3).

Eighty-five percent of employed recent master's degree recipients and 81% of employed recent bachelor's

degree recipients had full-time principal jobs. Ninety-three percent and 91% of recent master's and bachelor's computer and information sciences graduates, respectively, held full-time principal jobs. Among engineering graduates, 90% of master's degree and 91% of bachelor's degree recipients held full-time principal jobs (table 4).

Salary

Those individuals with master's degrees in engineering and those with master's degrees in computer and information sciences reported the highest median salary among recent SEH master's graduates, \$65,000. Those with bachelor's degrees in engineering had the highest median salary among recent SEH bachelor's graduates,

TABLE 2. Employed recent SEH graduates, by employment sector and level and field of degree: 2006
(Percent distribution)

| Degree level and field | All sectors | Educational institution | Government | Business/industry |
|---|-------------|-------------------------|------------|-------------------|
| All degrees, all fields | 100 | 24 | 11 | 65 |
| Biological, agricultural, and environmental life sciences | 100 | 32 | 10 | 57 |
| Computer and information sciences | 100 | 12 | 8 | 80 |
| Mathematics and statistics | 100 | 48 | 6 | 46 |
| Physical and related sciences | 100 | 43 | 9 | 48 |
| Psychology | 100 | 34 | 10 | 57 |
| Social and related sciences | 100 | 19 | 15 | 66 |
| Engineering | 100 | 15 | 10 | 75 |
| Health | 100 | 24 | 11 | 65 |
| Bachelor's, all fields | 100 | 22 | 10 | 68 |
| Biological, agricultural, and environmental life sciences | 100 | 31 | 9 | 60 |
| Computer and information sciences | 100 | 9 | 9 | 82 |
| Mathematics and statistics | 100 | 46 | 6 | 48 |
| Physical and related sciences | 100 | 39 | 9 | 52 |
| Psychology | 100 | 30 | 9 | 61 |
| Social and related sciences | 100 | 17 | 14 | 69 |
| Engineering | 100 | 12 | 11 | 77 |
| Health | 100 | 23 | 10 | 68 |
| Master's, all fields | 100 | 31 | 12 | 57 |
| Biological, agricultural, and environmental life sciences | 100 | 41 | 16 | 42 |
| Computer and information sciences | 100 | 19 | 5 | 76 |
| Mathematics and statistics | 100 | 55 | 4 | 41 |
| Physical and related sciences | 100 | 59 | 8 | 33 |
| Psychology | 100 | 51 | 14 | 35 |
| Social and related sciences | 100 | 34 | 25 | 40 |
| Engineering | 100 | 21 | 7 | 72 |
| Health | 100 | 25 | 13 | 61 |

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NOTES: Recent SEH graduates are those who earned bachelor's or master's degrees in science, engineering, or health fields between 1 July 2002 and 30 June 2005. Business/industry includes non-profits and self-employed. Detail may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, National Survey of Recent College Graduates, 2006.

TABLE 3. Occupations of employed recent SEH graduates, by level of degree: 2006

| Occupation | All degrees | Bachelor's | Master's |
|--|-------------|------------|----------|
| All occupations | 1,693,400 | 1,319,200 | 374,200 |
| Scientist | 360,600 | 240,900 | 119,700 |
| Biological, agricultural, and environmental life scientist | 55,300 | 35,500 | 19,800 |
| Computer and information scientist | 186,800 | 135,000 | 51,800 |
| Mathematical scientist | 19,400 | 10,500 | 8,900 |
| Physical scientist | 39,700 | 28,300 | 11,400 |
| Psychologist | 26,100 | 12,000 | 14,100 |
| Social scientist | 33,200 | 19,600 | 13,600 |
| Engineer | 173,300 | 120,000 | 53,300 |
| Science and engineering-related occupations | 405,700 | 294,200 | 111,500 |
| Non-science and engineering occupations | 753,700 | 664,000 | 89,700 |

SEH = science, engineering, and health.

S&E = science and engineering.

NOTES: Recent SEH graduates are those who earned bachelor's or master's degrees in science, engineering, or health fields between 1 July 2002 and 30 June 2005. Science and engineering-related occupations include health-related occupations, S&E manager, S&E precollege teacher, S&E technician/technologist, and other S&E-related occupations.

SOURCE: National Science Foundation/Division of Science Resources Statistics, National Survey of Recent College Graduates, 2006.

TABLE 4. Full- or part-time status of employed recent SEH graduates in principal job, by major field of degree: 2006

| Major field | Employed bachelor's degree recipients | | | Employed master's degree recipients | | |
|---|---------------------------------------|-----------|-----------|-------------------------------------|-----------|-----------|
| | Total | Full time | Part time | Total | Full time | Part time |
| All fields | 1,319,200 | 1,073,600 | 245,600 | 374,200 | 317,900 | 56,300 |
| Science | 951,000 | 757,600 | 193,400 | 180,300 | 151,000 | 29,400 |
| Biological, agricultural, and environmental life sciences | 154,700 | 115,100 | 39,600 | 24,800 | 21,600 | 3,100 |
| Computer and information sciences | 149,000 | 135,700 | 13,300 | 46,100 | 43,100 | 3,100 |
| Mathematics and statistics | 37,700 | 30,100 | 7,500 | 10,100 | 7,500 | 2,600 |
| Physical and related sciences | 45,700 | 36,000 | 9,700 | 12,900 | 11,000 | 1,900 |
| Psychology | 212,700 | 153,500 | 59,200 | 47,400 | 36,900 | 10,500 |
| Social and related sciences | 351,200 | 287,100 | 64,100 | 39,100 | 30,900 | 8,200 |
| Engineering | 167,400 | 152,300 | 15,100 | 76,600 | 68,700 | 7,800 |
| Health | 200,800 | 163,700 | 37,100 | 117,300 | 98,200 | 19,100 |

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NOTES: Recent SEH graduates are those who earned bachelor's or master's degrees in science, engineering, or health fields between 1 July 2002 and 30 June 2005. Employed graduates who worked 35 or more hours per week on principal job during a typical week are classified as full time and all other employed graduates are classified as part time.

SOURCE: National Science Foundation/Division of Science Resources Statistics, National Survey of Recent College Graduates, 2006.

\$52,000. Recent graduates holding bachelor's degrees in computer and information sciences reported a median salary of \$45,000. Those with degrees in health reported median salaries of \$58,000 for master's degree holders and \$45,000 for those with bachelor's degrees (table 5).

Recent graduates with master's degrees working in private business and industry reported a median salary of \$61,000, and those working for government agencies reported \$55,000. Recent graduates with bachelor's degrees working in business and industry reported a median salary of \$40,000; the median salary for their counterparts in the federal government was \$37,000 (table 6).

Gender

Recent female SEH graduates outnumbered males 56% to 44%. The bachelor's degree-level fields of study with the highest percentage of female graduates were health

TABLE 5. Median annual salary of full-time employed recent SEH graduates by major field of degree: 2006

| (Dollars) | | |
|--|------------|----------|
| Major field | Bachelor's | Master's |
| All fields | 39,000 | 56,000 |
| Science | 35,000 | 50,000 |
| Biological, agricultural, and environmental life sciences | 32,000 | 45,000 |
| Computer and information sciences | 45,000 | 65,000 |
| Mathematics and statistics | 37,000 | 60,000 |
| Physical and related sciences | 35,000 | 50,000 |
| Psychology | 30,000 | 40,000 |
| Social and related sciences | 34,000 | 47,000 |
| Engineering | 52,000 | 65,000 |
| Health | 45,000 | 58,000 |

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NOTES: Recent SEH graduates are those who earned bachelor's or master's degrees in science, engineering, or health fields between 1 July 2002 and 30 June 2005. Salary data and sector are for principal job only. Full-time employed are those working at least 35 hours per week at their principal jobs. Self-employed persons and full-time students are excluded from salary data.

SOURCE: National Science Foundation/Division of Science Resources Statistics, National Survey of Recent College Graduates, 2006.

TABLE 6. Median annual salary of full-time employed recent SEH graduates, by employment sector: 2006

| (Dollars) | | |
|-------------------------|------------|----------|
| Employment sector | Bachelor's | Master's |
| All sectors | 39,000 | 56,000 |
| Educational institution | 35,000 | 43,000 |
| Business/industry | 40,000 | 61,000 |
| Government | 37,000 | 55,000 |

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SOURCE: National Science Foundation/Division of Science Resources Statistics, National Survey of Recent College Graduates, 2006.

(86%) and psychology (77%). The recent bachelor's degree fields of study with the highest percentage of male graduates were engineering (78%) and computer and information sciences (77%). Results at the recent master's degree-level were similar; the highest percentages of female master's degree graduates were in health (79%) and psychology (78%), while engineering, computer and related sciences, and physical and related sciences had the highest levels of male graduates (77%, 66%, and 66%, respectively) (table 7).

Data Notes

Data from the National Science Foundation's 2006 National Survey of Recent College Graduates were collected on bachelor's and master's graduates who received science, engineering, or health degrees between July 1, 2002, and June 30, 2005. Respondents were individuals who recently received bachelor's or master's degrees in a SEH field from a U.S. institution, were living in the United States during the survey reference week of April 1st, 2006, and under age 76.

The full set of detailed tables from this survey will be available in the forthcoming report *Characteristics of Recent College Graduates: 2006* at <http://www.nsf.gov/statistics/recentgrads/>. For more information on the data in this InfoBrief, contact the author.

TABLE 7. Gender of recent SEH graduates, by level and field of degree: 2006

(Percent distribution)

| Degree type and field | Female | Male |
|---|--------|------|
| All degrees, all fields | 56 | 44 |
| Biological, agricultural, and environmental life sciences | 61 | 39 |
| Computer and information sciences | 25 | 75 |
| Mathematics and statistics | 45 | 55 |
| Physical and related sciences | 42 | 58 |
| Psychology | 77 | 23 |
| Social and related sciences | 55 | 45 |
| Engineering | 22 | 78 |
| Health | 83 | 17 |
| Bachelor's, all fields | 56 | 44 |
| Biological, agricultural, and environmental life sciences | 62 | 38 |
| Computer and information sciences | 23 | 77 |
| Mathematics and statistics | 46 | 54 |
| Physical and related sciences | 44 | 56 |
| Psychology | 77 | 23 |
| Social and related sciences | 55 | 45 |
| Engineering | 22 | 78 |
| Health | 86 | 14 |
| Master's, all fields | 55 | 45 |
| Biological, agricultural, and environmental life sciences | 54 | 46 |
| Computer and information sciences | 34 | 66 |
| Mathematics and statistics | 39 | 61 |
| Physical and related sciences | 34 | 66 |
| Psychology | 78 | 22 |
| Social and related sciences | 57 | 43 |
| Engineering | 23 | 77 |
| Health | 79 | 21 |

SEH = science, engineering, and health.

NOTE: Recent SEH graduates are those who earned bachelor's or master's degrees in science, engineering, or health fields between 1 July 2002 and 30 June 2005.

SOURCE: National Science Foundation/Division of Science Resources Statistics, National Survey of Recent College Graduates, 2006.

Notes

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2. For more information on classification of degree fields and occupations, please see the NSRCG survey overview at <http://www.nsf.gov/statistics/srvyrecentgrads/>.

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