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Employment Opportunities in the 1980s Were Favorable for S/E Graduates¹

The proportion of science and engineering (S/E) graduates who obtained jobs related to S/E activities within two years following graduation increased markedly from 1980 to 1988. The baccalaureate recipients' proportion increased from 53 percent to 63 percent, and that of master's-degree recipients, which had already been high at 82 percent (dipping to 81 percent in 1984), increased to 85 percent. Most of the S/E graduates who had not obtained employment in 1988 were full-time graduate students.

Obtaining S/E employment, however, is not

synonymous with obtaining in-field employment. Therefore S/E employment rates and in-field employment rates often differ; for instance, persons with degrees in mathematics often obtain work in the computer-science disciplines. Of all baccalaureate graduates in the physical sciences, 77 percent obtained jobs in science and engineering, but only 39 percent found work that was directly related to the field of their degree.

In general, science graduates earned considerably less than engineering graduates, at both degree levels. Recipients of baccalaureate science degrees, for instance, reported an average annual salary of \$22,900 compared to the \$30,000 reported by the engineering baccalaureate-degree recipients. The average annual salaries of newly employed S/E bachelor's- and master's-degree recipients were \$25,100 and \$34,900, respectively.

About one-fifth of bachelor's-degree recipients—and the same proportion of master's-degree recipients—were enrolled in graduate studies in 1988. These proportions existed throughout the eighties.

The unemployment rate for the total number of college graduates between 22 and 24 years old in 1988 was 4.8 percent, and for 25- to 34-year-olds, 2.3 percent. For S/E bachelor's- and master's-degree recipients, however, the unemployment rates were only 2.4 percent and 1.7 percent, respectively. Although the rates for S/E graduates increased sharply between 1980 and 1984, they dropped in most fields by 1988 to below those that had been reported in 1980. Nevertheless, the data suggest that S/E graduates find more favorable employment opportunities than does the general college-graduate population.

¹This information is based on the Survey of Natural Science, Social Science, and Engineering Graduates conducted in 1988 as part of a series of studies done for NSF's Division of Science Resources Studies by the Institute for Survey Research at Temple University. The purpose of the survey was to collect data on the postgraduate experiences of recent bachelor's- and master's-degree recipients in S/E fields, especially those who entered the work force. Specifically, the information was collected from the graduating classes of 1986 and 1987. During the eighties, surveys of recent S/E graduates were conducted on a biennial basis for the National Science Foundation, Division of Science Resources Studies, by the Institute.

Science and engineering (S/E) employment rates of recent S/E graduates, by degree level and field: 1980, 1984, and 1988

Field	Bachelor's			Master's		
	1980	1984	1988	1980	1984	1988
Science and engineering, total	53%	62%	63%	82%	81%	85%
Sciences, total	40	48	53	75	75	81
Physical	77	72	76	85	92	92
Mathematical	61	74	72	73	96	87
Computer	94	90	86	93	94	93
Environmental	58	61	70	87	90	93
Life	53	61	58	79	80	77
Psychology	18	25	28	69	47	53
Social	19	31	33	53	52	64
Engineering, total	93	89	88	95	94	94
Aeronautical/astronautical	73	84	74	1/	1/	1/
Chemical	94	89	89	96	90	100
Civil	94	90	91	93	96	93
Electrical/electronics	95	93	92	99	96	96
Mechanical	95	90	90	98	94	98

1/ No rate is computed for groups with fewer than 1,500 individuals in the labor force.

SOURCE: National Science Foundation, SRS

In-field employment rates of recent science and engineering graduates, by degree level and field: 1988

	Bachelor's	Master's
Science and engineering, total	41%	62%
Sciences, total	35	63
Physical	39	59
Mathematical	33	51
Computer	80	80
Environmental	28	69
Life	42	62
Psychology	9	43
Social	15	47
Engineering, total	55	60
Aeronautical/astronautical	58	1/
Chemical	39	49
Civil	76	78
Electrical/electronics	62	62
Mechanical	46	58

1/ No rate is computed for groups with fewer than 1,500 individuals in the labor force.

SOURCE: National Science Foundation, SRS