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## Graduate Enrollment in Science and Engineering Fields Increased Steadily Between 1975 and 1979

In fall 1979, graduate enrollment in science and engineering reached over 375,000, for an average growth rate of 3 percent per year since fall 1975. While this was taking place, total graduate enrollment in all fields declined at the rate of 4 percent per year—to 1,075,000 by 1979.

Between 1975 and 1979, graduate S/E enrollment grew faster in master's institutions (up 6 percent per year) than in doctorate institutions (up 2 percent per year). Most of the growth in master's institutions occurred between 1976 and 1977 (up 11 percent), while in doctorate institutions expansion was highest between 1978 and 1979.

Part-timers, who constituted about 35 percent of graduate S/E enrollment in 1979, accounted for 56 percent of the total net growth in all graduate institutions between 1975 and 1979—49 percent of the net addition to doctorate institutions and 71 percent of the growth in master's institutions.

Although the life sciences accounted for only a fourth of the graduate enrollment total in 1979, they were responsible for nearly half the overall growth between 1975 and 1979. This heavy emphasis on the life sciences was evident also in academic R/D expenditures (half the total in fiscal year 1979) and in academic employment of scientists and engineers (two-fifths the total for January 1980).

Students enrolled full time in graduate S/E programs at doctorate-granting institutions increased by almost 2 percent per year between 1975 and 1979,

attributable entirely to the growing enrollment of women in S/E fields. The number of women enrolled full time increased at an average rate of 8 percent per year from 1975 to 1979, compared to a decline in the enrollment of men of 1 percent per year. Graduate programs in the environmental sciences and engineering showed the most rapid growth in women's enrollment, both up about 15 percent per year during this period. These two areas were the only major fields in which there was growth in the number of men.

In the period 1977-79, when data were first available on part-time enrollment by sex, the number of women enrolled on a part-time basis rose by 13 percent per year in doctorate-granting institutions. Most of this growth occurred in the life and social sciences. The number of men studying part time declined slightly in these two years.

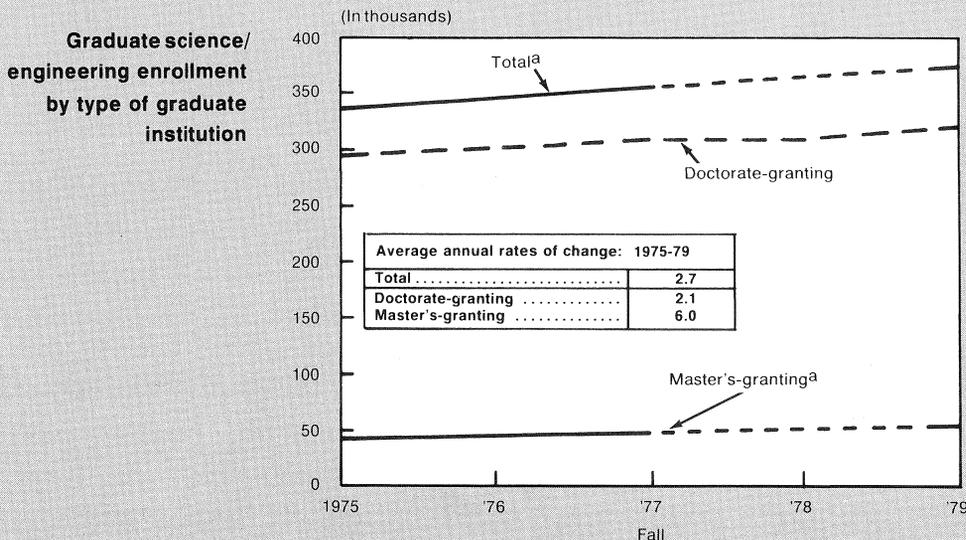
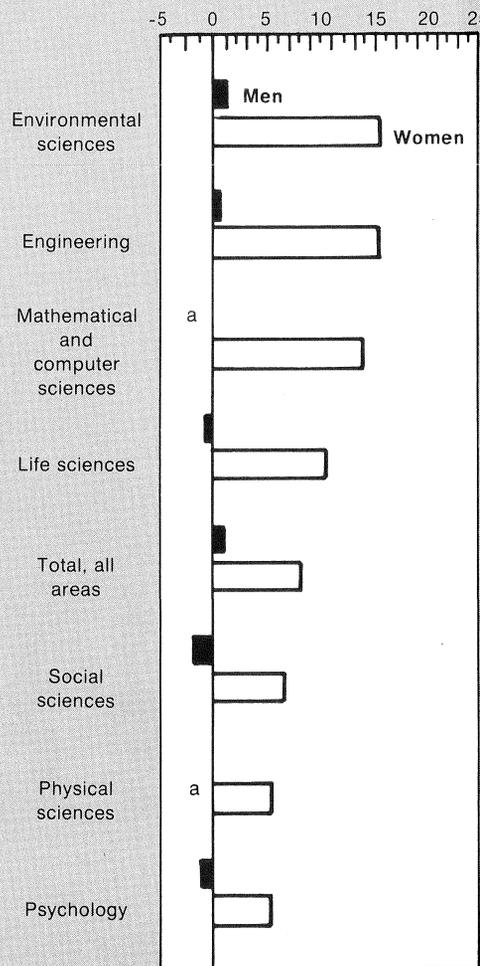
Among those enrolled full time at doctorate-granting institutions, equal proportions of both men and women received major support from the Federal Government in 1979—24 percent and 23 percent, respectively. A higher proportion of women, however, relied on their own resources for support than did men, 36 percent compared to 28 percent.

The 14 percent real-dollar rise in federal R/D expenditures in doctorate-granting institutions between fiscal year 1975 and fiscal year 1979 fueled the 21 percent increase in federally sponsored graduate research assistants in the same period. Those holding Federal fellowships and traineeships declined by 5 percent.

In 1979, foreign students enrolled full time accounted for 20 percent of the total enrollment in doctorate institutions—up four percentage points from their 1975 share. In every area of science, foreign nationals made up a higher proportion in 1979 than they did in 1975, with engineering drawing the highest share, 41 percent.

### Full-time graduate science enrollment in doctorate-granting institutions by area of science and sex

(Average annual rates of change, 1975-79)



<sup>a</sup>Data for master's-granting institutions interpolated for 1978.  
SOURCE: National Science Foundation

<sup>a</sup>Less than 0.5 percent change  
SOURCE: National Science Foundation