

Table 8. Scientists and engineers primarily engaged in research and development activities, by sector of employment: 1987-1999

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Thousands												
United States R&D scientists and engineers, total.....	895.7	NA	943.0	NA	981.7	NA	1,013.8	NA	1,036.1	NA	1,159.9	NA	1,261.2
Total, all industries ¹	702.2	715.5	733.0	758.5	776.4	772.0	766.6	757.3	789.5	859.3	918.6	974.6	1,015.7
Manufacturing industries ²	603.0	601.9	NA	NA	NA	572.4	569.6	547.2	576.7	623.1	661.0	670.6	627.9
Nonmanufacturing industries ²	99.2	113.6	NA	NA	NA	199.6	197.0	198.2	212.8	236.2	257.7	304.1	387.9
Federal Government, total ³	54.3	54.2	58.8	59.4	58.3	61.8	60.0	NA	53.9	52.1	49.8	48.4	47.7
Research.....	22.4	22.4	24.6	24.7	25.2	25.8	25.1	NA	NA	NA	NA	21.0	20.7
Development.....	31.9	31.7	34.2	34.6	33.1	36.0	34.9	NA	NA	NA	NA	27.4	27.0
Educational institutions, total.....	130.3	NA	142.0	NA	138.3	NA	175.0	NA	181.4	NA	178.6	NA	186.0
Doctorate scientists and engineers ⁴	77.2	NA	83.5	NA	74.6	NA	107.6	NA	114.0	NA	112.9	NA	118.0
Graduate students ⁵	53.1	55.7	58.5	60.6	63.7	66.0	67.4	68.3	67.4	66.0	65.7	66.1	68.0
Nonprofit organizations, total ⁶	8.9	NA	9.2	NA	8.7	NA	12.2	NA	11.3	NA	12.9	NA	11.8
Total United States civilian labor force ⁷	119,865	121,669	123,869	125,840	126,346	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368
R&D scientists and engineers per thousand labor force.....	7.5	NA	7.6	NA	7.8	NA	7.8	NA	7.8	NA	8.5	NA	9.0

¹Industry counts are for the average number of full-time equivalent (FTE) R&D scientists and engineers.

²For 1999, counts for manufacturing and nonmanufacturing industries based on new NAICS codes. For 1998 and earlier years, the industrial classification was based on SIC codes, and therefore counts are not comparable.

³Federal Government counts are for the number (that is, not FTE) of scientists and engineers whose work activity is classified as research or development.

⁴S&E counts for educational institutions are headcounts of doctoral scientists and engineers, not FTEs. For 1993 and later years, scientist and engineer counts are for the number of employed doctoral scientists and engineers who report their primary work activity as basic research, applied research, development, or design. For 1991 and earlier years, counts also include persons who reported "management/administration of R&D" as their primary work activity (3,900 of the 1991 total). For 1993 and later years, counts include persons who obtained their doctorates from outside the United States (25,000 of the 1993 total).

⁵Counts are for the number of full-time equivalent graduate students in science, engineering, and health fields working on R&D. FTE of graduate students estimated as half of the total number of graduate students who report fellowships, traineeships, or research assistantships as their primary mechanisms of support, based on the estimation that 50 percent of their time is spent on R&D activities.

⁶Scientist and engineer counts for nonprofit organizations are headcounts of doctoral scientists and engineers, not FTEs. For 1993 and later years, scientists and engineer counts are for the number of employed doctoral scientists and engineers who report their primary work activity as basic research, applied research, development, or design. For 1991 and earlier years, counts also include persons who reported "management/administration of R&D" as their primary work activity (1,700 of the 1991 total). For 1993 and later years, counts include persons who obtained their doctorates from outside the United States (2,000 of the 1993 total).

⁷Total labor force of the noninstitutional population, age 16 years and over.

KEY: NA = Data not available or not applicable.

NOTE: The methodology for calculating R&D scientists and engineers was changed for 1987 and later years. These data are not strictly comparable with counts previously published.

SOURCES: National Science Foundation/Division of Science Resources Statistics, Survey of Industrial Research and Development; Survey of Doctorate Recipients; SESTAT data system; Survey of Graduate Students and Postdoctorates in Science and Engineering; U.S. Office of Personnel Management; and Bureau of Labor Statistics, *Employment and Earnings* (annual) and *Labor Force Statistics from the Current Population Survey*.