

Science and engineering profile: Massachusetts

Characteristic	State	U.S.	Rank	Characteristic	State	U.S.	Rank
Doctoral scientists, 2001	26,970	542,940	4	Total R&D performance, 2002 (millions of dollars)	14,316	255,707	3
Doctoral engineers, 2001	4,890	112,760	4	Industry R&D, 2002 (millions of dollars)	10,279	182,403	5
S&E doctorates awarded, 2002	1,461	24,558	4	Academic R&D, 2002 (millions of dollars)	1,706	36,314	6
life sciences (percent)	23	27	na	life sciences (percent)	47	59	na
engineering (percent)	22	21	na	engineering (percent)	17	15	na
social sciences (percent)	21	16	na	physical sciences (percent)	13	8	na
S&E postdoctorates, 2002				Public higher education current-fund expenditures, 2001 (millions of dollars)	2,337	170,024	27
in doctorate-granting institutions	5,873	45,171	2	Number of SBIR awards, 1999-2002	2,792	19,383	2
S&E graduate students, 2002				Utility patents issued to state residents, 2002	3,608	86,971	6
in doctorate-granting institutions	25,215	482,211	5	Gross state product, 2001 (billions of dollars)	288	10,206	11
Population, 2003 (thousands)	6,433	294,688	13	agriculture (percent)	1	1	na
Civilian labor force, 2003 (thousands)	3,416	147,569	13	manufacturing, mining, construction (percent)	17	20	na
Personal income per capita, 2003 (dollars)	39,815	31,632	4	transportation, communication, utilities (percent)	6	8	na
Federal spending				wholesale and retail trade (percent)	15	16	na
Total expenditures, 2002 (millions of dollars)	47,480	1,896,317	14	finance, insurance, real estate (percent)	26	20	na
R&D obligations, 2002 (millions of dollars)	4,659	83,764	4	services (percent)	28	22	na
				government (percent)	9	12	na

na = not applicable.

SBIR = small business innovation research.

NOTES: Rankings and totals are based on data for the 50 states, District of Columbia, and Puerto Rico. Reliability of the estimates of industry R&D and of doctoral scientists and engineers varies by state, because the sample allocation was not based on geography. The rankings do not take into account the margin of error of estimates from sample surveys.

Data on graduate students, doctoral scientists, doctoral engineers, and postdoctorates include all graduate degree (except M.D.) candidates and recipients in S&E fields, including health fields.

Data on S&E doctorates awarded do not include health fields.

Federal obligations for research and development by agency and performer: Massachusetts, fiscal year 2002

(Thousands of dollars)

Agency	Performer							Rank
	Total	Federal intramural	All FFRDCs	Industrial firms	Universities and colleges	Other nonprofits	State and local government	
All agencies	4,658,616	676,831	360,454	1,240,619	1,170,695	1,202,935	7,082	4
Department of Agriculture	26,954	17,100	0	947	6,929	1,966	12	25
Department of Commerce	33,229	13,791	0	13,197	4,770	830	641	7
Department of Defense	1,760,424	178,051	360,159	1,025,465	159,632	37,107	10	5
Department of Energy	84,616	0	0	1,399	76,884	6,333	0	14
Department of Health and Human Services	2,235,967	392,138	0	124,271	673,060	1,042,430	4,068	2
Department of the Interior	13,086	12,030	0	306	679	71	0	9
Department of Transportation	67,207	44,703	295	20,303	75	175	1,656	3
Environmental Protection Agency	12,695	189	0	1,799	5,061	4,951	695	8
National Aeronautics and Space Administration	189,453	18,754	0	41,810	45,721	83,168	0	9
National Science Foundation	234,985	75	0	11,122	197,884	25,904	0	3
Rank	4	10	5	7	6	1	22	na

FFRDC = federally funded research and development center.

na = not applicable.

NOTES: Federal R&D obligations are as reported by funding agencies. Ranks and totals are based on data for the 50 states, District of Columbia, and Puerto Rico.

SOURCES: Prepared by the National Science Foundation/Division of Science Resources Statistics. Data compiled from numerous sources; see the section, Data Sources for Science and Engineering (S&E) State Profiles.