Science and engineering profile: Pennsylvania

Characteristic	State	U.S.	Rank
Doctoral scientists, 2003	26,940	566,330	6
Doctoral engineers, 2003	5,030	118,540	6
S&E doctorates awarded, 2004	1,280	26,275	5
Engineering (percent)	25	22	na
Life sciences (percent)	23	27	na
Social sciences (percent)	15	16	na
S&E and health postdoctorates in doctorate-granting institutions, 2003	2,395	46,807	5
S&E and health graduate students in doctorate-granting institutions, 2003	23,028	507,247	7
Population, 2004 (thousands)	12,406	297,550	6
Civilian labor force, 2004 (thousands)	6,275	148,769	6
Personal income per capita, 2004 (dollars)	33,257	33,041	19
Federal spending			
Total expenditures, 2003 (millions of dollars)	90,350	2,024,246	5
R&D obligations, 2003 (millions of dollars)	3,788	91,359	7
Total R&D performance, 2003 (millions of dollars)	9,944	277,577	10
Industry R&D, 2003 (millions of dollars)	7,091	198,244	9
Academic R&D, 2003 (millions of dollars)	2,013	40,055	5
Life sciences (percent)	59	59	na
Engineering (percent)	17	15	na
Math and computer sciences (percent)	7	4	na
Number of SBIR awards, 1999–2004	1,127	31,847	9
Utility patents issued to state residents, 2004	2,883	84,268	9
Gross state product, 2004 (billions of dollars)	468	11,744	6

na = not applicable.

S&E = science and engineering.

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 estimates of industry R&D and of doctoral scientists and engineers varies by state, because sample allocation was not based on geography. Rankings do not take into account the margin of error of estimates from sample surveys. Data on doctoral scientists and engineers include only recipients of doctoral degrees from U.S. institutions in S&E and health fields. The field percentages represent the largest three fields within the state.

Federal obligations for research and development, by agency and performer: Pennsylvania, FY 2003

(Thousands of dollars)

	Performer							
Agency	Total	Federal intramural	All FFRDCs	Industrial firms	Universities and colleges	Other nonprofits	State and local government	Rank
All agencies	3,787,926	452,657	29,966	1,542,275	1,413,476	341,503	8,049	7
Department of Agriculture	62,066	45,496	0	0	15,800	770	0	7
Department of Commerce	5,482	52	0	1,826	3,599	5	0	27
Department of Defense	1,435,990	49,964	29,966	1,114,412	202,436	39,212	0	9
Department of Energy	471,584	52,338	0	378,959	33,604	6,683	0	6
Department of Health and Human Services	1,589,840	300,910	0	32,063	973,270	281,374	2,223	5
Department of the Interior	3,638	2,966	0	0	447	185	40	28
Department of Transportation	7,652	22	0	1,549	461	6	5,614	18
Environmental Protection Agency	6,795	109	0	210	5,187	1,189	100	16
National Aeronautics and Space Administration	41,270	800	0	9,633	30,460	305	72	15
National Science Foundation	163,609	0	0	3,623	148,212	11,774	0	6
Rank	7	14	15	6	3	4	13	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.