

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, 2005	1,397	27,974	5
Engineering (%)	27	23	-
Life sciences (%)	21	26	-
Social sciences (%)	15	15	-
S&E and health postdoctorates in doctorate-granting institutions, 2005	2,406	48,601	5
S&E and health graduate students in doctorate-granting institutions, 2005	24,085	527,767	7
Population, 2005 (thousands)	12,430	300,322	6
Civilian labor force, 2005 (thousands)	6,292	150,717	6
Personal income per capita, 2005 (dollars)	34,848	34,495	19
Federal spending			
Total expenditures, 2004 (\$millions)	94,900	2,136,440	5
R&D obligations, 2004 (\$millions)	3,282	98,936	7
Total R&D performance, 2004 (\$millions)	10,813	283,439	10
Industry R&D, 2004 (\$millions)	8,005	201,131	9
Academic R&D, 2005 (\$millions)	2,354	45,725	5
Life sciences (%)	60	60	-
Engineering (%)	17	15	-
Math and computer sciences (%)	8	4	-
SBIR awards, 2000-05	1,224	33,289	9
Utility patents issued to state residents, 2005	2,298	74,630	10
Gross domestic product, 2005 (\$billions)	489	12,492	6

- = no value possible.

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.

Rankings are based on unrounded totals. Reliability of estimates 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 2004

(Thousands of dollars)

Agency	Total	Performer					State, local governments	Rank
		Federal intramural	All FFRDCs	Industrial firms	Universities and colleges	Other nonprofits		
All agencies	3,282,428	170,981	27,794	1,205,256	1,491,130	373,046	14,221	7
Department of Agriculture	57,516	44,490	0	0	11,934	1,079	13	10
Department of Commerce	8,859	149	0	5,354	2,824	5	527	21
Department of Defense	1,161,283	53,482	27,794	814,761	190,849	74,397	0	14
Department of Energy	417,828	54,450	0	326,565	32,942	3,871	0	5
Department of Health and Human Services	1,387,151	10,814	0	37,837	1,047,824	284,960	5,716	5
Department of Homeland Security	3,817	3,636	0	181	0	0	0	21
Department of the Interior	3,608	3,265	0	77	185	10	71	25
Department of Transportation	9,539	695	0	1,298	348	0	7,198	15
Environmental Protection Agency	1,888	0	0	70	1,215	603	0	25
National Aeronautics and Space Administration	48,447	0	0	15,826	31,922	3	696	15
National Science Foundation	182,492	0	0	3,287	171,087	8,118	0	5
Rank	7	18	14	13	3	3	12	-

- = no value possible.

FFRDC = federally funded research and development center.

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.