

Pennsylvania

Science and Engineering Profile							
Characteristic	State	U.S.	Rank	Characteristic	State	U.S.	Rank
Doctoral scientists, 1999 ¹	23,820	518,670	5	Total R&D performance, 1999 (millions).....	\$10,695	\$231,832	6
Doctoral engineers, 1999 ¹	4,290	107,100	8	Industry R&D, 1999 (millions).....	\$8,932	\$177,171	7
S&E doctorates awarded, 2000 ¹	1,240	25,979	6	Academic R&D, 1999 (millions).....	\$1,389	\$27,038	4
of which, in engineering.....	25%	21%		of which, in life sciences.....	57%	57%	
in life sciences.....	23%	26%		in engineering.....	17%	15%	
in psychology.....	16%	14%		in social sciences.....	7%	5%	
S&E postdoctorates, 2000 ¹				Public higher education current-fund			
in doctorate-granting institutions.....	2,582	41,548	5	expenditures, 1997 (millions).....	\$4,941	\$125,236	5
S&E graduate students, 2000 ¹				Number of SBIR awards, 1995-2000.....	889	26,424	9
in doctorate-granting institutions.....	19,609	435,612	6	Patents issued to state residents, 2000.....	3,636	85,068	7
Population, 2000 (thousands).....	12,281	285,231	6	Gross state product, 1999 (billions).....	\$383	\$9,369	6
Civilian labor force, 2000 (thousands).....	5,972	142,172	6	of which, agriculture.....	1%	1%	
Personal income per capita, 2000.....	\$29,533	\$29,451	17	manufacturing, mining, construction.....	24%	22%	
Federal spending				transportation, communication, utilities.....	9%	8%	
Total expenditures, 2000 (millions).....	\$73,715	\$1,615,468	5	wholesale and retail trade.....	15%	16%	
R&D obligations, 1999 (millions).....	\$1,907	\$73,718	13	finance, insurance, real estate.....	18%	19%	
				services.....	22%	21%	
				government.....	10%	12%	

NOTE: 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.

¹Data on graduate students, doctoral scientists and 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: Fiscal Year 1999								
Agency	Performer							
	Total	Federal Intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank, total
[In thousands of dollars]								
Total, all agencies.....	1,907,139	168,382	16,927	597,896	953,933	162,588	7,413	13
Department of Agriculture.....	46,744	35,745	0	0	10,728	206	65	8
Department of Commerce.....	4,803	243	0	2,502	938	520	600	27
Department of Defense.....	514,567	52,704	16,927	302,332	132,316	10,288	0	18
Department of Energy.....	327,308	43,365	0	256,812	23,545	3,586	0	7
Dept. of Health & Human Services.....	847,209	27,040	0	14,360	662,996	141,972	841	5
Department of the Interior.....	8,188	7,534	0	109	470	0	75	28
Department of Transportation.....	10,114	0	0	1,838	2,409	35	5,832	16
Environmental Protection Agency.....	5,718	0	0	437	3,580	1,701	0	23
National Aeronautics and Space Admin.....	39,333	1,751	0	18,277	16,856	2,449	0	18
National Science Foundation.....	103,155	0	0	1,229	100,095	1,831	0	6
State rank, total.....	13	19	17	14	3	7	9	na

NOTE: 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.

KEY: FFRDC = federally funded research and development center; SBIR = small business innovation research; na = not applicable.

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".