



APPENDIX TABLE 5-4

Higher education R&D expenditures, by source of funds and field: FY 2016

(Thousands of dollars)

Field ^a	All R&D expenditures	Federal government	State and local government	Institutions ^b	Business	Nonprofit organizations	All other sources
All fields	71,833,308	38,793,542	4,025,280	17,974,962	4,210,563	4,614,800	2,214,161
Science	56,290,662	31,090,354	3,023,028	13,541,084	3,031,096	3,868,151	1,736,949
Computer and information sciences	2,077,884	1,442,771	49,502	399,965	90,288	59,588	35,770
Geosciences, atmospheric sciences, and ocean sciences	3,087,774	1,992,990	157,693	614,647	109,478	127,763	85,203
Atmospheric science and meteorology	626,518	513,275	18,416	68,923	6,319	7,660	11,925
Geological and earth sciences	999,351	605,706	47,334	226,541	51,237	32,557	35,976
Ocean sciences and marine sciences	1,097,864	665,121	59,874	241,440	32,896	69,841	28,692
Geosciences, atmospheric sciences, and ocean sciences nec	364,041	208,888	32,069	77,743	19,026	17,705	8,610
Life sciences	40,887,850	21,798,334	2,437,745	9,700,749	2,569,302	3,038,475	1,343,245
Agricultural sciences	3,293,092	976,912	873,403	1,031,049	166,341	134,067	111,320
Biological and biomedical sciences	13,048,981	7,707,943	554,094	2,983,417	552,727	958,620	292,180
Health sciences	22,393,716	12,098,295	813,806	5,025,036	1,802,695	1,832,951	820,933
Natural resources and conservation	689,725	315,559	115,681	193,967	14,949	30,632	18,937
Life sciences nec	1,462,336	699,625	80,761	467,280	32,590	82,205	99,875



Field ^a	All R&D expenditures	Federal government	State and local government	Institutions ^b	Business	Nonprofit organizations	All other sources
Mathematics and statistics	681,661	444,419	25,714	170,414	8,844	23,601	8,669
Physical sciences	4,893,565	3,286,816	93,518	1,044,829	139,153	200,852	128,397
Astronomy and astrophysics	622,008	418,147	1,839	122,375	4,578	34,443	40,626
Chemistry	1,775,071	1,097,719	48,331	421,143	82,673	82,956	42,249
Materials science	172,086	111,802	4,579	38,435	9,518	5,465	2,287
Physics	2,124,098	1,523,751	33,703	417,189	37,851	71,221	40,383
Physical sciences nec	200,302	135,397	5,066	45,687	4,533	6,767	2,852
Psychology	1,218,721	761,433	49,603	291,319	13,084	84,105	19,177
Social sciences	2,366,571	898,576	145,563	908,025	50,569	282,278	81,560
Anthropology	96,505	39,440	2,501	42,190	1,982	7,860	2,532
Economics	396,393	112,338	37,543	166,032	8,910	54,860	16,710
Political science and government	385,245	103,681	15,042	177,119	3,991	61,439	23,973
Sociology, demography, and population studies	504,594	269,371	27,602	135,118	8,213	52,471	11,819
Social sciences nec	983,834	373,746	62,875	387,566	27,473	105,648	26,526
Sciences nec	1,076,636	465,015	63,690	411,136	50,378	51,489	34,928
Engineering	11,381,727	6,583,476	699,032	2,335,527	1,055,444	359,441	348,807
Aerospace, aeronautical and astronautical	883,260	623,571	24,846	115,771	80,432	31,049	7,591
Bioengineering and biomedical	1,084,355	650,752	56,057	254,840	46,976	53,428	22,302



Field ^a	All R&D expenditures	Federal government	State and local government	Institutions ^b	Business	Nonprofit organizations	All other sources
Chemical	885,273	467,678	40,386	199,334	121,432	34,328	22,115
Civil	1,331,155	591,637	221,119	348,873	84,724	46,354	38,448
Electrical, electronic, and communications	2,517,147	1,742,632	51,270	416,262	167,403	55,818	83,762
Industrial and manufacturing	239,078	148,464	10,846	56,714	16,372	3,652	3,030
Mechanical	1,435,828	860,745	55,454	279,079	169,124	33,587	37,839
Metallurgical and materials	771,683	442,893	29,270	181,287	74,702	19,512	24,019
Engineering nec	2,233,948	1,055,104	209,784	483,367	294,279	81,713	109,701
Non-S&E fields ^a	4,160,919	1,119,712	303,220	2,098,351	124,023	387,208	128,405
Business management and business administration	649,856	71,124	24,306	424,700	51,615	44,262	33,849
Communications and communications technologies	168,861	36,732	6,316	96,493	3,544	21,318	4,458
Education	1,352,650	630,205	100,636	419,442	26,792	147,875	27,700
Humanities	435,079	54,957	11,134	294,087	3,621	52,003	19,277
Law	190,443	28,244	10,073	109,778	8,527	26,686	7,135
Social work	208,969	93,616	28,544	59,096	2,874	19,086	5,753
Visual and performing arts	142,445	10,342	16,367	99,765	2,016	8,892	5,063
Non-S&E nec	1,012,616	194,492	105,844	594,990	25,034	67,086	25,170



nec = not elsewhere classified.

^a As part of the reclassification of disciplines, some R&D field names have changed.

^b Academic institutions' funds exclude research funds spent from multipurpose accounts.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey (HERD), FY 2016.

Science and Engineering Indicators 2018