

TABLE 17

Higher education R&D expenditures for equipment, by R&D field, source of funds, and institutional control: FY 2019

(Dollars in thousands)

Field	All expenditures			Federal			Nonfederal		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
All R&D fields	2,433,525	1,745,660	687,865	1,065,901	696,751	369,150	1,367,624	1,048,909	318,715
Science	1,616,462	1,113,722	502,740	755,246	479,528	275,718	861,216	634,194	227,022
Computer and information sciences	81,785	50,482	31,303	44,768	28,987	15,781	37,017	21,495	15,522
Geosciences, atmospheric sciences, and ocean sciences	108,984	92,571	16,413	69,685	60,306	9,379	39,299	32,265	7,034
Atmospheric science and meteorology	19,105	16,442	2,663	13,554	11,611	1,943	5,551	4,831	720
Geological and earth sciences	38,369	29,333	9,036	17,984	12,968	5,016	20,385	16,365	4,020
Ocean sciences and marine sciences	42,810	40,092	2,718	32,883	31,491	1,392	9,927	8,601	1,326
Geosciences, atmospheric sciences, and ocean sciences nec	8,700	6,704	1,996	5,264	4,236	1,028	3,436	2,468	968
Life sciences	968,567	680,075	288,492	376,377	225,401	150,976	592,190	454,674	137,516
Agricultural sciences	80,396	78,480	1,916	18,556	17,619	937	61,840	60,861	979
Biological and biomedical sciences	450,427	283,060	167,367	207,058	117,889	89,169	243,369	165,171	78,198
Health sciences	388,011	285,143	102,868	136,534	82,487	54,047	251,477	202,656	48,821
Natural resources and conservation	11,721	10,738	983	3,532	3,256	276	8,189	7,482	707
Life sciences nec	38,012	22,654	15,358	10,697	4,150	6,547	27,315	18,504	8,811
Mathematics and statistics	7,938	4,176	3,762	4,323	2,959	1,364	3,615	1,217	2,398
Physical sciences	378,838	232,017	146,821	239,981	146,551	93,430	138,857	85,466	53,391
Astronomy and astrophysics	31,787	20,028	11,759	18,658	11,175	7,483	13,129	8,853	4,276
Chemistry	124,277	89,934	34,343	69,812	49,149	20,663	54,465	40,785	13,680
Materials science	17,684	11,408	6,276	10,769	6,773	3,996	6,915	4,635	2,280
Physics	180,942	101,466	79,476	131,221	74,378	56,843	49,721	27,088	22,633
Physical sciences nec	24,148	9,181	14,967	9,521	5,076	4,445	14,627	4,105	10,522
Psychology	16,725	12,008	4,717	8,047	5,354	2,693	8,678	6,654	2,024
Social sciences	15,003	11,767	3,236	3,605	3,343	262	11,398	8,424	2,974
Anthropology	1,757	1,317	440	316	249	67	1,441	1,068	373
Economics	1,369	1,176	193	105	83	22	1,264	1,093	171
Political science and government	1,224	1,130	94	356	343	13	868	787	81
Sociology, demography, and population studies	1,891	1,539	352	566	475	91	1,325	1,064	261
Social sciences nec	8,762	6,605	2,157	2,262	2,193	69	6,500	4,412	2,088
Sciences nec	38,622	30,626	7,996	8,460	6,627	1,833	30,162	23,999	6,163
Engineering	770,261	597,002	173,259	305,152	212,328	92,824	465,109	384,674	80,435
Aerospace, aeronautical, and astronautical engineering	44,407	32,692	11,715	24,698	20,027	4,671	19,709	12,665	7,044
Bioengineering and biomedical engineering	59,748	37,985	21,763	26,910	14,535	12,375	32,838	23,450	9,388
Chemical engineering	46,903	34,695	12,208	17,049	11,382	5,667	29,854	23,313	6,541
Civil engineering	34,843	29,554	5,289	12,342	10,339	2,003	22,501	19,215	3,286
Electrical, electronic, and communications engineering	136,852	95,896	40,956	80,364	63,550	16,814	56,488	32,346	24,142
Industrial and manufacturing engineering	26,118	15,507	10,611	18,575	11,118	7,457	7,543	4,389	3,154

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	Total	Public	Private	Total	Public	Private	Total	Public	Private
Mechanical engineering	93,404	65,717	27,687	49,220	34,251	14,969	44,184	31,466	12,718
Metallurgical and materials engineering	68,605	48,858	19,747	38,508	23,688	14,820	30,097	25,170	4,927
Engineering nec	259,381	236,098	23,283	37,486	23,438	14,048	221,895	212,660	9,235
Non-S&E	46,802	34,936	11,866	5,503	4,895	608	41,299	30,041	11,258
Business management and business administration	7,606	4,020	3,586	214	206	8	7,392	3,814	3,578
Communication and communications technologies	3,996	3,945	51	141	130	11	3,855	3,815	40
Education	4,296	3,797	499	1,154	1,131	23	3,142	2,666	476
Humanities	4,435	2,339	2,096	26	26	0	4,409	2,313	2,096
Law	526	519	7	182	182	0	344	337	7
Social work	2,144	2,069	75	173	159	14	1,971	1,910	61
Visual and performing arts	1,416	1,161	255	135	2	133	1,281	1,159	122
Non-S&E nec	22,383	17,086	5,297	3,478	3,059	419	18,905	14,027	4,878

nec = not elsewhere classified; S&E = science and engineering.

Source(s):

National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, FY 2019.