

TABLE 18

## Higher education R&amp;D expenditures for equipment, by R&amp;D field, source of funds, and institutional control: FY 2023

(Dollars in thousands)

Field	All expenditures			Federal			Nonfederal		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
All R&D fields	3,259,897	2,339,646	920,251	1,573,117	1,118,877	454,240	1,686,780	1,220,769	466,011
Science	2,241,374	1,592,102	649,272	1,028,164	709,612	318,552	1,213,210	882,490	330,720
Computer and information sciences	133,914	87,839	46,075	73,273	53,965	19,308	60,641	33,874	26,767
Geosciences, atmospheric sciences, and ocean sciences	149,477	126,397	23,080	93,196	84,032	9,164	56,281	42,365	13,916
Atmospheric science and meteorology	23,967	20,543	3,424	18,240	16,109	2,131	5,727	4,434	1,293
Geological and earth sciences	57,147	42,211	14,936	28,915	24,042	4,873	28,232	18,169	10,063
Ocean sciences and marine sciences	60,956	56,891	4,065	42,381	40,469	1,912	18,575	16,422	2,153
Geosciences, atmospheric sciences, and ocean sciences nec	7,407	6,752	655	3,660	3,412	248	3,747	3,340	407
Life sciences	1,331,012	981,716	349,296	538,741	356,947	181,794	792,271	624,769	167,502
Agricultural sciences	157,445	154,953	2,492	52,081	51,407	674	105,364	103,546	1,818
Biological and biomedical sciences	566,598	361,193	205,405	261,976	159,324	102,652	304,622	201,869	102,753
Health sciences	541,976	414,862	127,114	199,709	129,061	70,648	342,267	285,801	56,466
Natural resources and conservation	19,270	18,224	1,046	7,153	6,560	593	12,117	11,664	453
Life sciences nec	45,723	32,484	13,239	17,822	10,595	7,227	27,901	21,889	6,012
Mathematics and statistics	13,546	4,323	9,223	6,646	3,231	3,415	6,900	1,092	5,808
Physical sciences	526,210	329,911	196,299	288,280	192,110	96,170	237,930	137,801	100,129
Astronomy and astrophysics	50,196	35,657	14,539	24,463	15,682	8,781	25,733	19,975	5,758
Chemistry	179,214	122,035	57,179	82,629	58,200	24,429	96,585	63,835	32,750
Materials science	19,923	14,459	5,464	9,231	6,389	2,842	10,692	8,070	2,622
Physics	223,252	137,847	85,405	149,604	99,111	50,493	73,648	38,736	34,912
Physical sciences nec	53,625	19,913	33,712	22,353	12,728	9,625	31,272	7,185	24,087
Psychology	16,859	10,023	6,836	9,106	4,451	4,655	7,753	5,572	2,181
Social sciences	21,316	13,662	7,654	5,269	4,203	1,066	16,047	9,459	6,588
Anthropology	2,183	1,636	547	666	444	222	1,517	1,192	325
Economics	4,171	3,202	969	1,512	1,392	120	2,659	1,810	849
Political science and government	1,455	1,279	176	583	513	70	872	766	106
Sociology, demography, and population studies	3,168	2,583	585	346	196	150	2,822	2,387	435
Social sciences nec	10,339	4,962	5,377	2,162	1,658	504	8,177	3,304	4,873
Sciences nec	49,040	38,231	10,809	13,653	10,673	2,980	35,387	27,558	7,829
Engineering	946,787	692,397	254,390	526,048	391,954	134,094	420,739	300,443	120,296
Aerospace, aeronautical, and astronautical engineering	129,830	101,862	27,968	81,026	75,476	5,550	48,804	26,386	22,418
Bioengineering and biomedical engineering	96,590	60,148	36,442	44,056	23,052	21,004	52,534	37,096	15,438
Chemical engineering	81,273	62,703	18,570	46,266	32,972	13,294	35,007	29,731	5,276
Civil engineering	55,115	45,759	9,356	24,507	21,339	3,168	30,608	24,420	6,188
Electrical, electronic, and communications engineering	205,886	142,328	63,558	131,082	100,399	30,683	74,804	41,929	32,875

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**Higher education R&D expenditures for equipment, by R&D field, source of funds, and institutional control: FY 2023**

(Dollars in thousands)

Field	All expenditures			Federal			Nonfederal		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
Industrial and manufacturing engineering	31,933	18,023	13,910	18,130	7,946	10,184	13,803	10,077	3,726
Mechanical engineering	129,395	96,324	33,071	70,832	55,898	14,934	58,563	40,426	18,137
Metallurgical and materials engineering	71,977	47,735	24,242	48,955	31,124	17,831	23,022	16,611	6,411
Engineering nec	144,788	117,515	27,273	61,194	43,748	17,446	83,594	73,767	9,827
Non-S&E	71,736	55,147	16,589	18,905	17,311	1,594	52,831	37,836	14,995
Business management and business administration	4,629	3,332	1,297	317	279	38	4,312	3,053	1,259
Communication and communications technologies	3,448	3,138	310	541	316	225	2,907	2,822	85
Education	6,954	5,736	1,218	2,270	1,865	405	4,684	3,871	813
Humanities	4,568	1,542	3,026	241	219	22	4,327	1,323	3,004
Law	743	526	217	121	120	1	622	406	216
Social work	293	279	14	167	156	11	126	123	3
Visual and performing arts	4,688	3,090	1,598	838	667	171	3,850	2,423	1,427
Non-S&E nec	46,413	37,504	8,909	14,410	13,689	721	32,003	23,815	8,188

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

**Source(s):**

National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, FY 2023.