

**TABLE 13**  
**Higher education R&D expenditures, by source of funds and R&D field: FY 2022**

(Dollars in thousands)

Field	All R&D expenditures	Source of funds					
		Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
All R&D fields	97,680,528	53,971,468	4,907,199	24,492,663	5,701,656	5,974,155	2,633,387
Science	76,226,286	42,786,338	3,660,829	18,362,439	4,376,552	4,979,772	2,060,356
Computer and information sciences	3,224,949	2,184,767	76,545	652,629	164,698	87,070	59,240
Geosciences, atmospheric sciences, and ocean sciences	3,690,235	2,478,702	218,642	680,423	90,513	148,997	72,958
Atmospheric science and meteorology	668,918	528,068	17,169	93,954	8,144	14,213	7,370
Geological and earth sciences	1,370,650	875,493	66,599	288,039	48,475	58,672	33,372
Ocean sciences and marine sciences	1,211,130	785,545	107,877	223,759	22,019	50,512	21,418
Geosciences, atmospheric sciences, and ocean sciences nec	439,537	289,596	26,997	74,671	11,875	25,600	10,798
Life sciences	56,498,207	30,958,717	2,929,174	13,333,506	3,840,001	3,799,516	1,637,293
Agricultural sciences	3,935,731	1,265,977	990,784	1,253,587	140,477	146,190	138,716
Biological and biomedical sciences	18,161,442	10,949,628	576,765	4,130,030	883,131	1,180,359	441,529
Health sciences	31,869,957	17,494,324	1,131,259	7,192,949	2,737,909	2,335,052	978,464
Natural resources and conservation	1,012,919	480,042	146,231	295,046	23,054	44,624	23,922
Life sciences nec	1,518,158	768,746	84,135	461,894	55,430	93,291	54,662
Mathematics and statistics	879,526	537,322	26,951	248,527	12,774	45,963	7,989
Physical sciences	6,167,583	4,212,405	109,478	1,313,681	176,315	263,520	92,184
Astronomy and astrophysics	813,900	581,652	5,647	145,274	4,856	51,438	25,033
Chemistry	2,126,741	1,322,328	47,140	556,117	81,665	88,605	30,886
Materials science	286,461	195,404	2,900	48,941	26,914	7,150	5,152
Physics	2,669,076	1,941,833	39,810	503,922	50,312	107,383	25,816
Physical sciences nec	271,405	171,188	13,981	59,427	12,568	8,944	5,297
Psychology	1,443,894	875,330	47,240	397,720	16,385	88,936	18,283
Social sciences	3,165,440	1,075,470	167,433	1,253,436	43,081	482,180	143,840
Anthropology	132,764	40,119	4,079	73,935	1,961	7,221	5,449
Economics	667,707	194,381	46,611	253,363	13,403	118,085	41,864
Political science and government	488,480	95,363	16,138	233,476	4,044	105,314	34,145
Sociology, demography, and population studies	616,142	272,683	32,664	208,094	5,822	84,437	12,442
Social sciences nec	1,260,347	472,924	67,941	484,568	17,851	167,123	49,940
Sciences nec	1,156,452	463,625	85,366	482,517	32,785	63,590	28,569
Engineering	15,596,634	9,694,378	891,234	3,031,767	1,184,067	407,915	387,273
Aerospace, aeronautical, and astronautical engineering	1,647,191	1,246,002	30,324	163,156	177,612	4,019	26,078
Bioengineering and biomedical engineering	1,726,307	1,100,258	52,882	373,311	67,913	101,641	30,302
Chemical engineering	1,108,245	646,644	41,255	251,281	99,665	44,709	24,691
Civil engineering	1,647,038	784,286	275,882	408,958	89,415	47,997	40,500
Electrical, electronic, and communications engineering	3,436,892	2,484,203	97,370	507,452	205,336	79,674	62,857

TABLE 13

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(Dollars in thousands)

Field	All R&D expenditures	Source of funds					
		Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
Industrial and manufacturing engineering	615,228	434,246	32,440	98,616	34,350	10,233	5,343
Mechanical engineering	2,062,508	1,409,792	69,034	344,809	164,831	37,558	36,484
Metallurgical and materials engineering	886,681	589,129	27,191	170,574	59,051	18,723	22,013
Engineering nec	2,466,544	999,818	264,856	713,610	285,894	63,361	139,005
Non-S&E	5,857,608	1,490,752	355,136	3,098,457	141,037	586,468	185,758
Business management and business administration	1,081,380	97,962	54,624	794,310	36,627	51,713	46,144
Communication and communications technologies	213,000	42,707	12,276	110,994	5,369	34,284	7,370
Education	1,740,784	783,518	143,117	533,086	39,802	212,572	28,689
Humanities	713,685	68,956	16,674	498,360	13,308	87,590	28,797
Law	358,693	32,391	14,542	208,060	8,970	73,053	21,677
Social work	363,079	181,943	36,805	95,163	5,250	38,758	5,160
Visual and performing arts	224,572	21,188	7,736	171,166	1,220	14,082	9,180
Non-S&E nec	1,162,415	262,087	69,362	687,318	30,491	74,416	38,741

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

**Note(s):**

This table includes only institutions reporting \$1 million or more in total R&D expenditures in 2021. Institutions reporting less than \$1 million in total R&D expenditures in 2021 completed a shorter version of the survey form in FY 2022, and that form did not collect R&D expenditures by source and detailed field. For R&D expenditures by major field at institutions completing the shorter version of the survey, see table 83.

**Source(s):**

National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, FY 2022.