

TABLE 13

Higher education R&D expenditures, by source of funds and R&D field: FY 2021

(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	89,723,447	49,143,460	4,736,015	22,448,362	5,115,480	5,590,273	2,689,857
Science	70,316,530	39,063,689	3,452,180	17,066,562	3,943,191	4,685,613	2,105,295
Computer and information sciences	2,951,923	1,994,728	69,099	597,889	150,733	77,519	61,955
Geosciences, atmospheric sciences, and ocean sciences	3,295,883	2,145,163	206,815	656,303	76,015	130,770	80,817
Atmospheric science and meteorology	624,579	484,265	18,889	93,352	6,711	11,714	9,648
Geological and earth sciences	1,242,339	772,157	61,483	279,698	36,697	51,507	40,797
Ocean sciences and marine sciences	1,035,519	640,634	98,407	209,010	21,115	44,793	21,560
Geosciences, atmospheric sciences, and ocean sciences nec	393,446	248,107	28,036	74,243	11,492	22,756	8,812
Life sciences	52,364,596	28,452,956	2,734,533	12,432,608	3,445,313	3,649,996	1,649,190
Agricultural sciences	3,548,896	1,099,585	921,680	1,134,280	132,301	137,492	123,558
Biological and biomedical sciences	16,557,201	10,001,728	568,953	3,806,544	713,278	1,085,048	381,650
Health sciences	29,884,728	16,138,445	1,030,872	6,809,105	2,530,643	2,292,843	1,082,820
Natural resources and conservation	934,765	429,905	140,192	271,302	20,765	50,191	22,410
Life sciences nec	1,439,006	783,293	72,836	411,377	48,326	84,422	38,752
Mathematics and statistics	772,935	475,827	27,009	212,549	12,149	37,883	7,518
Physical sciences	5,740,630	3,852,415	113,326	1,247,864	171,349	239,440	116,236
Astronomy and astrophysics	741,127	509,733	6,161	140,021	3,561	49,922	31,729
Chemistry	1,999,546	1,239,825	47,846	516,656	73,249	83,572	38,398
Materials science	285,931	174,331	5,632	67,374	25,498	8,048	5,048
Physics	2,463,331	1,767,740	43,643	475,272	46,537	92,923	37,216
Physical sciences nec	250,695	160,786	10,044	48,541	22,504	4,975	3,845
Psychology	1,326,030	812,660	44,942	358,712	12,198	77,025	20,493
Social sciences	2,842,033	955,852	168,142	1,109,283	44,268	427,640	136,848
Anthropology	109,546	29,533	3,428	62,278	1,892	7,255	5,160
Economics	549,132	137,555	42,387	215,777	12,495	101,381	39,537
Political science and government	425,661	86,443	18,063	196,891	5,115	88,338	30,811
Sociology, demography, and population studies	552,551	232,318	32,173	191,496	6,208	74,055	16,301
Social sciences nec	1,205,143	470,003	72,091	442,841	18,558	156,611	45,039
Sciences nec	1,022,500	374,088	88,314	451,354	31,166	45,340	32,238
Engineering	14,293,487	8,714,829	946,273	2,794,243	1,042,309	377,776	418,057
Aerospace, aeronautical, and astronautical engineering	1,451,964	1,110,088	28,477	149,857	128,926	3,196	31,420

TABLE 13

Higher education R&D expenditures, by source of funds and R&D field: FY 2021

(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
Bioengineering and biomedical engineering	1,560,381	960,152	55,254	359,195	62,568	88,596	34,616
Chemical engineering	1,024,301	572,307	41,478	233,601	106,178	43,933	26,804
Civil engineering	1,482,377	664,620	257,027	388,675	80,954	42,085	49,016
Electrical, electronic, and communications engineering	3,080,363	2,209,153	83,239	461,916	174,968	75,350	75,737
Industrial and manufacturing engineering	573,915	384,142	29,643	117,343	25,953	12,458	4,376
Mechanical engineering	1,881,551	1,274,012	64,449	327,594	143,926	33,715	37,855
Metallurgical and materials engineering	841,196	559,447	27,752	152,026	57,551	19,978	24,442
Engineering nec	2,397,439	980,908	358,954	604,036	261,285	58,465	133,791
Non-S&E	5,113,430	1,364,942	337,562	2,587,557	129,980	526,884	166,505
Business management and business administration	934,020	97,277	40,584	669,753	30,096	46,271	50,039
Communication and communications technologies	186,003	39,337	10,502	95,725	5,707	29,296	5,436
Education	1,616,705	701,430	132,307	517,116	41,470	197,170	27,212
Humanities	556,694	56,658	15,659	391,841	11,756	59,858	20,922
Law	282,662	28,777	15,473	161,967	5,933	54,897	15,615
Social work	319,273	165,278	29,196	84,104	3,327	34,434	2,934
Visual and performing arts	179,563	11,476	6,267	139,743	4,895	10,342	6,840
Non-S&E nec	1,038,510	264,709	87,574	527,308	26,796	94,616	37,507

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

Note(s):

This table includes only institutions reporting \$1 million or more in total R&D expenditures in 2020. Institutions reporting less than \$1 million in total R&D expenditures in 2020 completed a shorter version of the survey form in FY 2021, 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 2021.