

TABLE 12

Higher education R&D expenditures, by source of funds and R&D field: FY 2020

(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	86,296,178	46,143,829	4,596,633	21,946,790	5,184,925	5,745,238	2,678,763
Science	67,567,807	36,778,903	3,366,120	16,620,734	3,910,498	4,824,295	2,067,257
Computer and information sciences	2,923,149	2,000,937	59,461	578,481	156,246	81,578	46,446
Geosciences, atmospheric sciences, and ocean sciences	3,281,251	2,109,065	192,307	658,966	84,585	149,331	86,997
Atmospheric science and meteorology	612,890	471,158	20,739	92,002	6,616	10,302	12,073
Geological and earth sciences	1,159,627	696,991	56,003	276,947	42,549	53,207	33,930
Ocean sciences and marine sciences	1,136,259	713,086	89,392	214,593	25,140	62,473	31,575
Geosciences, atmospheric sciences, and ocean sciences nec	372,475	227,830	26,173	75,424	10,280	23,349	9,419
Life sciences	49,640,508	26,254,002	2,699,498	11,954,881	3,388,718	3,725,032	1,618,377
Agricultural sciences	3,626,162	1,072,057	950,453	1,160,242	145,810	153,008	144,592
Biological and biomedical sciences	15,761,876	9,339,917	558,750	3,686,204	703,545	1,108,185	365,275
Health sciences	28,026,662	14,733,751	987,527	6,452,035	2,470,203	2,336,032	1,047,114
Natural resources and conservation	900,697	410,120	140,342	255,659	24,851	46,367	23,358
Life sciences nec	1,325,111	698,157	62,426	400,741	44,309	81,440	38,038
Mathematics and statistics	798,975	486,259	26,640	223,162	13,335	39,436	10,143
Physical sciences	5,667,046	3,789,237	94,312	1,257,087	170,038	241,118	115,254
Astronomy and astrophysics	780,080	542,725	7,009	144,050	3,872	52,890	29,534
Chemistry	1,926,772	1,166,743	38,428	523,173	81,497	78,408	38,523
Materials science	252,193	156,894	3,233	57,559	22,558	8,275	3,674
Physics	2,434,467	1,736,916	34,396	481,101	44,965	97,849	39,240
Physical sciences nec	273,534	185,959	11,246	51,204	17,146	3,696	4,283
Psychology	1,357,081	808,565	47,653	374,133	15,469	87,853	23,408
Social sciences	2,947,338	969,278	175,297	1,163,690	49,205	451,233	138,635
Anthropology	119,329	38,847	3,855	64,794	1,954	5,480	4,399
Economics	562,192	121,461	48,994	223,229	14,023	111,551	42,934
Political science and government	425,267	78,462	13,079	202,670	7,156	86,889	37,011
Sociology, demography, and population studies	591,754	253,213	34,578	198,676	6,143	86,921	12,223
Social sciences nec	1,248,796	477,295	74,791	474,321	19,929	160,392	42,068
Sciences nec	952,459	361,560	70,952	410,334	32,902	48,714	27,997
Engineering	13,692,756	8,120,891	895,910	2,720,559	1,129,319	393,387	432,690
Aerospace, aeronautical, and astronautical engineering	1,295,759	957,795	33,259	130,543	129,465	4,683	40,014
Bioengineering and biomedical engineering	1,468,229	906,145	48,150	331,075	60,248	86,474	36,137
Chemical engineering	999,312	521,758	44,926	240,663	116,581	48,181	27,203
Civil engineering	1,422,418	606,519	255,959	377,850	98,399	46,087	37,604
Electrical, electronic, and communications engineering	3,048,420	2,143,397	79,138	482,858	187,270	74,512	81,245
Industrial and manufacturing engineering	588,127	384,795	35,472	113,635	36,419	12,205	5,601

TABLE 12

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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
Mechanical engineering	1,812,916	1,160,117	66,529	333,847	179,189	36,603	36,631
Metallurgical and materials engineering	816,610	504,528	29,785	161,984	64,388	19,043	36,882
Engineering nec	2,240,965	935,837	302,692	548,104	257,360	65,599	131,373
Non-S&E	5,035,615	1,244,035	334,603	2,605,497	145,108	527,556	178,816
Business management and business administration	878,721	74,126	41,108	640,841	26,819	45,597	50,230
Communication and communications technologies	191,813	40,830	10,816	98,931	6,602	29,566	5,068
Education	1,603,978	667,043	131,575	520,173	53,327	201,358	30,502
Humanities	563,007	54,155	17,922	385,675	13,756	67,083	24,416
Law	267,565	26,697	12,404	158,838	7,486	44,759	17,381
Social work	307,145	140,836	29,722	93,047	5,203	35,774	2,563
Visual and performing arts	171,605	15,140	6,626	129,234	2,747	10,584	7,274
Non-S&E nec	1,051,781	225,208	84,430	578,758	29,168	92,835	41,382

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 2019. Institutions reporting less than \$1 million in total R&D expenditures in 2019 completed a shorter version of the survey form in FY 2020, 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 82.

Source(s):

National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, FY 2020.