TABLE A-18

Imputed amounts for total and federally financed higher education R&D equipment expenditures, by R&D field: FY 2019

(Dollars in thousands)

R&D field	Total			Federally financed		
	All R&D expenditures	Imputed amount	Imputed amount as % of total	All R&D expenditures	Imputed amount	Imputed amount as % of total
All R&D fields	2,433,525	5,699	0.2	1,065,901	4,012	0.4
All science and engineering	2,386,723	92,094	3.9	1,060,398	32,700	3.1
Computer and information sciences	81,785	10,641	13.0	44,768	1,961	4.4
Geosciences, atmospheric sciences, and ocean sciences	108,984	2,495	2.3	69,685	280	0.4
Atmospheric science and meteorology	19,105	621	3.3	13,554	71	0.5
Geological and earth sciences	38,369	671	1.7	17,984	84	0.5
Ocean sciences and marine sciences	42,810	674	1.6	32,883	84	0.3
Geosciences, atmospheric sciences, and ocean sciences nec	8,700	529	6.1	5,264	41	0.8
Life sciences	968,567	17,884	1.8	376,377	10,136	2.7
Agricultural sciences	80,396	168	0.2	18,556	110	0.6
Biological and biomedical sciences	450,427	10,670	2.4	207,058	5,509	2.7
Health sciences	388,011	6,984	1.8	136,534	4,497	3.3
Natural resources and conservation	11,721	42	0.4	3,532	16	0.5
Life sciences nec	38,012	20	0.1	10,697	4	0.0
Mathematics and statistics	7,938	3,064	38.6	4,323	852	19.7
Physical sciences	378,838	14,748	3.9	239,981	4,554	1.9
Astronomy and astrophysics	31,787	3,679	11.6	18,658	1,484	8.0
Chemistry	124,277	976	0.8	69,812	598	0.9
Materials science	17,684	76	0.4	10,769	76	0.7
Physics	180,942	7,045	3.9	131,221	2,114	1.6
Physical sciences nec	24,148	2,972	12.3	9,521	282	3.0
Psychology	16,725	310	1.9	8,047	285	3.5
Social sciences	15,003	344	2.3	3,605	103	2.9
Anthropology	1,757	2	0.1	316	1	0.3
Economics	1,369	13	0.9	105	3	2.9
Political science and government	1,224	22	1.8	356	3	0.8
Sociology, demography, and population studies	1,891	249	13.2	566	80	14.1
Social sciences nec	8,762	58	0.7	2,262	16	0.7
Sciences nec	38,622	1,694	4.4	8,460	774	9.1
Engineering	770,261	40,914	5.3	305,152	13,755	4.5
Aerospace, aeronautical, and astronautical engineering	44,407	4,303	9.7	24,698	1,214	4.9
Bioengineering and biomedical engineering	59,748	1,341	2.2	26,910	790	2.9
Chemical engineering	46,903	788	1.7	17,049	469	2.8
Civil engineering	34,843	349	1.0	12,342	147	1.2
Electrical, electronic, and communications engineering	136,852	18,934	13.8	80,364	5,482	6.8
Industrial and manufacturing engineering	26,118	3,432	13.1	18,575	959	5.2
Mechanical engineering	93,404	8,762	9.4	49,220	3,804	7.7
Metallurgical and materials engineering	68,605	608	0.9	38,508	217	0.6

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Imputed amounts for total and federally financed higher education R&D equipment expenditures, by R&D field: FY 2019

(Dollars in thousands)

R&D field	Total			Federally financed		
	All R&D expenditures	Imputed amount	Imputed amount as % of total	All R&D expenditures	Imputed amount	Imputed amount as % of total
Engineering nec	259,381	2,397	0.9	37,486	673	1.8
All non-science and engineering	46,802	268	0.6	5,503	61	1.1
Business management and business administration	7,606	36	0.5	214	4	1.9
Communication and communications technologies	3,996	7	0.2	141	0	0.0
Education	4,296	73	1.7	1,154	31	2.7
Humanities	4,435	41	0.9	26	1	3.8
Law	526	10	1.9	182	1	0.5
Social work	2,144	9	0.4	173	4	2.3
Visual and performing arts	1,416	10	0.7	135	0	0.0
Non-science and engineering nec	22,383	82	0.4	3,478	20	0.6

nec = not elsewhere classified.

Note(s):

Imputation rate at total level is lower than imputation rates at detail levels because some institutions could provide totals but not details. Because of rounding, detail may not add to total. Percentages calculated on unrounded numbers. This table includes only institutions reporting $1 million or more in total R&D expenditures in FY 2018. Institutions reporting less than $1 million in total R&D expenditures in FY 2018 completed a shorter version of the survey form in FY 2019 that did not include this question.

Source(s):

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