

Table SURD-1

## Current fund expenditures for research equipment at academic institutions, by R&amp;D field: FY 2004–19

(Millions of current dollars, millions of constant 2012 dollars, and percent distribution)

Field	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Current \$millions															
All fields	1,895	1,880	1,826	1,824	1,874	1,947	2,148	2,256	2,041	2,254	2,036	2,120	2,169	2,191	2,144	2,434
Science	1,501	1,441	1,383	1,395	1,439	1,472	1,603	1,627	1,430	1,547	1,337	1,504	1,520	1,538	1,507	1,616
Computer and information sciences	105	72	70	75	80	90	65	91	73	273	70	88	97	103	90	82
Geosciences, atmospheric sciences, and ocean sciences	126	123	123	136	144	126	151	115	121	116	116	126	111	107	95	109
Atmospheric science and meteorology	20	26	34	31	27	17	24	21	20	18	22	20	21	26	17	19
Geological and earth sciences	43	44	35	36	39	47	52	47	53	47	52	50	42	33	40	38
Ocean sciences and marine sciences	41	40	44	62	70	52	58	32	29	39	32	46	39	37	33	43
Geosciences, atmospheric sciences, and ocean sciences nec	22	13	10	7	9	11	17	15	19	12	10	11	9	10	6	9
Life sciences	836	826	752	737	796	786	908	928	817	747	736	818	845	849	872	969
Agricultural sciences	79	72	75	79	103	81	81	74	85	79	84	90	89	77	79	80
Biological and biomedical sciences	348	326	302	272	303	299	396	393	334	313	310	332	365	384	393	450
Health sciences	376	378	337	340	355	367	390	413	358	317	297	324	339	335	357	388
Natural resources and conservation	na	na	na	na	na	na	na	na	na	na	na	na	11	11	14	12
Life sciences nec	34	50	37	46	35	40	42	47	39	39	45	71	42	43	30	38
Mathematics and statistics	8	9	9	9	9	9	8	7	7	7	6	6	9	7	9	8
Physical sciences	339	325	329	310	302	333	364	380	331	329	344	398	389	402	384	379
Astronomy and astrophysics	25	23	20	29	27	29	24	26	28	20	26	54	36	40	31	32
Chemistry	118	113	122	113	114	136	162	156	133	118	119	120	124	121	120	124
Materials science	na	na	na	na	na	na	na	na	na	na	na	na	10	15	17	18
Physics	160	159	153	143	136	149	154	180	156	166	185	206	203	209	192	181
Physical sciences nec	36	30	34	25	25	20	24	18	14	25	14	17	16	17	23	24
Psychology	18	15	18	14	15	24	17	17	21	14	16	14	15	16	16	17
Social sciences	16	19	14	20	22	26	15	16	11	12	11	10	12	14	13	15
Anthropology	na	na	na	na	na	na	na	na	na	na	na	na	1	2	2	2
Economics	2	2	2	2	2	1	1	2	1	3	2	2	4	3	3	1
Political science and government	2	2	1	1	1	2	1	1	1	1	0	1	1	1	1	1
Sociology, demography, and population studies	2	3	2	3	2	5	2	2	1	2	2	3	2	2	1	2
Social sciences nec	9	12	8	15	16	18	10	10	7	7	7	4	4	6	6	9
Sciences nec	54	53	67	95	71	76	76	74	50	49	39	45	42	41	27	39
Engineering	394	439	443	428	435	475	511	572	552	663	654	564	611	612	596	770
Aerospace, aeronautical, and astronautical	21	20	22	22	34	27	35	34	33	35	29	35	44	38	31	44
Bioengineering and biomedical	19	29	25	27	28	32	40	53	45	47	37	44	53	53	67	60
Chemical	55	37	39	37	39	48	53	56	54	59	47	46	46	44	43	47
Civil	34	29	27	29	32	35	38	51	42	61	33	31	31	32	33	35
Electrical, electronic, and communications	81	91	94	92	88	98	114	139	136	161	113	120	113	130	126	137

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Field	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Industrial and manufacturing	na	na	na	na	na	na	na	na	na	na	na	na	7	12	24	26
Mechanical	55	76	84	75	76	77	100	85	84	110	75	77	72	80	86	93
Metallurgical and materials	38	51	54	54	52	58	51	52	60	63	242	116	50	51	51	69
Engineering nec	91	106	98	92	85	101	81	101	98	128	78	96	195	172	135	259
Non-S&E	na	na	na	na	na	na	35	57	59	45	45	51	38	40	42	47
Business management and business administration	na	na	na	na	na	na	8	6	6	7	4	11	4	4	6	8
Communication and communications technologies	na	na	na	na	na	na	8	12	13	2	1	5	5	6	4	4
Education	na	na	na	na	na	na	7	11	7	6	7	6	8	8	6	4
Humanities	na	na	na	na	na	na	2	2	2	3	3	4	3	7	6	4
Law	na	na	na	na	na	na	0	0	0	0	0	0	0	1	0	1
Social work	na	na	na	na	na	na	0	1	0	0	0	0	0	0	0	2
Visual and performing arts	na	na	na	na	na	na	1	1	1	1	1	2	2	2	1	1
Non-S&E nec	na	na	na	na	na	na	9	25	28	25	28	23	17	13	17	22
	2012 constant \$millions															
All fields	2,235	2,150	2,028	1,972	1,988	2,049	2,235	2,299	2,041	2,216	1,965	2,026	2,052	2,034	1,944	2,168
Science	1,770	1,648	1,535	1,509	1,526	1,549	1,668	1,658	1,430	1,520	1,290	1,438	1,438	1,428	1,366	1,440
Computer and information sciences	124	82	78	81	85	95	67	92	73	268	68	84	92	96	81	73
Geosciences, atmospheric sciences, and ocean sciences	148	141	137	147	153	133	158	117	121	114	112	121	105	99	87	97
Atmospheric science and meteorology	24	30	38	33	28	18	25	21	20	18	22	19	20	24	16	17
Geological and earth sciences	51	51	39	39	41	49	54	48	53	46	50	48	40	31	36	34
Ocean sciences and marine sciences	48	46	49	67	74	55	60	33	29	38	31	44	37	35	30	38
Geosciences, atmospheric sciences, and ocean sciences nec	25	15	11	7	9	11	18	16	19	12	9	11	9	9	5	8
Life sciences	987	944	835	796	844	828	945	946	817	734	710	782	799	788	791	863
Agricultural sciences	93	82	84	85	109	86	84	75	85	78	81	86	84	71	72	72
Biological and biomedical sciences	410	373	335	295	322	315	412	401	334	307	299	318	345	356	356	401
Health sciences	444	432	375	367	377	386	405	421	358	311	286	310	320	311	323	346
Natural resources and conservation	na	na	na	na	na	na	na	na	na	na	na	na	10	10	13	10
Life sciences nec	40	57	41	49	37	42	44	48	39	38	43	68	40	40	27	34
Mathematics and statistics	10	10	10	10	9	10	8	7	7	7	6	5	9	7	8	7
Physical sciences	399	372	366	336	321	351	379	387	331	323	332	380	368	373	348	337
Astronomy and astrophysics	29	26	22	32	29	31	25	26	28	19	25	52	34	37	28	28
Chemistry	139	129	135	122	121	143	169	159	133	116	115	115	118	113	109	111
Materials science	na	na	na	na	na	na	na	na	na	na	na	na	9	14	16	16
Physics	189	182	170	154	144	157	160	183	156	164	178	197	192	194	174	161
Physical sciences nec	43	34	38	27	26	21	25	18	14	25	14	16	15	16	21	22
Psychology	21	17	20	15	16	26	17	17	21	13	15	13	14	15	15	15

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Field	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Social sciences	18	21	15	22	23	27	15	16	11	12	11	10	11	13	12	13
Anthropology	na	na	na	na	na	na	na	na	na	na	na	na	1	2	2	2
Economics	2	3	2	2	2	1	1	2	1	3	2	2	3	3	3	1
Political science and government	2	2	1	1	1	2	1	1	1	1	0	1	1	1	1	1
Sociology, demography, and population studies	3	3	3	3	2	5	2	2	1	2	2	3	2	1	1	2
Social sciences nec	11	14	9	16	17	19	11	11	7	7	6	4	4	6	5	8
Sciences nec	63	61	75	103	75	79	79	75	50	48	37	43	40	38	24	34
Engineering	465	502	492	463	462	500	531	583	552	652	631	539	578	568	540	686
Aerospace, aeronautical, and astronautical	25	23	25	24	36	28	36	35	33	35	28	33	41	35	28	40
Bioengineering and biomedical	22	33	28	29	30	33	41	54	45	46	36	42	50	49	61	53
Chemical	65	43	43	40	41	50	55	58	54	58	46	44	44	41	39	42
Civil	40	33	30	31	34	37	39	51	42	60	32	29	30	30	30	31
Electrical, electronic, and communications	96	104	105	100	94	103	119	142	136	158	109	115	107	120	114	122
Industrial and manufacturing	na	na	na	na	na	na	na	na	na	na	na	na	7	11	21	23
Mechanical	65	87	93	81	80	81	104	87	84	108	72	74	68	74	78	83
Metallurgical and materials	45	58	60	59	55	61	53	53	60	62	234	111	48	47	46	61
Engineering nec	107	121	109	99	90	106	84	103	98	126	75	91	185	160	123	231
Non-S&E	na	na	na	na	na	na	36	59	59	44	44	49	36	37	38	42
Business management and business administration	na	na	na	na	na	na	8	6	6	7	4	11	3	4	5	7
Communication and communications technologies	na	na	na	na	na	na	8	12	13	2	1	5	4	5	4	4
Education	na	na	na	na	na	na	7	11	7	6	7	6	7	7	6	4
Humanities	na	na	na	na	na	na	2	2	2	3	3	4	3	7	6	4
Law	na	na	na	na	na	na	0	0	0	0	0	0	0	1	0	0
Social work	na	na	na	na	na	na	0	1	0	0	0	0	0	0	0	2
Visual and performing arts	na	na	na	na	na	na	1	1	1	1	1	2	2	1	1	1
Non-S&E nec	na	na	na	na	na	na	10	26	28	25	27	22	16	12	16	20
	Percent distribution															
All fields	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Science	79.2	76.6	75.7	76.5	76.8	75.6	74.6	72.1	70.1	68.6	65.6	71.0	70.1	70.2	70.3	66.4
Computer and information sciences	5.5	3.8	3.9	4.1	4.3	4.6	3.0	4.0	3.6	12.1	3.5	4.1	4.5	4.7	4.2	3.4
Geosciences, atmospheric sciences, and ocean sciences	6.6	6.5	6.8	7.4	7.7	6.5	7.0	5.1	5.9	5.2	5.7	6.0	5.1	4.9	4.5	4.5
Atmospheric science and meteorology	1.1	1.4	1.9	1.7	1.4	0.9	1.1	0.9	1.0	0.8	1.1	0.9	1.0	1.2	0.8	0.8
Geological and earth sciences	2.3	2.4	1.9	2.0	2.1	2.4	2.4	2.1	2.6	2.1	2.5	2.3	1.9	1.5	1.9	1.6
Ocean sciences and marine sciences	2.2	2.1	2.4	3.4	3.7	2.7	2.7	1.4	1.4	1.7	1.6	2.2	1.8	1.7	1.5	1.8
Geosciences, atmospheric sciences, and ocean sciences nec	1.1	0.7	0.5	0.4	0.5	0.6	0.8	0.7	0.9	0.5	0.5	0.5	0.4	0.5	0.3	0.4
Life sciences	44.1	43.9	41.2	40.4	42.5	40.4	42.3	41.1	40.0	33.1	36.1	38.6	39.0	38.8	40.7	39.8



**Table SURD-1****Current fund expenditures for research equipment at academic institutions, by R&D field: FY 2004–19**

(Millions of current dollars, millions of constant 2012 dollars, and percent distribution)

Field	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Social work	na	na	na	na	na	na	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Visual and performing arts	na	na	na	na	na	na	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Non-S&E nec	na	na	na	na	na	na	0.4	1.1	1.4	1.1	1.4	1.1	0.8	0.6	0.8	0.9

na = not applicable; separate data for natural resources and conservation, materials science, anthropology, and industrial and manufacturing engineering were not collected before FY 2016, and capitalized equipment expenditures in non-S&E fields were not collected before FY 2010.

nec = not elsewhere classified.

**Note(s):**

Gross domestic product deflators come from the U.S. Bureau of Economic Analysis and are available at <https://www.bea.gov/national> (accessed August 2020). Because of rising capitalization thresholds, the dollar threshold for inclusion in the equipment category has changed over time. Generally, university equipment that costs less than \$5,000 would be classified under the cost category of "supplies." Detail may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of R&D Expenditures at Universities and Colleges, and Higher Education Research and Development Survey (HERD).

*Science and Engineering Indicators*