APPENDIX TABLE 5-12

Current fund expenditures for research equipment at academic institutions, by S&E field: FYs 2002–16

(Millions of dollars, millions of constant 2009 dollars, and percent distribution)

Field	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Current $millions															
All fields	1,703	1,820	1,895	1,880	1,826	1,824	1,874	1,947	2,114	2,199	1,982	2,210	1,991	2,070	2,131
Science	1,340	1,435	1,501	1,441	1,383	1,395	1,439	1,472	1,603	1,627	1,430	1,547	1,337	1,505	1,520
Computer and information sciences	101	99	105	72	70	75	80	90	65	91	73	273	70	88	97
Geosciences, atmospheric sciences, and ocean sciences	132	121	126	123	123	136	144	126	151	115	121	116	116	126	111
Atmospheric science and meteorology	15	18	20	26	34	31	27	17	24	21	20	18	22	20	21
Geological and earth sciences	33	42	43	44	35	36	39	47	52	47	53	47	52	50	42
Ocean sciences and marine sciences	74	50	41	40	44	62	70	52	58	32	29	39	32	46	39
Geosciences, atmospheric sciences, and ocean sciences nec	11	11	22	13	10	7	9	11	17	15	19	12	10	11	9
Life sciences	737	819	836	826	752	737	796	786	908	928	817	747	735	819	844
Agricultural sciences	72	78	79	72	75	79	103	81	81	74	85	79	84	90	89
Biological and biomedical sciences	297	337	348	326	302	272	303	299	396	393	334	313	310	333	365
Health sciences	339	371	376	378	337	340	355	367	390	413	358	317	297	325	338
Natural resources and conservation	na	na	na	na	na	na	na	na	na	na	na	na	na	na	11
Life sciences nec	29	33	34	50	37	46	35	40	42	47	39	39	45	71	42
Mathematics and statistics	10	8	8	9	9	9	9	9	8	7	7	7	6	6	9

Field	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Physical sciences	276	298	339	325	329	310	302	333	364	380	331	329	344	398	389
Astronomy and astrophysics	19	19	25	23	20	29	27	29	24	26	28	20	26	54	36
Chemistry	123	120	118	113	122	113	114	136	162	156	133	118	119	120	125
Materials science	na	na	na	na	na	na	na	na	na	na	na	na	na	na	10
Physics	122	139	160	159	153	143	136	149	154	180	156	166	185	206	203
Physical sciences nec	12	20	36	30	34	25	25	20	24	18	14	25	14	17	16
Psychology	19	23	18	15	18	14	15	24	17	17	21	14	16	14	15
Social sciences	18	19	16	19	14	20	22	26	15	16	11	12	11	10	12
Anthropology	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1
Economics	2	3	2	2	2	2	2	1	1	2	1	3	2	2	4
Political science and government	2	2	2	2	1	1	1	2	1	1	1	1	0	1	1
Sociology, demography, and population studies	4	3	2	3	2	3	2	5	2	2	1	2	2	3	2
Social sciences nec	9	10	9	12	8	15	16	18	10	10	7	7	7	4	4
Sciences nec	47	49	54	53	67	95	71	76	76	74	50	49	39	45	42
Engineering	363	385	394	439	443	428	435	475	511	572	552	663	654	564	611
Aerospace, aeronautical, and astronautical	24	22	21	20	22	22	34	27	35	34	33	35	29	35	44
Bioengineering and biomedical	18	20	19	29	25	27	28	32	40	53	45	47	37	44	53
Chemical	30	32	55	37	39	37	39	48	53	56	54	59	47	46	46
Civil	43	31	34	29	27	29	32	35	38	51	42	61	33	31	31

Field	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Electrical, electronic, and communications	79	86	81	91	94	92	88	98	114	139	136	161	113	120	113
Industrial and manufacturing	na	na	na	na	na	na	na	na	na	na	na	na	na	na	7
Mechanical	54	55	55	76	84	75	76	77	100	85	84	110	75	77	72
Metallurgical and materials	41	61	38	51	54	54	52	58	51	52	60	63	242	116	50
Engineering nec	74	78	91	106	98	92	85	101	81	101	98	128	78	96	195
2009 constant $millions															
All fields	2,003	2,099	2,126	2,044	1,926	1,874	1,889	1,947	2,088	2,128	1,884	2,067	1,829	1,882	1,912
Science	1,576	1,655	1,684	1,566	1,458	1,434	1,450	1,472	1,584	1,575	1,359	1,447	1,228	1,369	1,364
Computer and information sciences	118	114	118	78	74	77	81	90	64	88	69	255	65	80	87
Geosciences, atmospheric sciences, and ocean sciences	155	140	141	134	130	139	146	126	150	111	115	109	106	115	100
Atmospheric science and meteorology	17	20	22	28	36	32	27	17	24	20	19	17	21	18	19
Geological and earth sciences	38	48	48	48	37	37	39	47	52	45	51	44	48	45	38
Ocean sciences and marine sciences	87	58	46	43	47	64	70	52	57	31	27	36	29	42	35
Geosciences, atmospheric sciences, and ocean sciences nec	13	13	24	14	10	7	9	11	17	15	18	12	9	10	8
Life sciences	867	944	939	897	793	757	802	786	897	898	776	699	676	744	758
Agricultural sciences	85	90	88	78	80	81	103	81	80	72	81	74	77	82	80
Biological and biomedical sciences	349	389	390	355	318	280	306	299	391	381	318	292	285	302	328
Health sciences	399	427	422	411	356	349	358	367	385	400	340	296	273	295	303
Natural resources and conservation	na	na	na	na	na	na	na	na	na	na	na	na	na	na	10

Field	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Life sciences nec	35	38	38	54	39	47	35	40	42	46	37	36	41	65	38
Mathematics and statistics	12	9	9	10	9	9	9	9	8	7	6	6	6	5	8
Physical sciences	324	344	380	353	348	319	304	333	360	368	315	308	316	361	349
Astronomy and astrophysics	23	22	28	25	21	30	27	29	24	25	27	18	24	49	32
Chemistry	144	138	132	123	128	116	115	136	160	151	127	110	109	109	112
Materials science	na	na	na	na	na	na	na	na	na	na	na	na	na	na	9
Physics	143	160	179	173	162	147	137	149	152	174	148	156	170	188	182
Physical sciences nec	15	23	41	33	36	26	25	20	24	18	13	24	13	15	14
Psychology	22	26	20	16	19	15	15	24	16	16	20	13	14	13	13
Social sciences	21	21	17	20	14	20	22	26	14	15	10	12	10	9	11
Anthropology	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1
Economics	3	3	2	2	2	2	2	1	1	2	1	3	2	2	3
Political science and government	2	3	2	2	1	1	1	2	1	1	1	1	0	1	1
Sociology, demography, and population studies	4	4	3	3	2	3	2	5	2	2	1	2	2	3	2
Social sciences nec	11	12	11	13	9	15	16	18	10	10	7	6	6	4	4
Sciences nec	56	57	60	58	71	97	71	76	75	71	47	45	36	41	38
Engineering	427	444	442	477	468	440	439	475	505	553	525	620	601	513	548
Aerospace, aeronautical, and astronautical	28	26	24	22	23	23	35	27	35	33	32	33	27	32	39
Bioengineering and biomedical	21	23	21	32	26	28	29	32	39	51	43	44	34	40	47

Field	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Chemical	35	37	61	40	41	38	39	48	52	55	51	55	44	42	42
Civil	50	35	38	32	29	29	32	35	37	49	40	57	30	28	28
Electrical, electronic, and communications	93	99	91	99	99	95	89	98	113	135	130	150	104	109	101
Industrial and manufacturing	na	na	na	na	na	na	na	na	na	na	na	na	na	na	6
Mechanical	63	64	62	83	88	77	76	77	98	82	79	103	69	70	65
Metallurgical and materials	48	70	43	55	57	56	52	58	50	51	57	59	222	105	45
Engineering nec	88	89	102	115	104	94	86	101	80	98	93	120	71	87	175
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
Science	78.7	78.9	79.2	76.6	75.7	76.5	76.8	75.6	75.8	74.0	72.1	70.0	67.1	72.7	71.3
Computer and information sciences	5.9	5.4	5.5	3.8	3.9	4.1	4.3	4.6	3.1	4.1	3.7	12.4	3.5	4.2	4.5
Geosciences, atmospheric sciences, and ocean sciences	7.7	6.7	6.6	6.5	6.8	7.4	7.7	6.5	7.2	5.2	6.1	5.3	5.8	6.1	5.2
Atmospheric science and meteorology	0.9	1.0	1.1	1.4	1.9	1.7	1.4	0.9	1.1	0.9	1.0	0.8	1.1	1.0	1.0
Geological and earth sciences	1.9	2.3	2.3	2.4	1.9	2.0	2.1	2.4	2.5	2.1	2.7	2.1	2.6	2.4	2.0
Ocean sciences and marine sciences	4.3	2.8	2.2	2.1	2.4	3.4	3.7	2.7	2.7	1.5	1.5	1.8	1.6	2.2	1.8
Geosciences, atmospheric sciences, and ocean sciences nec	0.6	0.6	1.1	0.7	0.5	0.4	0.5	0.6	0.8	0.7	1.0	0.6	0.5	0.5	0.4
Life sciences	43.3	45.0	44.1	43.9	41.2	40.4	42.5	40.4	43.0	42.2	41.2	33.8	36.9	39.6	39.6
Agricultural sciences	4.2	4.3	4.2	3.8	4.1	4.3	5.5	4.2	3.8	3.4	4.3	3.6	4.2	4.4	4.2
Biological and biomedical sciences	17.4	18.5	18.4	17.4	16.5	14.9	16.2	15.4	18.7	17.9	16.9	14.1	15.6	16.1	17.1

Field	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Health sciences	19.9	20.4	19.8	20.1	18.5	18.6	19.0	18.8	18.4	18.8	18.1	14.3	14.9	15.7	15.8
Natural resources and conservation	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.5
Life sciences nec	1.7	1.8	1.8	2.6	2.0	2.5	1.8	2.0	2.0	2.1	2.0	1.7	2.3	3.4	2.0
Mathematics and statistics	0.6	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4
Physical sciences	16.2	16.4	17.9	17.3	18.0	17.0	16.1	17.1	17.2	17.3	16.7	14.9	17.3	19.2	18.3
Astronomy and astrophysics	1.1	1.0	1.3	1.2	1.1	1.6	1.4	1.5	1.1	1.2	1.4	0.9	1.3	2.6	1.7
Chemistry	7.2	6.6	6.2	6.0	6.7	6.2	6.1	7.0	7.7	7.1	6.7	5.3	6.0	5.8	5.8
Materials science	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.5
Physics	7.1	7.6	8.4	8.5	8.4	7.8	7.3	7.6	7.3	8.2	7.9	7.5	9.3	10.0	9.5
Physical sciences nec	0.7	1.1	1.9	1.6	1.9	1.4	1.3	1.0	1.1	0.8	0.7	1.1	0.7	0.8	0.7
Psychology	1.1	1.2	0.9	0.8	1.0	0.8	0.8	1.3	0.8	0.8	1.0	0.6	0.8	0.7	0.7
Social sciences	1.0	1.0	0.8	1.0	0.7	1.1	1.2	1.3	0.7	0.7	0.5	0.6	0.5	0.5	0.6
Anthropology	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.1
Economics	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2
Political science and government	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0
Sociology, demography, and population studies	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Social sciences nec	0.6	0.6	0.5	0.6	0.5	0.8	0.9	0.9	0.5	0.5	0.4	0.3	0.3	0.2	0.2
Sciences nec	2.8	2.7	2.8	2.8	3.7	5.2	3.8	3.9	3.6	3.3	2.5	2.2	1.9	2.2	2.0
Engineering	21.3	21.1	20.8	23.4	24.3	23.5	23.2	24.4	24.2	26.0	27.9	30.0	32.9	27.3	28.7

Field	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Aerospace, aeronautical, and astronautical	1.4	1.2	1.1	1.1	1.2	1.2	1.8	1.4	1.7	1.6	1.7	1.6	1.5	1.7	2.0
Bioengineering and biomedical	1.1	1.1	1.0	1.6	1.4	1.5	1.5	1.6	1.9	2.4	2.3	2.1	1.9	2.1	2.5
Chemical	1.8	1.8	2.9	2.0	2.1	2.0	2.1	2.5	2.5	2.6	2.7	2.7	2.4	2.2	2.2
Civil	2.5	1.7	1.8	1.5	1.5	1.6	1.7	1.8	1.8	2.3	2.1	2.8	1.6	1.5	1.5
Electrical, electronic, and communications	4.7	4.7	4.3	4.8	5.2	5.1	4.7	5.0	5.4	6.3	6.9	7.3	5.7	5.8	5.3
Industrial and manufacturing	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.3
Mechanical	3.2	3.0	2.9	4.1	4.6	4.1	4.0	4.0	4.7	3.9	4.2	5.0	3.8	3.7	3.4
Metallurgical and materials	2.4	3.4	2.0	2.7	3.0	3.0	2.8	3.0	2.4	2.4	3.0	2.9	12.2	5.6	2.4
Engineering nec	4.4	4.3	4.8	5.6	5.4	5.0	4.6	5.2	3.8	4.6	4.9	5.8	3.9	4.6	9.2

na = not applicable; separate data for natural resources and conservation, materials science, anthropology, and industrial and manufacturing engineering were not collected prior to FY 2016.

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 February 2016. 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 Science Foundation, National Center for Science and Engineering Statistics, Survey of Research and Development Expenditures at Universities and Colleges, and Higher Education Research and Development Survey (HERD).

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