

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
All institutions	-	5,671,891	5,735,955	6,167,466	6,944,769	967,125	2,301,102	319,102	2,966,923	390,517
Johns Hopkins U. ^a	1	390,245 i	338,454 i	317,282 i	332,727 i	22,326 i	26,888 i	3,462 i	257,687 i	22,364 i
California Institute of Technology	2	217,581	212,265 i	227,465	235,054 i	60,682 i	36,142 i	0 i	111,025 i	27,205 i
U. California, Berkeley	3	141,434	156,896	196,281	234,242	154,863	55,719	198	11,388	12,074
Michigan State U.	4	154,318	167,520	183,514	207,802	66	19,687	0	188,049	0
Massachusetts Institute of Technology	5	153,044	170,494	174,813	180,988	36,661	35,918	6,050	70,662	31,697
U. Colorado Boulder	6	115,340	120,677	143,342	179,084	75,402	13,610	0	82,413	7,659
U. Arizona	7	149,138	140,655	142,519	173,256	146,818	13,846	4,100	8,431	61
Cornell U.	8	121,218	120,151	120,697	136,751	13,639	32,543	4,087	55,446	31,036
U. Maryland ^b	9	105,718	101,322	110,607	135,422	48,426	10,334	7,911	56,336	12,415
Harvard U.	10	100,654	109,606	118,530	134,733	14,369	34,728	3,996	70,188	11,452
U. Rochester	11	101,004	99,556	112,275	124,977	0	7,859	0	117,118	0
U. Texas, Austin	12	81,380	85,250	93,232	123,113	26,910	24,211	42,219	28,669	1,104
U. Wisconsin-Madison	13	83,687	87,587	97,161	113,636	6,804	39,292	0	41,543	25,997
Pennsylvania State U., University Park and Hershey Medical Center	14	94,201	89,035	73,580	111,514	12,462	18,226	52,509	28,317	0
Princeton U.	15	94,815	99,326	101,461	109,961	36,251	32,016	7,240	33,192	1,262
U. California, San Diego	16	94,124	86,893	97,804	105,927	15,418	39,537	0	33,763	17,209
Stanford U.	17	94,954	98,672	101,529	103,816	4,028	31,848	15,354	49,870	2,716
Northwestern U.	18	78,168	83,618	90,194	97,816	7,498	42,247	19,933	22,886	5,252
U. Illinois, Urbana-Champaign	19	72,360	78,698	77,419	84,748	6,548	34,685	0	43,505	10
Florida State U.	20	68,454	63,481	65,661	78,948	317	22,804	4,349	51,460	18
U. Chicago	21	51,122	55,032	70,483	78,200	15,707	36,407	5,521	18,877	1,688
U. Pennsylvania	22	58,157	59,246	67,341	72,101	1,610	26,793	17,580	26,118	0
U. Michigan, Ann Arbor	23	60,824	66,041	65,018	70,259	6,922	35,089	0	28,248	0
U. Washington, Seattle	24	60,477	58,664	62,596	69,424	9,265	29,048	2,113	24,614	4,384
U. California, Santa Barbara	25	58,534	54,435	72,934	68,503	2,454	10,043	13,679	32,081	10,246
U. California, San Francisco	26	69,662	69,817	71,611	67,648	0	66,457	0	1,191	0
Texas A&M U., College Station and Health Science Center	27	54,574	56,029	56,540	65,248	3,433	27,800	7,769	23,388	2,858
U. Iowa	28	23,226	32,013	55,128	63,779	1,154	6,051	0	56,574	0
Yale U.	29	56,046	56,847	57,627	63,036	6,105	28,905	0	28,026	0
U. California, Los Angeles	30	54,697	56,624	55,159	61,410	0	25,424	0	33,192	2,794
Purdue U., West Lafayette	31	42,370	42,663	49,938	60,623	0	36,491	0	24,132	0
U. Notre Dame	32	44,855	47,332	47,516	59,388	0	34,516	0	24,872	0
Arizona State U.	33	25,619	26,742	27,777	59,230	0	14,799	0	14,574	29,857
U. Missouri, Columbia	34	9,173	8,722	9,469	57,534	0	6,362	0	51,172	0

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Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
U. Delaware	35	25,192	26,015	50,077	56,483	3,204	19,940	20,279	13,060	0
Columbia U. in the City of New York	36	37,384	46,386	52,767	52,418	11,618	19,577	2,607	18,616	0
U. North Carolina, Chapel Hill	37	39,979	38,809	49,368	51,933	1,552	30,227	0	11,851	8,303
SUNY, Stony Brook U.	38	41,224	43,101	45,541	49,245	2,189	15,110	0	31,946	0
U. Minnesota, Twin Cities	39	43,946	41,812	42,715	47,610	2,656	21,704	0	23,250	0
U. Central Florida	40	34,493	37,144	39,361	45,916	0	5,554	0	40,024	338
U. Florida	41	25,532	28,005	39,928	43,930	2,878	26,640	0	14,410	2
U. California, Irvine	42	40,964	38,794	40,171	43,790	0	24,009	0	19,630	151
Rice U.	43	33,656	33,015	31,638	43,704	1,129	20,909	1,894	19,681	91
U. California, Santa Cruz	44	36,262	35,606	37,808	43,696	20,609	14,697	0	8,099	291
Boston U.	45	30,909	35,094	38,445	42,374	3,238	21,277	0	17,859	0
Ohio State U.	46	57,083	40,010	47,143	39,570	4,519	9,661	2,675	22,715	0
Georgia Institute of Technology	47	34,215	33,914	33,858	39,186	0	24,325	0	14,861	0
U. Nebraska, Lincoln and Medical Center ^c	48	na	na	na	37,541	0	12,286	267	24,988	0
Louisiana State U., Baton Rouge	49	22,366	23,438	30,594	36,946	0	15,050	0	20,617	1,279
U. California, Davis	50	26,495	27,906	35,319	36,471	0	15,108	0	10,963	10,400
Northeastern U.	51	20,709	24,279	27,207	33,512	0	13,625	0	19,136	751
U. Pittsburgh, Pittsburgh	52	27,652	27,919	30,591	33,092	4,521	17,599	0	10,972	0
Catholic U. of America	53	17,669	19,708	23,353	32,191	0	3	0	27,944	4,244
Florida International U.	54	27,354	27,997	33,613	31,704	0	25,467	0	4,058	2,179
Iowa State U.	55	27,216	26,696	30,440	31,219	0	15,985	0	15,234	0
Emory U.	56	22,505	25,676	28,576	31,085	0	26,564	0	4,521	0
Indiana U., Bloomington	57	33,608	30,322	31,360	30,417	1,723	17,814	0	10,880	0
New York U.	58	26,698	26,417	26,391	30,409	0	15,549	0	14,860	0
Vanderbilt U. and Vanderbilt U. Medical Center	59	28,017	30,077	28,937	30,399	0	18,843	0	11,556	0
Washington U., Saint Louis	60	23,401	24,320	25,954	30,262	0	12,316	8,355	9,591	0
Duke U.	61	22,396	22,131	23,281	29,127	0	16,182	0	12,945	0
North Carolina State U.	62	23,464	28,455	27,486	28,745	0	16,370	0	12,147	228
U. Illinois, Chicago	63	15,752	17,718	21,497	28,674	0	13,743	0	14,931	0
Rutgers, State U. New Jersey, New Brunswick	64	25,703	23,111	32,108	28,283	1,908	6,825	1,398	16,794	1,358
U. Virginia, Charlottesville	65	27,628	27,304	27,721	27,920	3,805	13,274	0	10,841	0
U. Houston	66	50,164	52,230	60,462	27,682	293	15,585	536	8,983	2,285
U. Massachusetts, Amherst	67	28,757	22,250	23,286	27,580	5,992	11,743	0	9,845	0
Washington State U.	68	24,243	26,256	25,553	27,495	439	11,562	4,719	10,674	101
Montana State U., Bozeman	69	17,990	23,329	19,778	27,448	0	7,929	0	19,519	0

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Carnegie Mellon U.	70	21,580	21,109	23,841	27,237	1,504	11,099	1,894	12,681	59
U. Maryland, Baltimore County	71	18,278	19,202	20,806	25,604	15,705	4,802	468	4,629	0
U. Hawaii, Manoa	72	29,491	26,381	23,293	25,554	18,708	2,333	0	4,508	5
U. Tennessee, Knoxville	73	21,239	20,809	23,139	25,471	0	8,885	0	16,586	0
U. Utah	74	30,170	30,441	18,579	24,991	0	17,148	0	7,843	0
Dartmouth C. and Dartmouth Hitchcock Medical Center	75	21,219	26,312	24,806	24,630	0	11,869	33	12,728	0
U. Texas M. D. Anderson Cancer Center	76	19,060	17,572	19,651	23,775	0	0	0	23,775	0
Wayne State U.	77	16,895	19,885	20,880	23,226	0	13,686	0	4,286	5,254
Virginia Polytechnic Institute and State U.	78	24,214	24,374	23,394	22,452	394	13,571	1,448	6,660	379
U. Oklahoma, Norman and Health Science Center	79	18,739	16,497	18,730	21,859	0	12,341	0	9,518	0
U. Texas, Arlington	80	17,257	16,864	18,905	20,371	0	6,773	0	12,488	1,110
Syracuse U.	81	13,905	13,926	14,286	20,189	0	6,723	0	13,466	0
Auburn U., Auburn	82	15,247	15,214	17,011	19,616	909	8,154	242	10,216	95
U. Kansas	83	7,502	15,492	16,123	19,261	683	13,643	0	4,935	0
U. Alabama, Huntsville	84	13,353	15,071	17,852	19,243	15,296	1,065	22	2,839	21
U. Arkansas, Fayetteville	85	9,791	8,111	10,739	19,209	0	5,658	11	10,730	2,810
Colorado State U., Fort Collins	86	11,356	12,947	14,885	19,169	0	12,002	1,158	5,625	384
Georgia State U.	87	19,395	17,588	18,277	19,102	4,443	8,045	0	6,614	0
U. Massachusetts, Lowell	88	19,144	18,308	18,186	19,076	0	3,538	0	15,538	0
Colorado School of Mines	89	11,346	10,812	12,923	18,977	345	5,333	5,646	6,694	959
U. California, Riverside	90	17,037	17,559	17,938	18,535	0	10,291	0	8,244	0
New Jersey Institute of Technology	91	16,781	15,415	17,202	18,434	8,650	4,408	756	4,620	0
U. Southern California	92	23,644	21,413	17,696	18,195	6,542	11,653	0	0	0
U. Oregon	93	12,984	13,881	15,315	18,110	0	9,391	1,457	3,578	3,684
Brown U.	94	17,745	17,072	18,299	18,064	0	6,157	0	9,713	2,194
U. Texas, Dallas	95	17,759	16,444	16,709	17,707	4,669	5,695	0	5,916	1,427
Brandeis U.	96	13,701	12,459	16,778	17,131	4,779	5,785	552	5,890	125
SUNY, Binghamton U.	97	18,586	14,568	14,636	16,702	0	12,376	84	4,145	97
West Virginia U.	98	12,678	12,431	13,067	16,296	3,269	5,502	0	7,525	0
Temple U.	99	18,447	17,979	17,215	15,792	0	6,851	0	3,844	5,097
Rochester Institute of Technology	100	13,830	12,388	14,979	15,762	0	774	0	4,680	10,308
U. Connecticut	101	18,546	17,682	11,245	15,372	0	7,895	0	7,477	0
SUNY, U. Buffalo	102	11,161	13,431	11,990	15,320	0	11,496	3	3,821	0
Texas Tech U.	103	15,103	15,784	15,739	15,057	0	8,268	645	6,144	0
Georgetown U.	104	9,151	10,525	15,192	13,835	0	3,021	0	7,933	2,881

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Institution	Rank	2020	2021	2022	2023					
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Mississippi State U.	105	10,381	10,755	12,061	13,806	341	5,085	3,621	4,696	63
U. Mississippi	106	11,652	10,803	11,784	13,565	0	4,420	0	9,145	0
U. Alaska, Fairbanks	107	15,551	16,441	13,832	13,507	12,620	73	0	512	302
Boston C.	108	9,306	11,863	12,202	13,121	0	9,250	0	3,871	0
U. Southern Mississippi	109	13,422	14,672	14,071	12,954	0	10,393	0	0	2,561
New Mexico State U.	110	26,366	20,108	13,339	12,826	8,259	1,647	0	1,994	926
Rensselaer Polytechnic Institute	111	12,143	12,251	15,894	12,723	0	6,945	156	2,955	2,667
SUNY, U. Albany	112	7,719	6,791	7,299	12,431	0	9,793	0	2,638	0
Kansas State U.	113	12,583	12,736	14,709	12,230	0	2,995	0	9,235	0
U. Texas, San Antonio	114	11,234	11,547	12,128	12,226	0	7,586	0	4,640	0
U. Texas, El Paso	115	6,775	9,092	10,021	12,207	0	8,656	0	3,551	0
U. Cincinnati	116	8,874	9,189	10,335	12,181	0	7,651	0	4,530	0
Clemson U.	117	10,823	10,139	11,923	12,096	0	5,323	402	6,050	321
U. Toledo	118	7,445	10,594	11,637	11,716	932	3,251	0	7,520	13
U. Nevada, Reno	119	9,566	8,025	10,640	11,696	1,147	5,421	434	3,975	719
U. Georgia	120	11,295	10,896	10,161	11,502	486	7,961	0	3,055	0
U. Nevada, Las Vegas	121	9,692	10,589	9,030	11,407	617	4,792	0	5,998	0
Baylor U.	122	6,993	8,289	11,717	11,399	25	7,039	488	3,694	153
U. Alabama, Tuscaloosa	123	6,471	7,991	7,524	11,124	271	7,938	0	2,911	4
U. New Mexico	124	8,063	7,087	10,115	11,065	1,250	3,061	0	6,754	0
North Dakota State U.	125	6,502	10,077	9,362	11,009	0	3,811	6,493	705	0
Brigham Young U., Provo	126	5,268	6,357	6,726	10,717	0	5,015	0	5,702	0
Oakland U.	127	4,821	5,596	8,447	10,708	0	6,058	0	4,650	0
Tufts U.	128	15,438	9,212	11,206	10,498	663	7,629	859	669	678
U. South Florida ^d	129	11,433	9,900	10,866	10,460	0	5,981	0	4,096	383
Kent State U.	130	8,381	9,048	8,065	10,220	162	2,290	3,697	3,664	407
CUNY, City C.	131	9,591	8,709	11,590	10,061	0	6,064	0	3,997	0
San Diego State U.	132	6,402	6,681	7,587	10,039	980	7,037	0	2,022	0
Oklahoma State U., Stillwater	133	9,784	8,824	8,685	9,993	0	5,788	0	4,205	0
U. North Texas, Denton	134	9,275	8,710	8,762	9,854	0	6,401	0	3,453	0
U. Akron	135	8,576	6,703	8,690	9,555	0	9,524	30	1	0
U. Wisconsin-Milwaukee	136	8,699	10,970	10,084	9,286	5,746	2,180	0	1,360	0
CUNY, Advanced Science Research Center	137	4,154	6,107	9,558	9,285	0	3,157	0	6,128	0
Southern Methodist U.	138	3,847	4,598	5,607	9,217	0	5,398	0	3,819	0
U. Montana, Missoula	139	7,592	8,615	7,724	9,031	0	2,814	0	506	5,711

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U. California, Office of the President	140	8,123	7,905	8,725	8,957	8,957	0	0	0	0
Air Force Institute of Technology	141	7,796	15,999	11,934	8,942	0	0	0	8,942	0
George Washington U.	142	8,313	7,033	6,840	8,736	0	3,199	0	5,537	0
Old Dominion U.	143	7,028	7,021	8,410	8,733	0	4,024	0	4,709	0
U. Kentucky	144	8,553	8,722	9,118	8,370	0	4,968	0	3,402	0
California State U., Northridge	145	5,407	7,447	7,084	8,180	452	1,335	0	1,379	5,014
Northern Arizona U.	146	7,064	8,120	7,427	7,952	4,439	522	382	852	1,757
Boise State U.	147	3,788	5,881	6,848	7,828	142	2,575	4,597	514	0
U. Maine	148	6,427	6,803	6,427	7,816	0	1,206	0	6,610	0
Abilene Christian U.	149	ne	4,209	5,831	7,716	0	53	0	7,663	0
Xavier U. Louisiana	150	7,186	8,440	7,578	7,701	0	7,701	0	0	0
Oregon State U.	151	4,814	4,727	6,297	7,604	163	1,965	546	4,917	13
U. North Dakota	152	3,489	2,964	3,641	7,486	0	2,880	0	4,606	0
Jackson State U.	153	9,903	8,231	7,277	7,333	0	4,351	0	2,982	0
U. North Carolina, Charlotte	154	4,003	3,367	3,345	7,278	0	3,191	0	4,087	0
U. Miami	155	5,150	5,000	5,939	7,163	0	2,481	0	4,586	96
New Mexico Institute of Mining and Technology	156	1,361	1,151	1,798	7,124	0	40	0	7,084	0
George Mason U.	157	5,586	4,786	6,154	7,098	3,136	1,470	1,542	813	137
William & Mary	158	5,781	5,985	6,411	7,096	0	801	0	6,219	76
Howard U.	159	5,308	5,720	6,125	7,016	1,633	4,629	0	754	0
U. California, Merced	160	7,593	5,753	6,863	6,930	0	3,343	0	3,118	469
Embry-Riddle Aeronautical U.	161	2,744	3,853	5,852	6,884	14	0	0	719	6,151
Ohio U.	162	5,370	5,520	5,892	6,865	0	941	0	5,556	368
Texas State U.	163	2,208	3,421	5,123	6,776	0	3,094	0	1,132	2,550
Northern Illinois U.	164	5,560	5,454	6,220	6,765	0	2,619	0	4,146	0
Utah State U.	165	6,606	5,111	5,408	6,477	0	3,714	0	2,720	43
Georgia Southern U.	166	5,465	5,400	5,740	6,163	102	1,498	4,139	424	0
Rockefeller U.	167	7,184	6,835	5,693	6,114	0	5,248	0	866	0
U. Rhode Island	168	3,869	3,328	4,119	6,026	0	3,553	0	421	2,052
U. Puerto Rico, Rio Piedras	169	4,429	4,886	5,456	5,852	81	3,611	0	2,160	0
San Jose State U.	170	2,445	3,437	4,464	5,800	0	1,992	0	2,271	1,537
CUNY, Hunter C.	171	4,197	5,489	4,838	5,712	0	3,656	0	1,907	149
U. New Hampshire	172	4,425	4,957	5,090	5,689	0	1,760	858	3,071	0
U. North Carolina, Greensboro	173	3,505	4,250	5,251	5,687	0	3,117	2,560	2	8
Delaware State U.	174	2,210	2,304	3,965	5,666	101	1,401	6	4,158	0

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Tulane U.	175	5,720	5,018	4,579	5,633	0	2,582	0	3,051	0
U. Alabama, Birmingham	176	4,678	9,885	6,282	5,624	0	2,164	156	3,304	0
Lehigh U.	177	3,495	3,642	5,157	5,588	0	2,508	0	3,080	0
North Carolina Central U.	178	3,027	3,257	4,976	5,524	i	537	i	4,987	i
Case Western Reserve U.	179	8,063	9,007	10,694	5,407	176	3,032	0	2,110	89
Virginia Commonwealth U.	180	3,499	3,396	3,280	5,346	0	3,645	0	1,701	0
U. Texas Rio Grande Valley	181	5,148	4,338	3,997	5,214	2,305	992	144	1,594	179
U. South Carolina, Columbia	182	5,437	6,928	4,761	5,158	0	781	0	3,323	1,054
California Polytechnic State U., San Luis Obispo	183	5,672	4,953	5,294	5,010	0	571	0	1,309	3,130
American U.	184	4,714	4,404	4,351	4,853	0	1,143	619	3,091	0
Worcester Polytechnic Institute	185	2,773	3,852	3,487	4,748	0	2,305	0	2,443	0
Michigan Technological U.	186	4,094	4,085	4,600	4,747	0	2,225	0	2,441	81
Saint Louis U.	187	1,942	2,131	3,579	4,726	0	4,686	0	40	0
U. South Dakota	188	4,054	3,713	4,107	4,481	0	2,506	0	1,975	0
South Dakota School of Mines and Technology	189	1,425	1,824	2,883	4,365	0	2,355	0	2,010	0
U. Louisiana, Lafayette	190	3,546	6,453	3,957	4,358	75	1,461	0	2,012	810
California State U., Los Angeles	191	5,241	5,165	5,776	4,354	0	4,063	0	291	0
Rutgers, State U. New Jersey, Newark	192	2,384	2,667	4,099	4,188	0	3,098	0	1,090	0
Miami U.	193	1,329	3,940	2,701	4,186	0	3,590	0	339	257
Clarkson U.	194	2,217	2,414	3,918	4,148	0	2,815	0	715	618
Naval Postgraduate School	195	9,161	5,927	4,745	4,107	0	647	88	2,649	723
U. Massachusetts, Boston	196	3,584	4,174	3,076	3,981	0	2,153	0	1,828	0
U. Vermont	197	4,877	4,354	4,354	3,944	0	2,849	0	1,095	0
Hampton U.	198	3,142	3,409	4,282	3,898	0	342	0	3,556	0
U. Memphis	199	3,014	3,372	3,012	3,870	98	2,615	78	1,079	0
Missouri U. of Science and Technology	200	6,107	4,478	3,734	3,747	0	2,775	0	972	0
Texas Christian U.	201	695	398	4,131	3,625	91	1,187	0	1,090	1,257
U. Wyoming	202	1,248	1,808	2,625	3,585	362	2,130	54	1,005	34
U. Massachusetts, Dartmouth	203	2,116	2,650	3,290	3,547	0	2,378	0	1,014	155
Florida Atlantic U.	204	3,147	2,726	2,364	3,509	195	2,184	0	1,129	1
Rowan U.	205	664	1,524	1,483	3,480	52	2,596	0	830	2
Indiana U.-Purdue U., Indianapolis	206	2,306	2,748	2,736	3,382	0	2,342	0	1,038	2
North Carolina A&T State U.	207	1,638	1,158	2,053	3,306	0	1,698	0	1,608	0
Morgan State U.	208	411	774	2,314	3,287	0	816	0	2,427	44
Villanova U.	209	3,573	3,095	3,052	3,239	588	1,771	0	880	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Clark Atlanta U.	210	1,649	1,616	2,620	3,168	0	3,034	0	134	0
Drexel U.	211	2,437	2,074	2,306	3,102	0	1,527	0	1,575	0
Western Washington U.	212	1,323	2,191	2,569	3,100	492	2,360	248	0	0
California State U., San Bernardino	213	1,569	1,992	2,635	3,067	0	2,052	40	975	0
Illinois Institute of Technology	214	3,143	3,483	3,705	3,038	0	259	0	2,779	0
U. Idaho	215	1,539	1,646	2,177	3,021	900	985	111	1,025	0
CUNY, Lehman C.	216	2,208	2,062	2,650	3,003	828	2,166	0	9	0
U. Louisville	216	2,954	3,254	3,872	3,003	82	2,149	37	422	313
California State U., Long Beach	218	2,670	2,723	3,494	2,993	445	2,516	32	0	0
CUNY, Graduate Center	218	630	547	0	2,993	0	654	245	1,445	649
South Dakota State U.	220	1,974	1,943	1,610	2,892	0	2,781	0	111	0
San Francisco State U.	221	3,208	3,418	3,626	2,867	527	1,321	0	980	39
Stevens Institute of Technology	222	1,834	2,066	1,775	2,841	0	817	448	1,576	0
Morehouse C.	223	1,517	1,831	2,393	2,813	0	390	0	354	2,069
Wichita State U.	224	1,114	1,438	1,703	2,802	0	2,001	0	801	0
CUNY, Brooklyn C.	225	1,105	1,325	1,998	2,680	0	2,235	0	445	0
Fisk U.	226	212	1,645	1,926	2,574	0	99	437	2,038	0
Southern Illinois U., Carbondale	227	2,013	2,052	1,825	2,547	65	1,823	0	623	36
Troy U.	228	1,216	1,102	1,916	2,538	0	8	2,530	0	0
Wesleyan U.	228	2,383	2,137	2,622	2,538	613	1,173	0	752	0
James Madison U.	230	1,337	1,825	2,256	2,525	157	1,697	0	470	201
Montclair State U.	231	589	737	1,811	2,520	47	1,848	0	105	520
Louisiana Tech U.	232	1,775	2,342	2,110	2,519	0	1,273	0	1,246	0
Florida Institute of Technology	233	2,777	3,547	1,682	2,408	299	783	0	1,210	116
Seton Hall U.	234	401	396	743	2,375	0	1,942	0	433	0
U. Puerto Rico, Mayaguez	235	1,347	1,002	1,580	2,339	0	1,539	158	642	0
California State U., Fullerton	236	1,254	1,343	1,615	2,331	549	900	102	683	97
Wake Forest U.	236	2,196	2,236	1,996	2,331	0	704	331	1,296	0
East Carolina U.	238	2,168	1,814	1,740	2,274	0	1,365	0	909	0
U. Denver	239	4,913	3,977	4,420	2,249	67	1,240	79	848	15
Florida A&M U.	240	1,410	1,346	1,905	2,201	0	97	0	2,104	0
CUNY, Queens C.	241	1,444	1,815	2,266	2,163	0	1,625	0	538	0
U.S. Naval Academy	242	2,144	1,604	1,679	2,148	0	968	0	1,180	0
Tuskegee U.	243	166	169	1,910	2,141	0	40	1,944	157	0
Illinois State U.	244	567	1,171	1,812	2,138	0	1,193	0	945	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Marquette U.	245	2,681	3,903	2,539	2,115	0	1,862	0	253	0
Chapman U.	246	2,062	1,314	1,814	2,106	0	636	9	277	1,184
SUNY, C. of Environmental Science and Forestry	246	294	404	2,009	2,106	249	1,838	0	0	19
Creighton U.	248	1,463	1,621	2,020	2,097	0	844	0	1,253	0
U. New Orleans	249	2,398	2,652	2,181	2,094	0	1,387	0	707	0
Trinity U.	250	1,230	1,165	1,272	2,025	95	1,610	0	320	0
Central Michigan U.	251	2,508	1,891	2,396	2,004	441	66	69	1,428	0
Bowling Green State U.	252	2,326	2,345	2,201	1,994	0	1,317	217	460	0
Portland State U.	253	2,326	1,977	2,410	1,932	0	1,775	0	157	0
U. Colorado Denver ^e	254	na	1,574	1,895	1,924	0	1,400	0	524	0
U. Puerto Rico, Humacao	255	1,090	1,083	1,302	1,852	217	434	1,105	96	0
Texas Southern U.	256	1,204	1,168	1,015	1,823	0	1,034	0	528	261
Western Michigan U. and Homer Stryker M.D. School of Medicine	256	1,309	1,148	1,227	1,823	0	734	0	1,089	0
Loyola U., Chicago	258	763	1,026	1,691	1,796	0	1,575	0	221	0
U. San Diego	259	1,496	1,377	1,237	1,758	0	653	0	1,105	0
Amherst C.	260	1,534	1,203	1,649	1,728	293	698	0	737	0
U. West Florida	261	1,202	1,356	1,269	1,719	0	134	0	0	1,585
Western Kentucky U.	262	1,785	1,205	1,714	1,717	163	824	0	730	0
U.S. Air Force Academy	263	2,714	2,398	2,310	1,679	1,104	0	0	575	0
Mercer U.	264	2,038	1,878	1,925	1,664	0	1,547	0	117	0
Hope C.	265	1,315	2,032	2,122	1,652	0	1,009	0	188	455
Texas A&M U.-Corpus Christi	266	1,437	1,089	1,459	1,643	0	307	0	48	1,288
Cleveland State U.	267	1,547	976	1,030	1,610	0	1,120	0	490	0
Barnard C.	268	885	1,319	1,541	1,588	812	776	0	0	0
Towson U.	269	476	723	880	1,576	187	926	0	187	276
U. Missouri, Kansas City	270	1,680	1,451	1,277	1,556	181	385	0	956	34
Prairie View A&M U.	271	1,353	1,348	2,139	1,545	0	718	481	346	0
U. North Florida	272	682	608	1,134	1,544	0	879	0	665	0
Chicago State U.	273	ne	ne	1,341	1,534	0	531	0	1,003	0
Marshall U.	274	1,030	295	1,224	1,501	0	1,447	0	54	0
Colgate U.	275	618	884	1,215	1,456	89	583	0	784	0
California State Polytechnic U., Pomona	276	1,395	1,150	1,301	1,453	1,123	296	0	8	26
Clark U.	277	1,648	1,386	1,277	1,435	0	753	0	682	0
Middle Tennessee State U.	278	596	2,967	2,115	1,412	36	1,233	0	143	0
Christopher Newport U.	279	829	731	851	1,394	0	22	0	1,372	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Grinnell C.	280	742	691	823	1,361	51	1,099	0	211	0
U. Missouri, Saint Louis	281	1,910	2,345	1,076	1,336	102	1,160	0	74	0
U. North Carolina, Wilmington	282	375	435	675	1,317	0	193	0	0	1,124
CUNY, C. Staten Island	283	860	525	1,097	1,303	0	1,173	0	130	0
California State U., Fresno	284	1,127	1,307	2,668	1,295	0	1,125	0	170	0
Ball State U.	285	834	826	1,106	1,277	0	1,163	0	114	0
Furman U.	286	925	1,114	1,313	1,250	0	1,229	0	21	0
Fordham U.	287	747	1,067	1,532	1,226	0	1,003	0	223	0
Idaho State U.	288	1,372	1,847	1,490	1,225	0	367	0	858	0
Haverford C.	289	2,581 i	2,342 i	2,231 i	1,183 i	286 i	237 i	401 i	259 i	0 i
U. San Francisco	289	72	144	172	1,183	972	202	0	9	0
SUNY, Geneseo	291	785	1,197	1,234	1,176	0	322	0	854	0
U. Wisconsin-Eau Claire	292	814	1,041	954	1,160	42	507	345	0	266
Alabama A&M U.	293	636 i	681 i	758 i	1,143 i	0 i	529 i	0 i	614 i	0 i
Harvey Mudd C.	294	543	531	744	1,130	0	521	0	609	0
U. of the Virgin Islands	294	908	1,069	1,130	1,130	0	0	0	0	1,130
California State U., Dominguez Hills	296	556	418	1,464	1,128	0	91	0	1,037	0
Texas A&M U.-Commerce	297	939	995	1,028	1,116	0	221	0	895	0
California State U., San Marcos	298	1,667	1,063	981	1,109	0	0	0	810	299
Bryn Mawr C.	299	1,423	1,119	1,254	1,094	0	567	0	527	0
Norfolk State U.	300	726	763	1,051	1,074	0	0	0	1,051	23
Pomona C.	301	872	347	695	1,040	216	483	0	341	0
California State Polytechnic U., Humboldt	302	193	90	899	1,038	0	80	0	958	0
Swarthmore C.	303	734	891	779	1,019	150	626	0	243	0
Long Island U.	304	784	996	767	1,015	0	812	0	203	0
California State U., East Bay	305	939	1,215	895	999	188	145	0	658	8
Occidental C.	305	414	762	877 i	999 i	0 i	688 i	0 i	147 i	164 i
Reed C.	307	886	866 i	860 i	978 i	0 i	668 i	0 i	310 i	0 i
Appalachian State U.	308	408	591	1,013	971	0	631	0	340	0
U. South Alabama	309	433	626	561	970	0	787	0	183	0
U. Tulsa	310	424	403	718	961	0	668	0	293	0
Southern Illinois U., Edwardsville	311	911	1,374	426	955	0	287	0	376	292
Santa Clara U.	312	487	516	589	938	0	594	0	208	136
Franklin and Marshall C.	313	539	660	835	920	97	642	0	176	5
Saint Joseph's U.	314	194	137	1,397	906	0	797	0	109	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
U. North Carolina, Asheville	315	958	558	718	894	183	155	0	7	549
Southern Connecticut State U.	316	846	576	753	893	546	26	0	252	69
U. Washington, Bothell	317	156	681	1,194	884	0	0	0	838	46
Wellesley C.	318	391	327	214	879	42	766	0	71	0
U. Northern Iowa	319	911	966	921	877	0	705	0	172	0
West Chester U. Pennsylvania	320	425	466	771	857	63	504	0	290	0
U. Nebraska, Kearney	321	320	657	625	832	0	538	0	294	0
Spelman C.	322	713	523	410	774	0	640	0	134	0
Pennsylvania State U., Behrend	323	44	282	521	773	0	90	584	99	0
C. Charleston	324	700	983	518	768	180	41	266	94	187
Williams C.	324	1,245 i	1,237 i	675 i	768 i	53 i	503 i	0 i	212 i	0 i
Duquesne U.	326	2,326	615	629	726	0	608	0	118	0
U. Arkansas, Pine Bluff	326	540	1,175	513	726	0	726	0	0	0
Fort Lewis C.	328	470	835	743	725	0	86	619	20	0
CUNY, John Jay C. of Criminal Justice	329	507	235	650	723	0	455	0	0	268
Wright State U.	330	1,774	1,465	1,253	715	0	54	0	652	9
Macalester C.	331	377	451	622	682	70	593	0	19	0
Tennessee Technological U.	331	1,178	879	672	682	0	380	0	302	0
U. Tennessee, Chattanooga	333	52	22	40	662	0	206	0	456	0
Whitman C.	334	356	ne	486	656	0	623	0	33	0
Bowdoin C.	335	239	288	376	654	0	440	0	178	36
U. Central Oklahoma	336	696 i	729 i	572 i	637 i	0 i	336 i	0 i	301 i	0 i
California State U., Sacramento	337	296	238	403	630	0	335	0	295	0
U. Minnesota, Duluth	338	840	624	493	619	0	289	0	330	0
Tougaloo C.	339	361	359 i	537 i	610 i	0 i	386 i	0 i	223 i	1 i
Hamilton C.	340	208	193	127	606	0	376	0	194	36
Bucknell U.	341	872 i	816	1,038	605	51	341	0	213	0
Davidson C.	341	242	451	531	605	0	292	0	249	64
Eastern Kentucky U.	343	95	131	ne	598	0	399	0	199	0
Gustavus Adolphus C.	343	ne	ne	ne	598	0	568	0	30	0
Middlebury C.	343	429	648	564	598	0	289	0	309	0
CUNY, New York City C. of Technology	346	212	331	727	585	0	47	0	538	0
U. Richmond	347	430	454	519	563	0	424	0	139	0
Utah Valley U.	347	ne	ne	815	563	0	301	0	262	0
U. Nebraska, Omaha	349	62	76	180	556	0	0	79	477	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Winston-Salem State U.	350	554	956	964	551	0	551	0	0	0
Lamar U.	351	80	115	124	546	0	288	0	258	0
South Carolina State U.	352	414 i	456 i	498 i	541	0	0	0	541	0
Calvin U.	353	304 i	331 i	358 i	536 i	49 i	267 i	0 i	14 i	206 i
C. New Jersey	354	366	423	923	529	0	323	0	206	0
C. Wooster	355	235	414 i	549	524	0	324	92	108	0
Kenyon C.	356	300	ne	362	523	0	33	0	490	0
U. Colorado Anschutz Medical Campus ^e	357	na	391	566	521	0	0	0	521	0
Smith C.	358	321	495	453	517	37	293	0	187	0
U. Michigan, Dearborn	359	135	169	262	515	0	0	0	0	515
Northern Kentucky U.	360	778	671	875	505	0	293	0	212	0
U. Alaska, Anchorage	360	184	1,160	577	505	228	249	0	28	0
Kean U.	362	39	18	1,576	502	0	415	0	0	87
Murray State U.	363	185	201	293	481	0	439	0	39	3
Oberlin C.	364	483	298	ne	467	15	317	0	135	0
Sam Houston State U.	364	481	503	308	467	0	326	0	141	0
Colby C.	366	391	245	345	456	96	299	0	61	0
Skidmore C.	366	363	689	433	456	0	440	0	16	0
U. Arkansas, Little Rock	368	1,105	685	292	452	0	383	0	69	0
Vassar C.	369	250	178	233	450	178	261	0	11	0
Eastern Michigan U.	370	690	211	540	446	158	238	46	4	0
Lafayette C.	371	388	286	483	445	0	153	0	292	0
Southern U. and A&M C., Baton Rouge	372	735	583	200	433	0	150	0	283	0
Southeastern Louisiana U.	373	326	247	606	427	0	305	0	122	0
Yeshiva U.	374	286	253	682	419	0	0	0	419	0
Tarleton State U.	375	263	359	503	409	0	409	0	0	0
U.S. Military Academy	376	814	338	185	408	0	19	389	0	0
Butler U.	377	ne	ne	154	406	0	406	0	0	0
East Tennessee State U.	378	439 i	240 i	464 i	404	296	108	0	0	0
Hofstra U.	379	10	141	711	401	0	178	0	223	0
U. Central Arkansas	380	585	568	465	399	12	355	0	22	10
California State U., Chico	381	182	172	166	396	0	159	0	237	0
Salisbury U.	381	212	440	326	396	0	343	0	53	0
Indiana U., South Bend	383	ne	281	ne	392	0	148	0	244	0
Carleton C.	384	704	531	301	390 i	24 i	244 i	0 i	122 i	0 i

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
U. Dayton	385	868	910	876	385	24	18	136	207	0
Union C., Schenectady	386	268	185	244	383	93	275	0	15	0
Andrews U.	387	196	174	ne	380	377	3	0	0	0
St. John's U., New York	387	405	345	510	380	0	340	0	40	0
Winthrop U.	389	317	382	444	378	0	378	0	0	0
U. Colorado Colorado Springs	390	270	310	457	377	0	197	0	179	1
Florida Gulf Coast U.	391	397	197	207	376	0	376	0	0	0
U. Northern Colorado	392	122	149	72	374	85	254	0	35	0
U. Wisconsin-River Falls	393	330	84	ne	373	0	306	0	67	0
Tennessee State U.	394	435	0	0	369	0	23	0	346	0
Nova Southeastern U.	395	0	0	0	359	0	276	0	11	72
California State U., Channel Islands	396	39	301	406	357	0	357	0	0	0
Central State U.	397	6	67	954	352	0	270	0	82	0
California State U., Monterey Bay	398	0	57	446	349	0	349	0	0	0
U. of the Incarnate Word	398	226	298	478	349	0	146	0	203	0
CUNY, Baruch C.	400	297	256	338	347	0	0	0	347	0
Mount Holyoke C.	400	496	550	370	347	95	33	0	215	4
Ursinus C.	402	ne	ne	ne	344	0	197	0	147	0
Arkansas State U., Jonesboro	403	876	665	886	342	0	342	0	0	0
Clafin U.	404	258	129	102	340	0	320	0	20	0
Grand Valley State U.	405	374	247	331	339	0	275	0	64	0
U. of St. Thomas (MN)	406	235	168	340	338	0	338	0	0	0
SUNY, C. Plattsburgh	407	126	137	26	331	0	0	0	331	0
Seattle U.	408	165	86	311	327	0	81	0	246	0
Rhode Island C.	409	361	320	441	326	0	0	0	0	326
Kennesaw State U.	410	1,019	1,133	1,096	323	0	89	0	50	184
U. Wisconsin-La Crosse	411	416	476	299	322	0	220	0	102	0
SUNY, Oswego	412	314	328	450	315	0	278	0	37	0
Texas A&M International U.	413	42	154	275	314	0	136	125	53	0
SUNY, C. Brockport	414	74	103	211	310	92	98	0	120	0
Gallaudet U.	415	5	92	60	308	0	0	0	308	0
Purdue U., Northwest	416	207	110	202	302	0	302	0	0	0
Texas Woman's U.	417	204	7	585	286	0	285	0	0	1
Colorado C.	418	75	154	316	283	19	70	0	194	0
Coastal Carolina U.	419	0	88	209	280	0	105	0	175	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Ithaca C.	420	378	379	291	277	0	171	0	106	0
Trinity C., Hartford	421	50	113	147	271	0	242	0	29	0
U. Hawaii, Hilo	422	217	66	376	268	71	63	0	134	0
Central Washington U.	423	306	285	541	267	0	68	0	199	0
U. Guam	424	0	86	131	266	171	0	0	0	95
Texas A&M U.-Kingsville	425	164	213	323	265	0	208	43	14	0
Azusa Pacific U.	426	205	207	176	256	0	74	0	182	0
Providence C.	427	390	99	ne	253	20	233	0	0	0
Loyola Marymount U.	428	233	269	383	252	0	176	0	0	76
U. Puerto Rico, Cayey	429	203	127	61	248	0	30	0	218	0
West Texas A&M U.	430	211	200	258	247	0	247	0	0	0
Sul Ross State U.	431	0	149 i	190 i	231	0	0	0	0	231
Rutgers, State U. New Jersey, Camden	432	354	41	297	229	0	131	0	98	0
Gettysburg C.	433	203	ne	ne	228	0	192	0	36	0
Willamette U.	434	269	179	139	227	0	172	0	55	0
Roger Williams U.	435	101	2	47	224	8	102	0	114	0
U. North Georgia	436	91	2	15	218	2	40	0	176	0
Lewis and Clark C.	437	749	249	246	214	0	210	4	0	0
Hobart and William Smith Colleges	438	175	152	300	211	0	37	0	174	0
New York Institute of Technology	438	0	3	101	211	0	0	0	211	0
U. Houston-Clear Lake	440	403	236	123	206	0	0	0	0	206
Indiana U. Pennsylvania	441	425	364	456	204	0	33	0	171	0
Albion C.	442	422	231 i	217 i	203	203	0	0	0	0
California State U., Stanislaus	442	17	84	117	203	0	110	0	93	0
California State U., Bakersfield	444	91	447	322	202	0	202	0	0	0
Norwich U.	445	ne	ne	ne	200	0	200	0	0	0
St. Olaf C.	446	106	82	ne	196	5	123	0	68	0
U. Wisconsin-Oshkosh	446	288 i	292	398	196	0	150	0	46	0
U. Louisiana, Monroe	448	55	17	247	195	0	195	0	0	0
Claremont McKenna C.	449	144	136	385	191	0	82	0	109	0
CUNY, York C.	450	568	192	172	188	1	187	0	0	0
Augusta U.	451	29	172	266	187	0	187	0	0	0
Fayetteville State U.	452	260	147	165	183 i	0 i	0 i	0 i	0 i	183 i
Ferris State U.	453	ne	ne	ne	179	0	158	0	21	0
Bates C.	454	405	413	330	175	57	43	0	75	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020		2021		2022		2023											
								All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec						
U. Wisconsin-Green Bay	455	125	i	112	i	156	i	166	i	0	i	81	i	0	i	85	i	0	i
U. South Carolina, Aiken	456	51		9		292		165		0		165		0		0		0	
Missouri State U.	457	418		345		291		164		111		53		0		0		0	
Dillard U.	458	975		252		158		163		0		0		0		163		0	
Sacred Heart U.	459	ne		64		ne		161		0		69		0		39		53	
Drake U.	460	ne		221		220		158		0		12		0		146		0	
Benedict C.	461	146		ne		ne		149		0		149		0		0		0	
Sonoma State U.	462	203		289		62		145		0		145		0		0		0	
Connecticut C.	463	350		271		690		144		0		144		0		0		0	
Virginia State U.	463	0		0		80		144		0		144		0		0		0	
C. of Saint Benedict	465	167	i	108	i	124	i	142	i	0	i	99	i	1	i	42	i	0	i
Saint John's U.	465	132	i	108	i	125	i	142	i	0	i	100	i	0	i	42	i	0	i
Pepperdine U.	467	56		111		89		139		0		138		0		1		0	
U. Maryland Center for Environmental Science	468	541		519		1,014		132		0		56		0		76		0	
U. New Haven	469	285		323		128		131		0		18		113		0		0	
U. Puget Sound	470	252		ne		123		127		0		116		0		5		6	
U. Wisconsin-Stevens Point	471	105		61		136		125		0		125		0		0		0	
Citadel Military C. South Carolina	472	119		76		184		122		0		50		0		72		0	
U. Texas, Tyler	472	33		46		29		122		0		99		0		0		23	
Youngstown State U.	472	346		335		366		122		21		66		0		35		0	
Black Hills State U.	475	116		103		101		120		0		0		0		120		0	
Wheaton C., Wheaton	476	150		148		ne		119		0		104		0		15		0	
Fort Valley State U.	477	72		76		83		118		0		118		0		0		0	
Elon U.	478	83		59		45		116		1		84		0		31		0	
Albany State U.	479	54		102		ne		111		0		111		0		0		0	
Langston U.	480	109		28		53		110		0		0		0		0		110	
U. Houston-Downtown	480	72		382		88		110		46		0		0		0		64	
Canisius U.	482	ne		173		159		108		0		0		0		0		108	
Virginia Military Institute	482	ne		ne		112		108		0		92		0		16		0	
U. Wisconsin-Platteville	484	101	i	82	i	98	i	107	i	0	i	56	i	0	i	51	i	0	i
Pace U.	485	138		226		100		106		0		106		0		0		0	
Western Illinois U.	485	78		68		84		106		0		67		0		39		0	
U. Scranton	487	ne		ne		ne		100		0		92		0		5		3	
Purdue U., Fort Wayne	488	126		92		76		99		0		95		0		4		0	
Austin Peay State U.	489	15		50		89		96		0		1		0		95		0	

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Pennsylvania State U., Harrisburg	490	0	0	8	91	0	91	0	0	0
U. of the Pacific	491	307	223	152	88	37	51	0	0	0
Eastern Washington U.	492	66	63	125	86	0	75	0	11	0
Savannah State U.	493	50	34	53	85	0	85	0	0	0
Montana Technological U.	494	123	216	375	83	0	83	0	0	0
Central Connecticut State U.	495	82	73	104	82	0	82	0	0	0
Manhattan C.	496	71	112	140	79	0	79	0	0	0
Pennsylvania State U., Altoona	497	ne	ne	ne	77	0	0	3	74	0
Fairfield U.	498	153	134	ne	76	0	53	0	23	0
St. Edward's U.	499	1,074	1,101	571	70	0	70	0	0	0
U. Alaska, Southeast	500	55	67	44	66	66	0	0	0	0
U. of Mary Washington	501	62	100	117	63	0	2	0	61	0
U.S. Coast Guard Academy	502	ne	ne	ne	62	0	54	0	8	0
U. Hawaii, Maui C.	503	ne	0	ne	61	0	0	61	0	0
Stephen F. Austin State U.	504	36	29	114	60	0	60	0	0	0
U. of Health Sciences and Pharmacy in St. Louis	505	0	0	9	59	0	0	0	59	0
Lawrence Technological U.	506	6	55	148	57	0	0	0	57	0
Western Carolina U.	507	253	45	9	56	33	23	0	0	0
U. Detroit Mercy	508	5	6	0	55	0	55	0	0	0
U. Texas of the Permian Basin	509	24	30	30	51	0	22	0	0	29
Pacific U.	510	120	299	467	49	0	7	0	42	0
SUNY, Buffalo State U.	511	3	0	0	47	0	0	0	47	0
Minnesota State U., Mankato	512	52	29	39	46	33	13	0	0	0
New C. Florida	513	ne	ne	ne	40	0	34	0	6	0
Pittsburg State U.	514	22	24	27	39	0	39	0	0	0
Merrimack C.	515	0	ne	ne	36	27	9	0	0	0
Marian U., Indianapolis	516	ne	ne	ne	33	0	33	0	0	0
Marymount U.	517	ne	88	2	32	0	32	0	0	0
Monmouth U.	517	19	44	110	32	0	1	0	31	0
U. Hartford	517	0	0	8	32	0	7	0	25	0
Lake Superior State U.	520	ne	ne	21	25	0	25	0	0	0
U. Wisconsin-Superior	521	0	0	0	23	0	19	4	0	0
St. Mary's C. Maryland	522	ne	ne	ne	22	0	22	0	0	0
U. Virginia's C. Wise	523	ne	20	44	18	0	18	0	0	0
DePaul U.	524	305	258	13	16	0	15	0	1	0

TABLE 48

Higher education R&D expenditures in the physical sciences, ranked by all FY 2023 physical sciences: FYs 2020–23 and by subfield for FY 2023

(Dollars in thousands)

Institution	Rank	2020	2021	2022	2023					
					All physical sciences	Astronomy and astrophysics	Chemistry	Materials science	Physics	Physical sciences nec
Indiana State U.	524	160	89	130	16	0	0	0	16	0
Northern Michigan U.	526	35	10	43	15	0	11	0	4	0
U. Maryland, Eastern Shore	526	1,243	0	0	15	0	0	0	15	0
U. New England	526	26	19	14	15	0	15	0	0	0
Lincoln U.	529	ne	ne	ne	14	0	0	0	14	0
Oregon Health and Science U.	529	0	0	0	14	0	14	0	0	0
U. Baltimore	529	67	45	0	14	0	0	0	0	14
New Mexico Highlands U.	532	541	6 i	9 i	12	0	12	0	0	0
St. Cloud State U.	532	15	13	19	12	5	5	0	2	0
U. Puerto Rico, Ponce	534	ne	ne	ne	9	0	9	0	0	0
Alfred U.	535	7	5	16	8	8	0	0	0	0
Eastern Connecticut State U.	536	0	5	7	7	0	6	0	1	0
Florida Polytechnic U.	536	76	71	4	7	0	7	0	0	0
Robert Morris U.	536	ne	ne	6 i	7	0	0	0	7	0
U. of the District of Columbia	536	0	0	0	7	0	7	0	0	0
Lipscomb U.	540	0 i	0	ne	6	0	6	0	0	0
Framingham State U.	541	247	205 i	105 i	5	0	5	0	0	0
La Sierra U.	542	1	1	1	1 i	0 i	0 i	0 i	1 i	0 i
William Paterson U.	542	361	140	124	1	0	1	0	0	0
All other surveyed institutions	-	32,857	30,638	30,704	0	0	0	0	0	0

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

nec = not elsewhere classified.

^a Johns Hopkins University includes the Applied Physics Laboratory (APL), with \$296,755 thousand imputed for total R&D expenditures in physical sciences in FY 2023. Total expenditures by field for Johns Hopkins University are flagged as imputed because APL was unable to distribute a portion of institutionally funded R&D by field.

^b The University of Maryland includes expenditures from the University of Maryland, Baltimore and University of Maryland, College Park campuses. In FY 2019, the two campuses began reporting as one research unit to reflect their new strategic partnership. This relationship was codified through the University of Maryland Strategic Partnership Act passed by the Maryland General Assembly in 2016. Prior to FY 2019, both campuses reported to the survey as separate institutions.

^c The University of Nebraska, Lincoln and Medical Center includes expenditures from the University of Nebraska, Lincoln; University of Nebraska, Medical Center; and University of Nebraska, Central Administration campuses. Due to a realignment within the University of Nebraska system that occurred on 22 June 2023, the three campuses fall under the leadership of one president. Prior to FY 2023, these three campuses reported to the survey as separate institutions.

^d The University of South Florida includes expenditures from the University of South Florida, Tampa; University of South Florida, Saint Petersburg; and University of South Florida, Sarasota-Manatee campuses. Due to the consolidation of the three campuses that occurred on 1 July 2020, University of South Florida, Saint Petersburg and University of South Florida, Sarasota-Manatee began reporting with the University of South Florida, Tampa as the University of South Florida. Prior to FY 2021, all three campuses reported to the survey as separate institutions.

^e The University of Colorado Denver and University of Colorado Anschutz Medical Center report to the survey separately. Prior to FY 2021, expenditures were reported together under University of Colorado Denver and Anschutz Medical Campus.

Note(s):

Institutions reporting zero expenditures in ranked total for FY 2023 are not listed in this table. Tied institutions are ranked alphabetically. Ranked institutions are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large, multi-campus universities; some are part of state university systems. For a complete list of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 6.

Source(s):

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