

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
All institutions	-	2,435,600	2,463,695	2,669,468	2,966,923	1,736,203	1,767,509	1,942,446	2,123,118
Johns Hopkins U. ^a	1	232,583 i	223,991 i	234,921 i	257,687 i	222,997	215,073	225,387	248,916
Michigan State U.	2	142,473	154,887	167,776	188,049	92,899	113,913	124,233	144,752
U. Rochester	3	95,695	93,851	105,517	117,118	90,436	88,161	98,439	110,943
California Institute of Technology	4	106,237	100,714 i	100,726	111,025 i	92,720	78,185	80,750	81,849
U. Colorado Boulder	5	69,967	70,498	79,823	82,413	64,624	64,351	69,385	71,502
Massachusetts Institute of Technology	6	48,695	57,207	68,994	70,662	38,758	45,000	53,744	56,056
Harvard U.	7	49,146	59,910	66,873	70,188	29,457	31,258	37,997	34,387
U. Iowa	8	17,099	26,404	48,303	56,574	14,623	24,381	45,461	51,726
U. Maryland ^b	9	46,013	42,274	45,925	56,336	29,752	31,173	29,928	33,004
Cornell U.	10	48,658	53,686	51,692	55,446	37,180	43,263	40,260	42,061
Florida State U.	11	41,870	38,309	40,478	51,460	26,260	22,154	25,129	35,433
U. Missouri, Columbia	12	3,443	3,221	3,198	51,172	2,486	2,070	1,925	2,579
Stanford U.	13	48,826	47,667	48,088	49,870	32,816	32,299	33,960	37,003
U. Illinois, Urbana-Champaign	14	27,506	33,961	38,628	43,505	20,032	22,415	27,787	31,688
U. Wisconsin-Madison	15	24,984	26,135	33,045	41,543	17,822	18,846	24,029	27,280
U. Central Florida	16	29,759	33,116	34,327	40,024	16,961	19,270	19,961	25,736
U. California, San Diego	17	66,169	56,983	58,691	33,763	32,298	32,711	38,163	22,834
Princeton U.	18	40,161	35,249	37,325	33,192	28,224	23,204	23,951	18,686
U. California, Los Angeles	18	33,263	30,227	30,682	33,192	22,591	20,068	24,786	24,918
U. California, Santa Barbara	20	23,427	26,695	32,704	32,081	13,661	16,106	19,648	18,547
SUNY, Stony Brook U.	21	26,615	26,964	30,296	31,946	19,742	20,764	22,447	24,545
U. Texas, Austin	22	26,463	23,011	23,264	28,669	18,638	14,953	15,478	16,400
Pennsylvania State U., University Park and Hershey Medical Center	23	26,281	20,314	21,573	28,317	16,969	17,473	17,343	22,022
U. Michigan, Ann Arbor	24	23,596	27,204	26,384	28,248	13,625	16,183	16,485	17,982
Yale U.	25	27,884	29,911	28,927	28,026	16,547	16,119	16,466	16,743
Catholic U. of America	26	12,213	13,988	19,597	27,944	11,952	13,555	19,597	27,081
U. Pennsylvania	27	21,371	20,728	24,454	26,118	14,450	14,568	17,013	18,175
U. Nebraska, Lincoln and Medical Center ^c	28	na	na	na	24,988	na	na	na	18,048
U. Notre Dame	29	15,639	16,473	17,906	24,872	10,607	10,256	11,319	14,760
U. Washington, Seattle	30	19,281	18,479	21,238	24,614	17,789	17,655	19,998	23,796
Purdue U., West Lafayette	31	19,417	16,391	18,954	24,132	9,235	10,082	11,398	14,246
U. Texas M. D. Anderson Cancer Center	32	19,060	17,572	19,651	23,775	8,114	8,179	8,306	11,861
Texas A&M U., College Station and Health Science Center	33	17,848	16,238	19,252	23,388	9,751	10,514	11,657	13,326
U. Minnesota, Twin Cities	34	19,948	19,162	20,446	23,250	16,693	15,816	16,437	18,423

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(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Northwestern U.	35	15,418	19,296	19,886	22,886	8,508	8,746	10,229	10,597
Ohio State U.	36	21,007	19,719	25,431	22,715	17,224	16,003	18,054	18,111
Louisiana State U., Baton Rouge	37	13,851	12,979	17,419	20,617	9,293	8,305	8,020	8,594
Rice U.	38	16,107	14,466	15,651	19,681	9,200	8,273	10,243	11,944
U. California, Irvine	39	18,770	19,684	18,914	19,630	10,987	11,775	13,063	13,158
Montana State U., Bozeman	40	9,194	9,940	10,957	19,519	5,188	7,261	8,315	16,667
Northeastern U.	41	12,711	15,248	16,743	19,136	8,026	9,014	9,555	12,916
U. Chicago	42	12,688	15,752	19,896	18,877	10,586	13,574	16,277	14,173
Columbia U. in the City of New York	43	12,331	17,403	21,038	18,616	9,642	15,103	16,037	16,617
Boston U.	44	14,002	15,143	17,312	17,859	9,963	10,572	12,340	12,715
Rutgers, State U. New Jersey, New Brunswick	45	12,903	13,193	15,686	16,794	6,212	6,736	7,519	8,320
U. Tennessee, Knoxville	46	14,423	14,277	14,496	16,586	8,951	9,105	9,575	10,498
U. Massachusetts, Lowell	47	14,669	12,753	12,817	15,538	10,138	9,661	9,585	10,944
Iowa State U.	48	14,842	14,746	16,138	15,234	9,760	11,324	12,524	11,021
U. Illinois, Chicago	49	7,884	8,392	11,030	14,931	5,874	6,815	9,219	12,869
Georgia Institute of Technology	50	11,892	11,359	11,461	14,861	7,182	6,788	7,055	7,936
New York U.	51	12,945	12,261	13,288	14,860	6,927	7,483	7,688	8,766
Arizona State U.	52	12,338	14,980	15,121	14,574	6,395	8,833	10,119	9,450
U. Florida	53	13,128	13,180	14,892	14,410	9,258	9,375	11,210	11,124
Syracuse U.	54	9,629	9,184	9,393	13,466	5,770	6,037	5,790	7,763
U. Delaware	55	5,429	4,523	11,981	13,060	4,452	3,576	4,788	5,693
Duke U.	56	12,587	10,595	10,609	12,945	10,780	9,760	9,763	11,845
Dartmouth C. and Dartmouth Hitchcock Medical Center	57	12,021	14,279	13,327	12,728	4,677	5,301	6,023	5,091
Carnegie Mellon U.	58	11,458	11,111	11,547	12,681	6,254	6,000	6,575	6,558
U. Texas, Arlington	59	10,782	10,373	12,897	12,488	6,615	6,574	9,048	8,342
North Carolina State U.	60	11,615	12,217	11,091	12,147	7,012	7,912	7,960	8,108
U. North Carolina, Chapel Hill	61	10,472	10,003	10,374	11,851	8,065	7,344	7,468	8,245
Vanderbilt U. and Vanderbilt U. Medical Center	62	14,458	13,676	11,203	11,556	8,139	6,510	6,825	6,907
U. California, Berkeley	63	32,085	33,755	37,089	11,388	17,480	18,480	22,296	7,112
U. Pittsburgh, Pittsburgh	64	8,507	8,706	11,050	10,972	6,176	5,927	8,499	9,169
U. California, Davis	65	10,195	9,032	11,138	10,963	7,160	6,595	8,529	8,183
Indiana U., Bloomington	66	12,816	11,417	11,070	10,880	9,644	8,075	7,332	6,965
U. Virginia, Charlottesville	67	12,224	10,671	11,632	10,841	10,220	8,967	9,731	8,818
U. Arkansas, Fayetteville	68	4,313	3,443	5,378	10,730	2,292	2,070	3,723	9,144
Washington State U.	69	12,549	10,978	9,653	10,674	6,837	8,560	7,274	7,374

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		2020	2021	2022	2023	2020	2021	2022	2023
Auburn U., Auburn	70	7,842	9,147	8,907	10,216	5,012	4,549	4,791	5,600
U. Massachusetts, Amherst	71	8,927	7,995	8,782	9,845	4,976	5,267	5,750	6,233
Brown U.	72	7,968	8,542	9,155	9,713	3,718	5,221	5,729	7,048
Washington U., Saint Louis	73	5,060	5,680	6,504	9,591	4,606	5,255	6,119	8,853
U. Oklahoma, Norman and Health Science Center	74	6,397	6,446	8,205	9,518	3,054	2,907	4,237	3,984
Kansas State U.	75	8,209	8,759	11,342	9,235	6,007	6,616	8,099	7,322
U. Mississippi	76	7,658	7,568	8,566	9,145	5,768	5,690	5,710	6,725
U. Houston	77	8,637	7,385	9,044	8,983	2,775	2,809	3,255	3,424
Air Force Institute of Technology	78	7,796	15,999	11,934	8,942	4,973	8,037	8,136	7,070
U. Arizona	79	9,230	9,072	5,890	8,431	5,464	5,685	4,432	5,493
U. California, Riverside	80	7,777	8,003	7,334	8,244	6,880	6,534	6,196	6,491
U. California, Santa Cruz	81	6,991	6,919	6,876	8,099	4,865	4,666	5,534	6,051
Georgetown U.	82	5,833	7,444	9,852	7,933	4,763	6,119	7,318	5,503
U. Utah	83	0	8,945	0	7,843	0	5,381	0	6,043
Abilene Christian U.	84	ne	4,209	5,746	7,663	ne	712	905	836
West Virginia U.	85	7,810	4,887	5,551	7,525	5,765	3,757	4,282	5,811
U. Toledo	86	4,645	6,700	6,033	7,520	3,237	4,768	5,259	5,644
U. Connecticut	87	6,034	5,482	5,753	7,477	4,609	4,030	4,284	5,725
New Mexico Institute of Mining and Technology	88	1,074	984	1,649	7,084	1,061	972	1,543	6,995
U. New Mexico	89	4,272	4,044	4,943	6,754	3,846	3,524	4,363	6,249
Colorado School of Mines	90	5,398	5,336	5,455	6,694	5,059	4,957	4,850	5,660
Virginia Polytechnic Institute and State U.	91	7,831	7,913	7,798	6,660	4,788	5,196	5,300	5,006
Georgia State U.	92	5,727	4,705	4,220	6,614	5,143	2,893	2,425	3,460
U. Maine	93	5,267	5,645	5,637	6,610	1,648	2,161	2,237	2,820
William & Mary	94	5,280	5,491	5,421	6,219	4,049	3,774	4,291	5,080
Texas Tech U.	95	7,419	7,553	6,739	6,144	1,215	1,141	1,391	1,861
CUNY, Advanced Science Research Center	96	2,778	4,490	6,640	6,128	2,096	3,559	5,277	4,152
Clemson U.	97	5,747	5,915	6,199	6,050	3,820	4,288	4,752	5,178
U. Nevada, Las Vegas	98	3,807	4,851	5,075	5,998	982	1,428	1,638	2,617
U. Texas, Dallas	99	5,219	4,550	4,911	5,916	2,914	2,588	2,928	3,867
Brandeis U.	100	9,118	7,813	5,693	5,890	5,523	4,522	1,577	2,311
Brigham Young U., Provo	101	2,034	2,337	2,586	5,702	1,676	1,927	2,487	2,565
Colorado State U., Fort Collins	102	2,855	2,956	3,551	5,625	2,101	2,460	3,053	4,966
Ohio U.	103	3,971	4,088	4,837	5,556	2,885	3,070	3,723	3,756
George Washington U.	104	4,334	3,752	4,105	5,537	3,597	2,898	3,669	3,887

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Institution	Rank	Total				Federally financed					
		2020	2021	2022	2023	2020	2021	2022	2023		
North Carolina Central U.	105	2,878	2,601	4,495	4,987	i	2,834	2,356	4,251	4,710	i
U. Kansas	106	2,108	3,264	3,660	4,935		1,983	2,365	2,908	3,551	
Oregon State U.	107	1,310	1,564	2,856	4,917		1,304	1,554	2,831	4,827	
Old Dominion U.	108	4,731	4,551	5,169	4,709		3,510	3,352	3,424	3,532	
Mississippi State U.	109	3,475	3,675	4,123	4,696		1,138	1,022	1,396	1,924	
Rochester Institute of Technology	110	3,504	3,585	4,681	4,680		2,160	2,165	2,990	3,363	
Oakland U.	111	2,300	2,819	3,850	4,650		886	1,208	1,316	1,276	
U. Texas, San Antonio	112	4,254	4,510	4,123	4,640		3,017	3,090	2,485	2,689	
U. Maryland, Baltimore County	113	2,753	2,869	4,686	4,629		2,300	2,570	3,621	3,349	
New Jersey Institute of Technology	114	4,366	4,153	4,166	4,620		1,542	1,640	1,575	1,205	
U. North Dakota	115	1,123	812	669	4,606		129	31	142	3,947	
U. Miami	116	3,713	3,682	4,334	4,586		3,161	3,353	4,060	3,963	
U. Cincinnati	117	3,078	3,202	3,250	4,530		2,036	2,328	2,151	2,679	
Emory U.	118	3,433	4,835	3,804	4,521		2,729	2,984	2,719	3,189	
U. Hawaii, Manoa	119	4,021	4,291	4,063	4,508		3,792	3,763	3,488	4,068	
Wayne State U.	120	3,654	4,254	4,872	4,286		2,469	3,071	3,356	2,895	
Oklahoma State U., Stillwater	121	4,604	4,483	4,097	4,205		1,357	1,461	1,843	1,935	
Delaware State U.	122	1,313	i	1,340	2,640		873	i	1,003	2,175	3,605
Northern Illinois U.	123	4,024		3,875	3,431		4,146	2,567	2,460	2,833	3,083
SUNY, Binghamton U.	124	6,624		4,123	4,570		4,145	2,318	1,619	1,153	1,146
U. South Florida ^d	125	4,213		3,623	4,127		4,096	2,114	1,867	2,196	1,777
U. North Carolina, Charlotte	126	2,742		1,757	2,010		4,087	1,901	1,310	1,517	2,428
Florida International U.	127	8,185		5,218	4,440		4,058	3,976	2,345	2,262	2,657
CUNY, City C.	128	3,361		3,553	4,153		3,997	2,626	3,228	3,771	3,952
U. Nevada, Reno	129	4,235		2,947	3,720		3,975	2,590	2,399	2,602	3,382
Boston C.	130	1,814		3,320	3,271		3,871	1,471	1,997	2,327	2,948
Temple U.	131	6,708		6,242	6,046		3,844	3,720	3,387	3,258	3,180
SUNY, U. Buffalo	132	3,526		3,283	2,610		3,821	2,412	2,319	1,751	2,396
Southern Methodist U.	133	2,378		2,504	3,127		3,819	1,934	2,266	2,436	1,724
Baylor U.	134	2,968		2,955	3,786		3,694	1,136	1,158	1,586	1,241
Kent State U.	135	2,591		2,378	2,666		3,664	1,617	1,282	1,717	2,421
U. Oregon	136	7,248		3,462	3,502		3,578	4,826	2,937	2,556	3,093
Hampton U.	137	3,142		3,409	3,625		3,556	3,142	3,409	3,625	3,556
U. Texas, El Paso	138	2,155		2,801	3,622		3,551	1,024	1,559	1,675	1,860
U. North Texas, Denton	139	3,689		3,205	2,974		3,453	1,222	1,099	995	1,047

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(Dollars in thousands)

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		2020	2021	2022	2023	2020	2021	2022	2023
U. Kentucky	140	3,751	3,124	3,509	3,402	3,116	2,434	3,240	2,957
U. South Carolina, Columbia	141	3,777	3,050	2,613	3,323	2,264	1,467	1,401	1,336
U. Alabama, Birmingham	142	2,491	2,339	3,152	3,304	2,214	2,093	2,462	2,732
U. California, Merced	143	3,101	2,344	2,663	3,118	2,119	871	1,571	2,586
American U.	144	3,867	3,614	3,368	3,091	3,205	2,976	2,754	3,091
Lehigh U.	145	1,348	1,577	2,478	3,080	868	1,102	1,620	2,327
U. New Hampshire	146	2,672	2,786	3,124	3,071	2,283	1,461	1,577	1,412
U. Georgia	147	2,701	2,499	2,900	3,055	792	516	789	823
Tulane U.	148	2,986	2,791	2,275	3,051	1,971	1,748	1,647	2,183
Jackson State U.	149	1,451	1,160	1,955	2,982	1,314	1,011	1,687	2,541
Rensselaer Polytechnic Institute	150	2,554	2,883	4,177	2,955	1,151	1,240	1,281	1,142
U. Alabama, Tuscaloosa	151	3,530	4,005	2,683	2,911	2,568	2,558	2,529	2,580
U. Alabama, Huntsville	152	1,767	2,284	2,957	2,839	886	1,172	1,722	1,360
Illinois Institute of Technology	153	2,476	3,110	3,352	2,779	2,125	2,613	2,884	2,421
Utah State U.	154	2,462	2,172	2,275	2,720	1,661	1,421	1,633	2,200
Naval Postgraduate School	155	6,244	4,070	2,751	2,649	6,178	3,899	2,674	2,580
SUNY, U. Albany	156	2,427	1,977	2,779	2,638	533	609	596	720
Worcester Polytechnic Institute	157	1,351	2,239	1,964	2,443	582	1,136	944	1,379
Michigan Technological U.	158	2,169	2,218	2,218	2,441	640	553	564	614
Morgan State U.	159	234	385	1,394	2,427	218	374	1,305	2,384
San Jose State U.	160	626	1,301	1,728	2,271	615	822	1,198	1,167
U. Puerto Rico, Rio Piedras	161	1,653	1,919	1,614	2,160	1,067	1,454	1,002	1,474
Case Western Reserve U.	162	1,767	1,702	1,940	2,110	1,610	1,476	1,695	1,912
Florida A&M U.	163	1,371	1,323	1,891	2,104	1,327	1,321	1,861	2,086
Fisk U.	164	200	1,022	1,283	2,038	200	904	1,050	1,362
San Diego State U.	165	1,561	1,594	1,420	2,022	440	517	644	853
U. Louisiana, Lafayette	166	1,283	3,442	1,826	2,012	44	2,011	63	70
South Dakota School of Mines and Technology	167	693	1,143	1,709	2,010	693	865	1,471	1,815
New Mexico State U.	168	1,386	1,675	1,792	1,994	1,132	1,322	1,355	1,541
U. South Dakota	169	1,555	1,691	1,727	1,975	976	1,028	1,254	1,309
CUNY, Hunter C.	170	1,194	1,015	1,446	1,907	973	954	1,189	1,303
U. Massachusetts, Boston	171	1,214	1,479	1,153	1,828	533	624	450	427
Virginia Commonwealth U.	172	1,249	1,379	1,547	1,701	901	992	1,190	1,139
North Carolina A&T State U.	173	1,116	910	1,296	1,608	1,049	877	1,269	1,468
U. Texas Rio Grande Valley	174	595	807	1,280	1,594	594	683	917	1,115

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Stevens Institute of Technology	175	1,824	1,518	1,376	1,576	1,648	1,242	1,188	1,204
Drexel U.	176	258	1,339	1,696	1,575	0	1,119	1,313	1,182
CUNY, Graduate Center	177	630	547	0	1,445	435	518	0	10
Central Michigan U.	178	2,366	1,651	1,558	1,428	1,943	1,627	1,537	1,425
California State U., Northridge	179	2,567	1,525	1,605	1,379	2,373	1,508	1,574	1,348
Christopher Newport U.	180	766	705	803	1,372	518	526	647	1,200
U. Wisconsin-Milwaukee	181	6,526	3,324	1,813	1,360	4,260	1,985	1,153	840
California Polytechnic State U., San Luis Obispo	182	2,494	1,757	2,142	1,309	937	658	962	1,072
Wake Forest U.	183	1,366	1,080	1,087	1,296	1,103	936	874	1,099
Creighton U.	184	837	951	1,204	1,253	529	571	800	844
Louisiana Tech U.	185	980	1,055	1,016	1,246	252	232	214	323
Florida Institute of Technology	186	1,364	2,513	1,051	1,210	1,193	1,887	490	725
U. California, San Francisco	187	917	1,325	904	1,191	0	1	0	0
U.S. Naval Academy	188	1,217	1,001	840	1,180	1,193	897	769	1,152
Texas State U.	189	735	1,251	1,064	1,132	734	1,127	922	967
Florida Atlantic U.	190	991	849	561	1,129	481	404	460	566
U. San Diego	191	918	879	862	1,105	496	402	272	397
U. Vermont	192	2,441	1,104	1,199	1,095	1,383	616	653	627
Rutgers, State U. New Jersey, Newark	193	408	371	1,685	1,090	261	316	927	519
Texas Christian U.	193	299	173	1,612	1,090	175	154	220	411
Western Michigan U. and Homer Stryker M.D. School of Medicine	195	660	537	639	1,089	509	442	393	582
U. Memphis	196	791	770	404	1,079	353	341	0	158
Norfolk State U.	197	650	732	1,051	1,051	650	732	1,051	1,051
Indiana U.-Purdue U., Indianapolis	198	507	486	990	1,038	455	486	912	1,008
California State U., Dominguez Hills	199	25	0	856	1,037	3	0	593	892
U. Idaho	200	245	246	396	1,025	160	160	163	198
U. Massachusetts, Dartmouth	201	499	716	843	1,014	75	41	74	35
U. Wyoming	202	679	549	467	1,005	652	511	463	983
Chicago State U.	203	ne	ne	651	1,003	ne	ne	651	1,003
San Francisco State U.	204	883	927	1,134	980	493	498	425	563
California State U., San Bernardino	205	0	80	529	975	0	62	520	956
Missouri U. of Science and Technology	206	3,792	1,873	1,162	972	2,758	883	595	755
California State Polytechnic U., Humboldt	207	144	14	825	958	76	7	32	54
U. Missouri, Kansas City	208	894	897	624	956	726	667	428	302
Illinois State U.	209	229	280	222	945	220	214	219	691

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
East Carolina U.	210	814	621	474	909	305	401	270	256
Texas A&M U.-Commerce	211	810	783	853	895	688	678	741	657
Villanova U.	212	520	492	799	880	306	273	628	705
Rockefeller U.	213	2,464	1,305	966	866	583	348	187	179
Idaho State U.	214	742	885	1,109	858	394	403	443	237
SUNY, Geneseo	215	683	928	751	854	542	632	648	715
Northern Arizona U.	216	941	858	633	852	352	373	369	718
U. Denver	217	1,456	1,230	1,750	848	795	598	986	325
U. Washington, Bothell	218	156	681	1,152	838	156	681	1,152	766
Rowan U.	219	276	752	689	830	194	695	658	322
George Mason U.	220	842	646	671	813	700	466	434	447
California State U., San Marcos	221	841	339	482	810	841	336	482	677
Wichita State U.	222	0	0	578	801	0	0	372	610
Colgate U.	223	147	389	417	784	19	82	179	272
Howard U.	224	762	720	777	754	612	583	665	437
Wesleyan U.	225	1,130	909	909	752	791	597	508	442
Amherst C.	226	705	570 i	746	737	603	434	590	470
Western Kentucky U.	227	425	433	600	730	289	316	394	518
Embry-Riddle Aeronautical U.	228	1,787	2,244	1,508	719	902	873	512	279
Clarkson U.	229	388	1,005	629	715	244	139	157	150
U. New Orleans	230	803	749	713	707	551	469	378	399
North Dakota State U.	231	732	970	1,023	705	197	514	441	134
California State U., Fullerton	232	481	448	530	683	396	316	325	218
Clark U.	233	1,054	1,069	734	682	586	643	469	294
Tufts U.	234	1,621	1,872	2,686	669	1,587	1,798	2,509	560
U. North Florida	235	197	162	450	665	88	100	178	308
California State U., East Bay	236	584	539	396	658	221	301	197	495
Wright State U.	237	1,250	975	888	652	1,014	847	689	564
U. Puerto Rico, Mayaguez	238	367	386	414	642	292	293	367	548
Southern Illinois U., Carbondale	239	327	537	432	623	243	257	306	445
Alabama A&M U.	240	331 i	367 i	414 i	614 i	259 i	327 i	405 i	536 i
Harvey Mudd C.	241	284	362	589	609	96	148	344	237
U.S. Air Force Academy	242	2,714	1,846	1,150	575	2,714	1,796	1,110	575
South Carolina State U.	243	414 i	456 i	498 i	541	414 i	456 i	498 i	541
CUNY, New York City C. of Technology	244	212	326	540	538	200	314	523	499

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
CUNY, Queens C.	244	458	423	568	538	171	278	353	307
Texas Southern U.	246	277	199	208	528	188	95	97	416
Bryn Mawr C.	247	462	462	655	527	55	257	368	320
U. Colorado Denver ^e	248	na	417	708	524	na	417	708	508
U. Colorado Anschutz Medical Campus ^e	249	na	391	566	521	na	344	353	279
Boise State U.	250	202	131	342	514	94	79	263	442
U. Alaska, Fairbanks	251	0	0	263	512	0	0	6	244
U. Montana, Missoula	252	260	231	283	506	77	117	125	292
Cleveland State U.	253	786	427	402	490	409	191	169	223
Kenyon C.	253	291	ne	330	490	194	ne	279	438
U. Nebraska, Omaha	255	58	73	154	477	0	47	99	446
James Madison U.	256	298	516	893	470	182	266	223	204
Bowling Green State U.	257	849	784	348	460	590	649	241	319
U. Tennessee, Chattanooga	258	0	0	0	456	0	0	0	0
CUNY, Brooklyn C.	259	193	198	200	445	118	177	166	376
Seton Hall U.	260	0	0	151	433	0	0	151	231
Georgia Southern U.	261	120	415	421	424	47	32	22	34
U. Louisville	262	426	702	297	422	57	81	68	96
U. Rhode Island	263	100	20	102	421	79	20	86	155
Yeshiva U.	264	286	253	682	419	286	253	682	419
Southern Illinois U., Edwardsville	265	0	525	261	376	0	122	261	376
Morehouse C.	266	216	146	277	354	216	146	277	354
CUNY, Baruch C.	267	276	256	306	347	275	253	298	347
Prairie View A&M U.	268	932	692	388	346	97	185	130	130
Tennessee State U.	268	0	0	0	346	0	0	0	346
Pomona C.	270	103	167	229	341	0	139	174	155
Appalachian State U.	271	115	320	611	340	98	166	391	160
Miami U.	272	142	142	434	339	116	95	263	209
SUNY, C. Plattsburgh	273	126	65	13	331	110	41	13	270
U. Minnesota, Duluth	274	123	250	208	330	17	175	152	262
Trinity U.	275	218	139	143	320	61	115	97	146
Reed C.	276	129	128	273	310	41	43	180	204
Middlebury C.	277	19	276	196	309	0	276	196	295
Gallaudet U.	278	0	92	60	308	0	92	59	184
Tennessee Technological U.	279	594	504	471	302	488	402	318	251

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
U. Central Oklahoma	280	557 i	583 i	270 i	301 i	512 i	537 i	89 i	99 i
California State U., Sacramento	281	207	176	270	295	152	125	150	165
U. Nebraska, Kearney	282	17	16	157	294	9	0	57	210
U. Tulsa	283	163	207	342	293	71	103	288	234
Lafayette C.	284	227	211	235	292	205	194	206	268
California State U., Los Angeles	285	639	395	721	291	622	394	691	291
West Chester U. Pennsylvania	286	98	238	454	290	0	55	202	178
Southern U. and A&M C., Baton Rouge	287	634	450	68	283	427	227	68	283
Chapman U.	288	81	88	135	277	71	86	95	112
Utah Valley U.	289	ne	ne	320	262	ne	ne	316	231
Haverford C.	290	147 i	87 i	224 i	259 i	49	51	178	214
Lamar U.	291	26	49	53	258	0	49	30	187
Marquette U.	292	320	427	412	253	225	291	296	206
Southern Connecticut State U.	293	13	91	224	252	0	0	13	37
Davidson C.	294	45	107	261	249	45	107	210	137
Seattle U.	295	79	84	206	246	58	79	126	198
Indiana U., South Bend	296	ne	248	ne	244	ne	244	ne	218
Swarthmore C.	297	353	236	190	243	139	162	110	146
California State U., Chico	298	150	162	105	237	144	162	104	230
Fordham U.	299	0	0	0	223	0	0	0	0
Hofstra U.	299	2	16	22	223	0	0	0	0
Tougaloo C.	299	81	81 i	197 i	223 i	81	81 i	197 i	223 i
Loyola U., Chicago	302	52	166	375	221	0	146	350	198
U. Puerto Rico, Cayey	303	48	62	59	218	48	62	57	194
Mount Holyoke C.	304	22	364	156	215	0	342	155	161
Bucknell U.	305	87 i	85	230	213	87 i	85	194	211
Northern Kentucky U.	306	270	159	168	212	203	33	101	56
Williams C.	306	315 i	323 i	186 i	212 i	182 i	193 i	89 i	101 i
Grinnell C.	308	58	231	46	211	0	0	0	0
New York Institute of Technology	308	0	3	101	211	0	3	101	190
Santa Clara U.	310	145	148	163	208	130	144	138	202
U. Dayton	311	438	511	312	207	428	507	312	207
C. New Jersey	312	312	239	754	206	306	233	730	185
Long Island U.	313	109	151	151	203	51	54	76	65
U. of the Incarnate Word	313	0	60	179	203	0	60	179	203

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Central Washington U.	315	109	29	500	199	103	27	497	199
Eastern Kentucky U.	315	40	71	ne	199	35	64	ne	150
Colorado C.	317	37	47	53	194	15	4	33	148
Hamilton C.	317	44	40	9	194	3	8	9	1
Hope C.	319	560	615	534	188	444	524	329	159
Smith C.	320	102	220	102	187	95	212	81	160
Towson U.	320	191	278	306	187	50	115	246	170
U. South Alabama	322	26	37	107	183	25	35	106	178
Azusa Pacific U.	323	68	78	65	182	0	0	0	0
U. Colorado Colorado Springs	324	145	185	185	179	22	25	112	97
Bowdoin C.	325	131	79	106	178	125	78	106	169
Franklin and Marshall C.	326	78	156	206	176	48	96	141	91
U. North Georgia	326	91	0	0	176	0	0	0	17
Coastal Carolina U.	328	0	68	154	175	0	60	111	155
Hobart and William Smith Colleges	329	95	116	188	174	82	99	179	162
U. Northern Iowa	330	86	125	174	172	86	117	168	165
Indiana U. Pennsylvania	331	218	189	218	171	175	171	181	171
California State U., Fresno	332	283	178	418	170	252	178	345	145
Dillard U.	333	959	205	155	163	646	205	155	163
Portland State U.	334	418	317	249	157	344	303	238	30
Tuskegee U.	334	32	35	21	157	32	35	21	151
Occidental C.	336	103	111	129	147	70	64	71	80
Ursinus C.	336	ne	ne	ne	147	ne	ne	ne	142
Drake U.	338	ne	221	211	146	ne	200	211	146
Middle Tennessee State U.	339	0	292	349	143	0	56	148	105
Sam Houston State U.	340	74	170	140	141	72	147	112	141
U. Richmond	341	112	91	88	139	98	78	81	122
Oberlin C.	342	270	141	ne	135	191	132	ne	124
Clark Atlanta U.	343	671	477	188	134	662	456	184	130
Spelman C.	343	0	0	19	134	0	0	19	134
U. Hawaii, Hilo	343	36	34	166	134	36	33	159	118
CUNY, C. Staten Island	346	542	242	96	130	542	239	57	92
Carleton C.	347	84	250	93	122	84	101	77	113
Southeastern Louisiana U.	347	113	107	218	122	44	38	118	89
Black Hills State U.	349	116	94	101	120	91	94	95	113

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
SUNY, C. Brockport	349	5	11	96	120	2	11	79	100
Duquesne U.	351	122	46	123	118	43	34	83	84
Mercer U.	352	87	92	95	117	0	0	0	18
Ball State U.	353	9	65	98	114	0	21	39	42
Roger Williams U.	353	0	0	30	114	0	0	30	93
South Dakota State U.	355	33	86	48	111	32	83	45	108
Claremont McKenna C.	356	59	59	304	109	59	59	304	109
Saint Joseph's U.	356	66	32	117	109	0	0	0	0
C. Wooster	358	75	103 i	127	108	35	42 i	60	108
Ithaca C.	359	22	47	98	106	0	13	42	56
Montclair State U.	360	43	19	121	105	0	0	38	86
U. Wisconsin-La Crosse	361	188	252	105	102	151	243	73	68
Pennsylvania State U., Behrend	362	22	17	35	99	15	17	35	99
Rutgers, State U. New Jersey, Camden	363	32	2	28	98	0	0	0	0
U. Puerto Rico, Humacao	364	0	419	574	96	0	245	286	96
Austin Peay State U.	365	13	50	26	95	13	50	0	94
C. Charleston	366	135	223	209	94	72	118	190	68
California State U., Stanislaus	367	5	12	9	93	0	0	0	72
U. Wisconsin-Green Bay	368	63 i	57 i	79 i	85 i	39 i	36 i	44 i	52 i
Central State U.	369	0	51	0	82	0	51	0	82
U. Maryland Center for Environmental Science	370	72	61	74	76	72	61	74	76
Bates C.	371	155	175	159	75	94	37	0	0
Pennsylvania State U., Altoona	372	ne	ne	ne	74	ne	ne	ne	0
U. Missouri, Saint Louis	372	3	39	56	74	0	28	56	74
Citadel Military C. South Carolina	374	0	24	80	72	0	7	73	11
Wellesley C.	375	0	23	0	71	0	23	0	0
U. Arkansas, Little Rock	376	0	0	13	69	0	0	13	62
St. Olaf C.	377	31	4	ne	68	7	0	ne	25
U. Wisconsin-River Falls	378	175	36	ne	67	174	36	ne	62
Grand Valley State U.	379	10	3	26	64	9	0	1	0
Colby C.	380	89	65	39	61	74	41	31	42
U. of Mary Washington	380	5	32	39	61	5	25	28	53
U. of Health Sciences and Pharmacy in St. Louis	382	0	0	9	59	0	0	9	3
Lawrence Technological U.	383	6	54	143	57	6	48	132	57
Willamette U.	384	108	5	19	55	4	0	0	47

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Marshall U.	385	11	22	26	54	0	12	3	23
Salisbury U.	386	43	48	48	53	0	0	0	0
Texas A&M International U.	386	38	37	43	53	38	37	43	53
U. Wisconsin-Platteville	388	0 i	39 i	47 i	51 i	0 i	16 i	20 i	21 i
Kennesaw State U.	389	288	253	161	50	165	160	161	50
Texas A&M U.-Corpus Christi	390	0	0	12	48	0	0	0	0
SUNY, Buffalo State U.	391	3	0	0	47	2	0	0	47
U. Wisconsin-Oshkosh	392	27 i	30	16	46	0 i	0	11	19
C. of Saint Benedict	393	37 i	32 i	36 i	42 i	0 i	3 i	3 i	4 i
Pacific U.	393	41	21	36	42	21	16	21	34
Saint John's U.	393	33 i	32 i	37 i	42 i	0 i	0 i	0 i	0 i
Saint Louis U.	396	156	11	69	40	67	11	7	0
St. John's U., New York	396	76	1	13	40	0	0	0	0
Murray State U.	398	20	6	53	39	0	0	35	9
Sacred Heart U.	398	ne	0	ne	39	ne	0	ne	0
Western Illinois U.	398	39	16	37	39	39	16	37	39
SUNY, Oswego	401	23	46	11	37	0	0	0	0
Gettysburg C.	402	80	ne	ne	36	41	ne	ne	3
U. Northern Colorado	403	50	24	57	35	0	0	12	35
Youngstown State U.	403	23	25	0	35	20	24	0	0
Whitman C.	405	104	ne	46	33	77	ne	3	0
Elon U.	406	27	21	19	31	0	0	0	0
Monmouth U.	406	0	15	99	31	0	15	99	31
Gustavus Adolphus C.	408	ne	ne	ne	30	ne	ne	ne	0
Trinity C., Hartford	409	4	1	3	29	0	0	0	0
U. Alaska, Anchorage	410	0	32	42	28	0	32	42	28
U. Hartford	411	0	0	4	25	0	0	0	17
Fairfield U.	412	52	63	ne	23	42	50	ne	9
U. Central Arkansas	413	80	255	200	22	76	176	132	7
Ferris State U.	414	ne	ne	ne	21	ne	ne	ne	17
Furman U.	414	12	9	61	21	1	1	1	1
Clafin U.	416	50	25	27	20	50	25	27	20
Fort Lewis C.	416	0	0	0	20	0	0	0	14
Macalester C.	418	171	272	24	19	31	172	0	0
Indiana State U.	419	121	56	104	16	121	56	104	16

TABLE 51

Total and federally financed higher education R&D expenditures in physics, ranked by FY 2023 total: FYs 2020–23

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Skidmore C.	419	49	42	0	16	41	34	0	14
Virginia Military Institute	419	ne	ne	17	16	ne	ne	0	0
U. Maryland, Eastern Shore	422	0	0	0	15	0	0	0	15
Union C., Schenectady	422	110	6	102	15	81	6	22	0
Wheaton C., Wheaton	422	93	50	ne	15	66	35	ne	0
Calvin U.	425	6 i	8 i	11 i	14 i	0 i	0 i	0	0
Lincoln U.	425	ne	ne	ne	14	ne	ne	ne	14
Texas A&M U.-Kingsville	425	1	33	4	14	0	0	0	0
Eastern Washington U.	428	66	63	118	11	66	62	118	0
Nova Southeastern U.	428	0	0	0	11	0	0	0	0
Vassar C.	428	232	121	14	11	147	89	0	0
CUNY, Lehman C.	431	409	495	0	9	409	413	0	0
U. San Francisco	431	27	4	15	9	0	0	0	0
California State Polytechnic U., Pomona	433	89	40	27	8	89	40	27	1
U.S. Coast Guard Academy	433	ne	ne	ne	8	ne	ne	ne	0
Robert Morris U.	435	ne	ne	6 i	7	ne	ne	0 i	0
U. North Carolina, Asheville	435	0	0	0	7	0	0	0	7
New C. Florida	437	ne	ne	ne	6	ne	ne	ne	0
U. Puget Sound	438	96	ne	7	5	50	ne	0	0
U. Scranton	438	ne	ne	ne	5	ne	ne	ne	0
Eastern Michigan U.	440	114	13	34	4	31	9	0	0
Northern Michigan U.	440	26	3	1	4	0	0	0	0
Purdue U., Fort Wayne	440	3	10	15	4	0	0	0	0
St. Cloud State U.	443	11	9	14	2	3	0	0	0
U. North Carolina, Greensboro	443	50	44	0	2	5	0	0	0
DePaul U.	445	267	211	0	1	205	211	0	0
Eastern Connecticut State U.	445	0	0	0	1	0	0	0	0
La Sierra U.	445	1	1	1	1 i	0	0	0	0 i
Pepperdine U.	445	2	10	21	1	0	0	0	0
U. Akron	445	0	0	4	1	0	0	0	0
All other surveyed institutions	-	24,135	24,068	19,533	0	18,183	15,972	12,442	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.

^a Johns Hopkins University includes the Applied Physics Laboratory (APL), with \$245,923 thousand imputed for total and \$240,253 thousand reported for federally financed R&D expenditures in physics 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.