

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022												
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec								
All institutions	-	3,185,919	3,281,415	3,294,584	3,690,235	668,918	1,370,650		1,211,130	439,537							
U. California, San Diego	1	180,626	201,331	185,870	187,175	2,031	46,032		139,029	83							
Woods Hole Oceanographic Institution	2	145,169	143,240	160,059	166,020	i	30,261	i	73,100	i	15,232	i					
U. Washington, Seattle	3	123,301	135,307	128,033	152,187		55,133		11,151		77,308		8,595				
U. Colorado Boulder	4	121,624	119,824	118,876	129,830		29,149		17,039		3,165		80,477				
Texas A&M U., College Station and Health Science Center	5	113,459	107,894	106,932	122,622		6,600		14,720		95,258		6,044				
U. Alaska, Fairbanks	6	69,346	72,609	95,711	121,905		12,633		67,635		40,094		1,543				
Johns Hopkins U. ^a	7	42,585	i	65,556	i	79,257	i	96,789	i	14,132	i	41,157	i	31,292	i	10,208	i
U. Oklahoma, Norman and Health Science Center	8	71,836		84,812		91,101		89,076		78,348		10,728		0		0	
U. New Hampshire	9	48,149		51,661		55,523		86,032		29,758		7,874		48,400		0	
Columbia U. in the City of New York	10	75,900		78,288		77,515		79,949		10,448		31,192		37,609		700	
U. Maryland ^b	11	52,823		58,099		61,660		78,455		15,881		54,477		2,031		6,066	
U. Hawaii, Manoa	12	82,955		71,468		73,176		78,404		2,791		15,377		57,333		2,903	
U. Wisconsin-Madison	13	58,701		65,000		65,814		68,178		39,134		17,782		0		11,262	
Arizona State U.	14	83,703		73,544		68,116		67,062		0		67,062		0		0	
U. Miami	15	48,427		50,684		50,826		59,693		43,791		0		15,294		608	
California Institute of Technology	16	37,101		43,338		43,295	i	57,033		2,689		46,166		208		7,970	
U. Texas, Austin	17	51,155		61,145		54,009		55,612		27		43,557		9,266		2,762	
U. Rhode Island	18	50,513		42,634		52,469		54,685		11		11,031		34,107		9,536	
Colorado State U., Fort Collins	19	85,500		67,642		60,073		53,708		43,583		9,147		32		946	
U. Utah	20	27,848	i	20,011	i	47,024	i	47,824		984		30,064		0		16,776	
Oregon State U.	21	40,030		39,215		43,111		46,982		1,730		9,042		24,101		12,109	
U. California, Los Angeles	22	38,106		41,594		41,818		45,869		10,230		29,608		0		6,031	
U. California, Santa Barbara	23	35,554		40,396		37,222		43,416		0		11,828		31,404		184	
U. Maryland Center for Environmental Science	24	43,867		43,554		40,621		42,407		105		3,538		38,725		39	
Harvard U.	25	43,664		43,505		38,756		38,984		7,508		9,216		451		21,809	
William & Mary	26	32,425		33,084		34,838		38,810		0		404		38,406		0	
U. California, Santa Cruz	27	26,570		29,389		31,217		35,788		0		7,990		19,192		8,606	
Pennsylvania State U., University Park and Hershey Medical Center	28	46,390		41,590		31,930		35,715		17,891		14,664		3,160		0	
U. Arizona	29	31,075		31,148		32,088		33,859		8,419		22,276		2,186		978	

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Institution	Rank	2019	2020	2021	2022					
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec	
SUNY, Stony Brook U.	30	26,282	25,334	26,694	33,444	182	6,468	26,666	128	
Louisiana State U., Baton Rouge	31	31,853	32,283	28,763	33,440	0	5,976	20,358	7,106	
U. Delaware	32	18,346	17,697	18,173	33,416	0	6,372	18,079	8,965	
U. California, Davis	33	29,166	30,153	30,603	32,940	3,999	2,947	4,885	21,109	
Stanford U.	34	17,624	20,216	21,216	30,947	0	21,779	2,787	6,381	
North Carolina State U.	35	21,691	27,010	25,579	30,854	7,990	0	6,482	16,382	
Massachusetts Institute of Technology	36	34,015	32,718	30,961	29,992	9,549	10,258	7,724	2,461	
Princeton U.	37	24,755	23,819	29,203	29,942	13,198	8,865	0	7,879	
U. Southern Mississippi	38	29,968	29,843	26,110	27,927	0	6,014	4,736	17,177	
Rutgers, State U. New Jersey, New Brunswick	39	18,036	25,634	24,326	27,807	2,820	201	24,378	408	
U. Maine	40	25,039	24,874	24,778	25,600	0	7,634	17,930	36	
Desert Research Institute	41	23,991	22,889	22,791	24,804	5,625	19,179	0	0	
U. North Carolina, Chapel Hill	42	16,922	19,242	16,879	23,339	0	5,419	12,356	5,564	
U. Alabama, Huntsville	43	16,001	17,304	17,960	23,111	21,336	1,540	207	28	
U. Southern California	44	16,850	19,983	14,323	22,308	0	9,472	12,836	0	
U. South Florida ^C	45	25,127	24,670	19,373	22,129	168	6,802	15,159	0	
U. Nevada, Reno	46	14,563	15,077	19,030	20,831	458	18,925	615	833	
U. Maryland, Baltimore County	47	13,585	15,158	15,087	20,378	9,157	8,487	2,445	289	
U. Georgia	48	23,281	20,493	17,846	19,938	0	4,813	15,125	0	
Michigan Technological U.	49	14,388	13,896	16,272	19,663	3,177	72	7,687	8,727	
U. Wyoming	50	6,755	12,944	11,251	19,400	8,056	11,115	149	80	
Florida International U.	51	14,955	16,023	16,584	18,793	6,102	1,701	10,990	0	
U. Florida	52	17,186	17,740	16,189	18,734	0	10,773	7,961	0	
Florida State U.	53	18,343	20,816	16,252	17,014	4,282	3,371	8,283	1,078	
Mississippi State U.	54	10,928	17,335	15,520	16,607	1,177	11,275	4,046	109	
San Jose State U.	55	12,777	13,747	14,857	16,303	2,376	584	12,491	852	
U. Michigan, Ann Arbor	56	15,705	14,928	15,080	15,865	0	15,865	0	0	
New Mexico Institute of Mining and Technology	57	6,791	6,729	7,309	15,847	0	15,847	0	0	
SUNY, U. Albany	58	15,833	15,523	15,605	15,821	14,414	1,407	0	0	
Georgia Institute of Technology	59	12,260	12,904	13,998	14,771	338	13,788	645	0	

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Texas A&M U.-Corpus Christi	60	13,494	11,900	12,296	14,478	515	1,606	8,063	4,294	
George Mason U.	61	11,598	10,679	12,577	14,205	6,176	6,732	972	325	
U. Kansas	62	10,594	10,485	11,923	13,717	1,174	12,543	0	0	
U. Massachusetts, Dartmouth	63	11,550	10,917	12,196	13,329	0	0	13,329	0	
U. Minnesota, Twin Cities	64	14,391	14,715	13,634	13,095	0	13,095	0	0	
U. Hawaii, system office	65	10,531	11,853	11,591	12,125	12,125	0	0	0	
U. California, Irvine	66	11,580	12,705	13,034	11,555	112	11,443	0	0	
Nova Southeastern U.	67	8,878	11,436	10,973	11,526	0	0	11,526	0	
U. California, Riverside	68	10,774	10,855	10,303	11,310	0	2,988	0	8,322	
U. Connecticut	69	10,974	9,186	10,483	11,254	0	1,150	10,104	0	
U. Pittsburgh, Pittsburgh	70	13,185	10,875	9,952	11,232	0	2,904	0	8,328	
Texas Tech U.	71	8,213	8,913	9,282	11,018	688	5,768	0	4,562	
Washington State U.	72	10,109	9,440	8,946	10,772	1	1,676	0	9,095	
U. Houston	73	10,516	9,437	9,292	10,320	10,015	18	0	287	
U. Chicago	74	9,370	9,090	8,854	10,117	0	10,117	0	0	
Brown U.	75	4,310	5,954	7,954	9,945	13	2,042	246	7,644	
Boston C.	76	5,130	5,836	7,414	9,912	7,610	2,302	0	0	
Colorado School of Mines	77	8,238	8,916	5,713	9,411	110	8,553	0	748	
Boston U.	78	8,701	8,573	7,876	9,399	0	9,390	9	0	
Ohio State U.	79	9,030	9,158	7,979	9,228	0	9,228	0	0	
Indiana U., Bloomington	80	7,220	8,053	7,960	9,084	3,076	2,975	0	3,033	
U. Wisconsin-Milwaukee	81	6,442	7,288	7,385	9,026	2,370	560	6,096	0	
Dartmouth C. and Dartmouth Hitchcock Medical Center	82	4,359	5,241	4,607	8,933	0	8,933	0	0	
Texas State U.	83	7,349	7,357	7,338	8,853	12	2,871	0	5,970	
U. of the Virgin Islands	84	830	3,639	6,508	8,729	0	278	6,000	2,451	
Montana Technological U.	85	7,235	7,825	8,222	8,666	0	8,666	0	0	
U. California, Berkeley	86	9,429	9,845	7,857	8,644	5	8,639	0	0	
U. South Carolina, Columbia	87	988	9,378	9,609	8,202	137	0	8,065	0	
Duke U.	88	11,077	9,675	7,310	8,178	0	1,455	6,723	0	
Purdue U., West Lafayette	89	7,119	10,166	7,578	8,127	7,893	0	0	234	

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U. New Mexico	90	7,329	6,924	6,727	7,336	338	6,976	0	22	
U. Guam	91	2,753	2,696	5,047	6,937	0	492	6,281	164	
U. North Dakota	92	6,713	6,781	6,234	6,874	6,214	660	0	0	
Washington U., Saint Louis	93	5,676	5,509	6,083	6,678	0	6,678	0	0	
U. Illinois, Urbana-Champaign	94	6,868	6,281	5,521	6,575	5,175	1,400	0	0	
Michigan State U.	95	5,244	5,435	5,695	6,532	0	6,272	0	260	
Florida A&M U.	96	5,282	5,844	5,633	6,499	0	0	6,158	341	
Cornell U.	97	6,531	8,145	6,589	6,463	59	6,120	284	0	
Yale U.	98	6,995	5,916	7,021	6,411	0	6,411	0	0	
U. Virginia, Charlottesville	99	5,352	6,040	5,356	6,392	0	0	0	6,392	
U. North Carolina, Wilmington	100	5,193	5,206	4,311	6,351	0	385	5,827	139	
U. Idaho	101	5,923	4,933	4,803	5,991	177	5,711	0	103	
U. Alabama, Tuscaloosa	102	1,000	3,062	4,302	5,895	0	2,379	3,516	0	
U. Oregon	102	4,871	6,704	6,060	5,895	0	5,319	576	0	
U. Montana, Missoula	104	6,376	5,878	6,212	5,818	0	2,126	3,692	0	
Morgan State U.	105	3,955	3,384	3,298	5,672	0	5,672	0	0	
Northern Arizona U.	106	7,984	7,408	6,790	5,396	183	3,766	9	1,438	
U. Nevada, Las Vegas	107	4,526	6,342	6,082	5,393	209	4,854	0	330	
U. Toledo	108	5,659	5,748	5,309	5,367	0	5,367	0	0	
U. Arkansas, Fayetteville	109	4,449	3,499	5,686	5,333	0	5,333	0	0	
U. Central Florida	110	4,486	4,008	3,951	5,319	5,286	0	33	0	
U. Alaska, Anchorage	111	5,186	7,339	5,735	5,286	417	3,254	1,615	0	
Montana State U., Bozeman	112	5,618	5,603	5,468	5,246	0	4,372	0	874	
West Virginia U.	113	10,049	9,625	3,965	5,177	0	4,292	0	885	
Naval Postgraduate School	114	6,339	6,566	6,591	5,148	1,566	195	2,553	834	
Northeastern U.	115	4,603	4,039	4,044	5,122	0	1,168	3,954	0	
San Francisco State U.	116	4,297	3,759	3,975	4,988	298	519	3,849	322	
Tulane U.	117	4,317	4,825	4,217	4,967	0	4,967	0	0	
Southern Methodist U.	118	6,954	6,100	5,367	4,956	0	4,956	0	0	
Iowa State U.	119	3,917	4,538	5,650	4,897	0	4,897	0	0	

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SUNY, U. Buffalo	120	3,533	3,739	4,912	4,848	0	4,848	0	0	
U. South Alabama	121	4,222	5,011	4,466	4,841	0	217	4,624	0	
New Mexico State U.	122	3,908	5,381	5,067	4,830	189	1,861	0	2,780	
Auburn U., Auburn	123	2,690	3,460	4,008	4,791	72	3,170	92	1,457	
U. Texas, San Antonio	124	1,178	2,354	3,429	4,787	0	2,576	129	2,082	
East Carolina U.	125	3,684	4,586	4,564	4,751	0	907	3,844	0	
Rice U.	126	4,341	5,152	4,786	4,738	0	4,738	0	0	
Virginia Polytechnic Institute and State U.	127	4,185	3,068	3,534	4,652	149	4,480	0	23	
U. Texas, El Paso	128	3,168	3,426	3,757	4,565	0	4,550	0	15	
U. California, Merced	129	2,916	2,943	3,849	4,454	374	1,675	12	2,393	
U. Louisiana, Lafayette	130	3,957	5,426	6,277	4,439	0	2,697	811	931	
U. Massachusetts, Amherst	131	6,569	4,265	3,582	4,378	0	4,378	0	0	
U. Memphis	132	4,117	5,493	4,089	4,298	0	4,046	0	252	
U. Vermont	133	772	2,716	3,237	4,278	2,221	2,052	0	5	
U. Puerto Rico, Mayaguez	134	5,676	5,487	2,014	4,127	0	629	2,998	500	
Saint Louis U.	135	1,281	1,174	2,264	3,879	0	3,879	0	0	
Old Dominion U.	136	4,907	4,166	3,775	3,787	0	0	3,787	0	
U. Maryland, Eastern Shore	137	4,369	3,454	4,182	3,778	0	0	3,778	0	
U. Massachusetts, Boston	138	5,249	3,848	2,960	3,666	0	1,818	1,833	15	
Oklahoma State U., Stillwater	139	2,613	2,870	3,119	3,663	0	3,663	0	0	
U. Iowa	139	2,088	2,441	1,971	3,663	0	1,684	0	1,979	
Baylor U.	141	2,685	2,185	2,731	3,569	1,686	1,471	342	70	
U. Washington, Tacoma	142	1,827	2,089	2,838	3,535	0	0	3,535	0	
Western Washington U.	143	3,822	3,897	3,379	3,298	0	1,921	1,377	0	
U. Kentucky	144	2,331	2,966	3,356	2,948	0	2,948	0	0	
Grand Valley State U.	145	2,818	2,887	2,803	2,928	0	15	0	2,913	
Boise State U.	146	3,536	3,660	3,129	2,927	106	2,114	51	656	
Ohio U.	147	1,618	1,697	2,183	2,847	54	2,793	0	0	
Emory U.	148	1,237	1,075	2,217	2,792	0	0	0	2,792	
Florida Gulf Coast U.	149	877	1,654	2,475	2,791	0	0	2,791	0	

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U. Rochester	150	2,765	3,104	2,536	2,724	0	2,724	0	0	
California State U., Monterey Bay	151	1,327	1,281	1,953	2,702	0	291	2,008	403	
San Diego State U.	152	2,582	2,234	2,158	2,684	0	1,392	664	628	
U. Tennessee, Knoxville ^d	153	5,557	5,322	5,062	2,609	0	2,609	0	0	
Tarleton State U.	154	3,504	3,188	3,745	2,594	0	1,202	0	1,392	
U. Puerto Rico, Rio Piedras	155	2,537	3,754	3,409	2,586	0	2,271	315	0	
Hampton U.	156	3,779	3,454	2,881	2,576	1,710	0	864	2	
CUNY, City C.	157	2,459	1,699	1,600	2,547	0	1,867	680	0	
U. Massachusetts, Lowell	158	1,977	2,177	2,614	2,493	770	1,723	0	0	
Rutgers, State U. New Jersey, Newark	159	3,313	1,485	1,873	2,487	0	2,487	0	0	
C. Charleston	160	1,212	1,048	1,156	2,470	47	1,933	490	0	
Syracuse U.	161	3,913	3,060	3,005	2,463	0	2,463	0	0	
Montclair State U.	162	1,685	1,262	1,815	2,393	0	1,860	454	79	
Georgia State U.	163	1,268	1,104	1,500	2,276	0	2,276	0	0	
U. Nebraska, Lincoln	164	3,639	2,943	2,186	2,220	0	2,220	0	0	
Rensselaer Polytechnic Institute	165	1,931	2,837	1,868	2,214	0	2,214	0	0	
Utah State U.	166	1,150	511	2,146	2,173	1,462	711	0	0	
Idaho State U.	167	1,447	1,792	1,627	2,092	0	1,502	0	590	
Western Michigan U. and Homer Stryker M.D. School of Medicine	168	1,546	1,402	1,660	2,077	0	2,077	0	0	
California Polytechnic State U., San Luis Obispo	169	1,362	1,105	1,106	2,006	0	0	2,006	0	
Florida Institute of Technology	170	2,096	2,310	3,254	1,985	671	0	1,119	195	
U. Texas Rio Grande Valley	171	2,049	1,769	1,649	1,981	0	93	1,647	241	
Sonoma State U.	172	ne	571	1,617	1,938	0	280	170	1,488	
U. Pennsylvania	173	2,455	1,760	1,929	1,856	0	1,856	0	0	
Portland State U.	174	2,090	2,212	1,818	1,826	476	1,271	79	0	
Embry-Riddle Aeronautical U.	175	818	1,336	1,200	1,823	1,823	0	0	0	
SUNY, Binghamton U.	176	2,026	1,916	1,636	1,789	0	1,789	0	0	
U. Hawaii, Hilo	177	842	894	1,195	1,770	0	1,091	635	44	
Vanderbilt U. and Vanderbilt U. Medical Center	178	1,586	1,919	1,861	1,737	0	1,737	0	0	
Pennsylvania State U., Behrend	179	1,154	250	1,249	1,727	237	27	1,463	0	

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					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec					
Bowling Green State U.	180	1,112	1,903	1,875	1,679	0	346	1,333	0					
U. Mississippi	181	1,726	1,151	1,306	1,614	226	950	409	29					
U. New Orleans	182	1,778	1,585	1,244	1,576	24	1,551	1	0					
U. Missouri, Columbia	183	1,335	988	1,249	1,575	0	1,543	32	0					
Coastal Carolina U.	184	1,573	1,690	1,415	1,573	328	47	1,180	18					
Monmouth U.	185	1,082	1,621	1,492	1,572	0	0	1,572	0					
Alaska Pacific U.	186	1,406	1,196	1,005	1,548	0	35	1,236	277					
Southern Illinois U., Carbondale	187	1,354	848	1,643	1,522	4	649	0	869					
Temple U.	188	1,559	2,044	2,108	1,498	0	1,498	0	0					
Northwestern U.	189	1,547	1,351	1,342	1,443	0	1,443	0	0					
Occidental C.	190	817	1,086	1,201	1,416	i	0	165	1,251	i				
Central Washington U.	191	2,110	1,525	1,204	1,394	0	1,394	0	0					
Indiana U.-Purdue U., Indianapolis	192	926	1,272	938	1,393	0	1,393	0	0					
Carleton C.	193	1,607	863	900	1,374	0	1,374	0	0					
Florida Atlantic U.	194	1,149	1,186	2,013	1,332	236	0	0	1,096					
Northern Illinois U.	195	395	553	803	1,320	66	789	0	465					
Kansas State U.	196	2,337	1,479	1,130	1,295	0	1,295	0	0					
Amherst C.	197	169	439	567	i	1,265	0	1,265	0	0				
CUNY, Hunter C.	198	1,147	1,339	1,010	1,197	0	1,197	0	0					
Heidelberg U.	199	1,222	1,125	1,725	1,184	0	0	1,184	0					
California State U., Northridge	200	1,832	2,158	731	1,181	0	468	395	318					
Western Kentucky U.	201	979	842	1,013	1,142	48	1,094	0	0					
Lehigh U.	202	1,191	1,510	1,087	1,124	0	1,082	42	0					
SUNY, C. of Environmental Science and Forestry	203	554	1,211	995	1,103	i	173	i	595	i	159	i	176	i
SUNY, Buffalo State	204	1,050	895	869	1,098	0	369	0	729					
American U.	205	482	642	1,035	1,091	0	0	0	1,091					
Kent State U.	206	942	958	1,038	1,088	6	882	134	66					
U. North Carolina, Charlotte	207	1,111	1,009	1,054	1,077	0	1,077	0	0					
Air Force Institute of Technology	208	967	742	175	1,025	1,025	0	0	0					
U. Cincinnati	209	1,143	1,171	913	993	0	993	0	0					

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022					
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec	
Appalachian State U.	210	583	499	357	987	732	255	0	0	
Tufts U.	211	482	472	377	982	0	797	142	43	
CUNY, York C.	212	85	527	543	953	0	953	0	0	
South Dakota State U.	212	1,933	904	801	953	0	721	0	232	
U. Illinois, Chicago	214	701	1,021	943	948	0	948	0	0	
Hawaii Pacific U.	215	324	220	289	947	0	947	0	0	
SUNY, C. Plattsburgh	216	850	824	813	905	0	125	780	0	
Duquesne U.	217	84	584	510	886	0	886	0	0	
Salisbury U.	218	1,334	891	988	882	0	784	0	98	
James Madison U.	219	1,003	753	628	870	0	817	0	53	
California State Polytechnic U., Humboldt	220	1,490	1,464	1,141	863	27	116	703	17	
U. Dayton	221	428	359	465	851	565	286	0	0	
Clark U.	222	1,787	1,890	1,197	843	92	282	278	191	
Miami U.	223	1,031	1,354	1,071	829	0	829	0	0	
California State U., East Bay	224	ne	1,029	927	816	206	76	534	0	
U. Texas, Dallas	225	907	856	598	815	0	815	0	0	
California State U., Sacramento	226	909	839	752	808	0	808	0	0	
Colorado C.	227	109	96	114	806	0	806	0	0	
North Dakota State U.	228	714	553	680	804	0	804	0	0	
New York U.	229	434	401	436	800	0	548	252	0	
Rockefeller U.	229	974	986	660	800	0	0	0	800	
Stockton U.	231	2,484	2,789	885	798	0	0	798	0	
Brigham Young U., Provo	232	567	461	853	787	0	787	0	0	
Delaware State U.	233	633	385	377	752	0	292	460	0	
Carnegie Mellon U.	234	994	448	364	736	265	425	0	46	
Colgate U.	235	511	453	677	728	0	612	0	116	
Savannah State U.	236	633	728	815	694	131	0	476	87	
U. North Texas, Denton	237	1,444	2,064	1,879	687	0	687	0	0	
Central Michigan U.	238	661	677	557	683	254	221	208	0	
U. Texas, Arlington	239	1,289	877	867	668	0	668	0	0	

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022					
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec	
U. New England	240	1,405	936	867	662	0	0	662	0	
U. Akron	241	192	285	467	659	0	659	0	0	
Towson U.	242	653	709	481	654	0	654	0	0	
U. Colorado Denver ^e	243	na	na	379	650	608	42	0	0	
Georgia Southern U.	244	774	719	890	642	0	395	185	62	
Austin Peay State U.	245	14	596	611	635	0	632	0	3	
Case Western Reserve U.	246	591	523	536	634	0	634	0	0	
Wesleyan U.	247	444	821	450	632	0	632	0	0	
California State U., Chico	248	140	395	426	624	0	624	0	0	
Southern Illinois U., Edwardsville	249	1,383	1,979	2,542	604	0	460	0	144	
Des Moines U.	250	82	197	459	600	0	461	139	0	
Villanova U.	251	809	826	443	565	0	478	87	0	
CUNY, Queens C.	252	427	817	402	561	0	561	0	0	
U.S. Naval Academy	253	1,079	775	649	550	0	0	550	0	
Skidmore C.	254	762	632	320	547	0	547	0	0	
U. Minnesota, Duluth	255	3,466	2,480	451	528	0	528	0	0	
Middlebury C.	256	270	240	425	513	0	307	0	206	
Roger Williams U.	257	700	730	777	506	8	0	443	55	
Rowan U.	258	451	409	397	494	0	494	0	0	
U. Alaska, Southeast	259	309	222	228	493	0	282	211	0	
Illinois State U.	260	809	788	591	491	0	477	0	14	
Plymouth State U.	261	ne	ne	ne	424	162	0	0	262	
Wright State U.	262	312	210	163	418	0	418	0	0	
California State U., Fullerton	263	420	329	229	414	0	212	202	0	
Hofstra U.	264	20	4	53	410	9	67	137	197	
California State U., Long Beach	265	125	514	226	399	0	399	0	0	
Oregon Institute of Technology	266	358	312	328	387	0	0	0	387	
Southern Connecticut State U.	267	168	253	300	386	2	51	333	0	
Colby C.	268	152	193	187	376	0	376	0	0	
U. San Francisco	269	194	106	204	374	123	77	0	174	

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022					
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec	
Long Island U.	270	40	345	261	372	0	372	0	0	
U. Richmond	271	49	62	218	369	0	369	0	0	
CUNY, Advanced Science Research Center	272	3	104	1,030	365	0	329	36	0	
U. Washington, Bothell	273	462	371	405	351	347	0	4	0	
Bowdoin C.	274	507	635	328	349	0	49	300	0	
U. Wisconsin-Stevens Point	275	214 i	226	368	338	0	338	0	0	
Missouri State U.	276	34	95	177	337	44	293	0	0	
Williams C.	276	205	195 i	200 i	337 i	0 i	337 i	0 i	0 i	
William Paterson U.	278	299	579	487	328	0	180	0	148	
Chapman U.	279	231	212	304	324	38	15	0	271	
Western Carolina U.	280	494	297	314	313	0	39	274	0	
Texas Christian U.	281	178	248	121	307	0	0	307	0	
Franklin and Marshall C.	282	710	232	119	305	0	240	0	65	
Howard U.	282	248	225	289	305	0	0	305	0	
West Texas A&M U.	282	434	219	688	305	0	305	0	0	
George Washington U.	285	288	436	175	288	0	9	0	279	
Hobart and William Smith Colleges	285	118	148	23	288	288	0	0	0	
U. Missouri, Kansas City	287	402	308	190	285	0	247	7	31	
Pomona C.	288	236	274	193	272	0	178	0	94	
Virginia Commonwealth U.	289	871	354	278	269	105	0	0	164	
U. Puerto Rico, Medical Sciences Campus	290	29	136	265	264	0	264	0	0	
Murray State U.	291	120	134	139	249	0	249	0	0	
Texas A&M U.-Kingsville	292	942	849	0	242	9	0	0	233	
Marshall U.	293	164	258	404	239	0	4	0	235	
Indiana U. Pennsylvania	294	497	161	33	234	0	234	0	0	
North Carolina Central U.	294	303	321	294	234	0	199	0	35	
Middle Tennessee State U.	296	500	48	126	229	0	164	0	65	
Macalester C.	297	427	390	221	223	0	223	0	0	
CUNY, Brooklyn C.	298	631 i	645	504	222	0	222	0	0	
Lewis and Clark C.	298	294	212	280	222	0	214	0	8	

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022					
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec	
U. North Florida	300	144	10	21	213	83	0	105	25	
California State U., Los Angeles	301	0 i	0	23	202	0	202	0	0	
U. Northern Colorado	301	140	296	147	202	0	202	0	0	
Sam Houston State U.	303	86	72	124	196	0	118	0	78	
Trinity U.	304	113	56	96	194	0	194	0	0	
Wayne State U.	305	412	296	288	193	0	193	0	0	
New School	306	800	537	169	192	0	0	0	192	
U. Tulsa	306	112	213	202	192	0	188	0	4	
Bryn Mawr C.	308	185	260	151	189	0	189	0	0	
C. Wooster	309	120	59	137 i	188	0	188	0	0	
New Mexico Highlands U.	310	ne	189	198 i	187 i	0 i	187 i	0 i	0 i	
U. Colorado Colorado Springs	310	79	173	141	187	130	33	0	24	
U. San Diego	312	185	163	226	185	0	24	161	0	
U. of the District of Columbia	313	84	41	177	183	88	95	0	0	
Union C., Schenectady	314	189	154	252	181	0	181	0	0	
Texas Southern U.	315	140	197	79	173	0	0	0	173	
Wellesley C.	316	154	161	86	169	0	169	0	0	
Sul Ross State U.	317	0	22	22 i	168 i	0 i	168 i	0 i	0 i	
U. Louisville	318	197	180	185	166	102	43	21	0	
U. New Haven	319	152	143	93	151	81	0	70	0	
Northern Michigan U.	320	155	91	101	149	0	149	0	0	
Illinois Institute of Technology	321	246	398	224	146	10	136	0	0	
Utah Valley U.	322	ne	ne	ne	140	0	140	0	0	
Eastern Michigan U.	323	399	172	108	139	0	81	0	58	
Indiana State U.	323	199	120	74	139	0	139	0	0	
U. North Georgia	325	129	133	132	137	0	137	0	0	
U. North Carolina, Greensboro	326	0	0	0	135	0	135	0	0	
U. Wisconsin-Eau Claire	326	8	8	69	135	0	135	0	0	
Furman U.	328	16	47	78	132	0	132	0	0	
U. Northern Iowa	329	161	142	151	129	0	0	0	129	

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022					
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec	
Central State U.	330	163	126	102	124	0	124	0	0	
California State U., San Marcos	331	0	47	13	123	0	0	0	123	
Whitman C.	332	52	23	ne	121	0	121	0	0	
Smith C.	333	117	36	228	120	0	120	0	0	
Tennessee State U.	333	0	297	166 i	120	0	120	0	0	
U.S. Air Force Academy	333	0	0	34	120	0	97	0	23	
Willamette U.	336	14	4	53	119	0	118	1	0	
Haverford C.	337	229 i	229 i	145 i	115 i	0 i	90 i	15 i	10 i	
U. Wisconsin-Green Bay	338	92 i	90 i	82 i	114 i	0 i	114 i	0 i	0 i	
Clarkson U.	339	4	59	172	112	0	103	9	0	
Clafin U.	340	259	37	26	105	16	89	0	0	
Albion C.	341	53	84	82 i	103 i	0 i	103 i	0 i	0 i	
U. Louisiana, Monroe	341	307	46	64	103	103	0	0	0	
CUNY, Baruch C.	343	79	198	44	102	0	0	102	0	
Winston-Salem State U.	344	0	0	0	100	0	100	0	0	
U. Denver	345	186	168	52	96	0	96	0	0	
U. North Carolina, Asheville	345	128	84	260	96	87	9	0	0	
U. Puerto Rico, Humacao	347	0	0	17	92	0	0	0	92	
U. West Florida	347	138	875	18	92	0	92	0	0	
Mount Holyoke C.	349	0	0	0	90	0	90	0	0	
Northland C.	349	ne	ne	78 i	90 i	0 i	77 i	0 i	13 i	
Dillard U.	351	0	0	87	89	0	89	0	0	
DePaul U.	352	37	91	276	88	0	63	25	0	
Nevada State C.	353	ne	ne	ne	82	0	0	0	82	
SUNY, Geneseo	353	298	239	212	82	0	82	0	0	
Ithaca C.	355	ne	6	114	80	51	16	13	0	
Fort Valley State U.	356	0	0	82	79	0	79	0	0	
SUNY, C. Brockport	356	396	353	319	79	0	79	0	0	
U. Texas of the Permian Basin	358	ne	0	0	77	0	77	0	0	
Barnard C.	359	9	60	164	76	70	6	0	0	

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022					
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec	
California State U., San Bernardino	360	118	87	51	75	0	73	2	0	
Troy U.	361	ne	49	31	71	0	4	67	0	
U. Colorado Anschutz Medical Campus ^e	361	na	na	212	71	71	0	0	0	
California State U., Maritime Academy	363	0	0	0	70	0	0	70	0	
California State U., Bakersfield	364	262	176	134	69	0	69	0	0	
U. Alabama, Birmingham	365	870	701	436	66	66	0	0	0	
Bates C.	366	119	119	37	65	0	65	0	0	
SUNY, Oswego	367	52	73	71	64	32	32	0	0	
U. Southern Maine	367	41	42	18	64	0	33	31	0	
Stephen F. Austin State U.	369	292	177	121	62	0	55	7	0	
Northwest Indian C.	370	1,043	43 i	52 i	60	0	0	60	0	
U. of Mary Washington	371	17	97	54	57	0	57	0	0	
U. Nebraska, Omaha	372	7	18	34	56	0	56	0	0	
Northeastern Illinois U.	373	131	50	68	54	0	54	0	0	
Kean U.	374	ne	301	61	53	0	19	0	34	
Texas A&M International U.	374	96	84	39	53	0	53	0	0	
U. of the Pacific	374	0	0	43	53	0	53	0	0	
Hamilton C.	377	72	15	1	52	0	52	0	0	
Vassar C.	378	11	0	17	51	0	51	0	0	
U. Baltimore	379	0	0	0	48	0	0	0	48	
Hope C.	380	0	20	59	47	0	47	0	0	
CUNY, Lehman C.	381	0	37	20	44	0	44	0	0	
U. Wisconsin-Oshkosh	382	126 i	126 i	126	43	0	43	0	0	
U. Puget Sound	383	ne	1	ne	42	10	1	0	31	
Bucknell U.	384	94	12 i	10	40	0	40	0	0	
Calvin U.	385	37	21 i	30 i	39 i	0 i	39 i	0 i	0 i	
Virginia State U.	386	157	0	8	37	37	0	0	0	
U. Wisconsin-La Crosse	387	31	35	18	35	0	35	0	0	
West Chester U. Pennsylvania	388	60	65	55	31	0	31	0	0	
Lincoln U., Jefferson City	389	0	0	60	28	28	0	0	0	

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022					
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec	
U. Wisconsin-Superior	389	25	30	11	28	0	28	0	0	
Brandeis U.	391	0	12	0	27	27	0	0	0	
U.S. Military Academy	392	111	98	2	26	0	0	0	26	
CUNY, C. Staten Island	393	0	0	0	25	0	25	0	0	
East Tennessee State U.	394	6 i	0 i	26 i	18 i	0 i	18 i	0 i	0 i	
Eastern Washington U.	395	66	58	61	17	0	17	0	0	
Babson C.	396	0 i	0 i	0 i	16 i	0 i	0 i	16 i	0 i	
California State U., Dominguez Hills	397	7	13	8	15	0	15	0	0	
Dakota State U.	397	0	18	37	15	0	15	0	0	
Suffolk U.	399	ne	28	28	14	0	14	0	0	
Tennessee Technological U.	399	74	60	24	14	0	14	0	0	
U. Houston-Downtown	399	27	94	52	14	0	4	10	0	
Bentley U.	402	ne	ne	ne	13	0	10	3	0	
California State Polytechnic U., Pomona	402	295	68	151	13	0	3	0	10	
Lafayette C.	402	0	8	5	13	0	13	0	0	
Loyola Marymount U.	402	761	489	527	13	0	5	0	8	
St. Cloud State U.	406	13	217	128	12	0	2	0	10	
Texas A&M U.-San Antonio	407	ne	ne	ne	10	0	0	0	10	
Winthrop U.	407	5	0	0	10	0	0	10	0	
Eastern Connecticut State U.	409	22	101	143	8	0	0	8	0	
Minnesota State U., Mankato	409	32	1	13	8	0	8	0	0	
California State U., Fresno	411	125	147	379	7	0	7	0	0	
U. of St. Thomas (MN)	411	15	18	222	7	0	7	0	0	
Northeast Ohio Medical U.	413	6	0	5	6	0	6	0	0	
Pennsylvania State U., Harrisburg	413	11	5	22	6	3	3	0	0	
Central Connecticut State U.	415	61	91	79	5	0	5	0	0	
Claremont McKenna C.	416	173	29	17	4	0	0	4	0	
California Lutheran U.	417	0	0	ne	3	0	0	3	0	
CUNY, Graduate Center	417	2	0	0	3	0	3	0	0	
Fort Lewis C.	417	22	56	46	3	0	0	0	3	

TABLE 40

Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2022 geosciences, atmospheric sciences, and ocean sciences: FYs 2019–22 and by subfield for FY 2022

(Dollars in thousands)

Institution	Rank	2019	2020	2021	2022				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
California State U., Stanislaus	420	0	1	13	2	0	2	0	0
Youngstown State U.	420	9	2	0	2	0	2	0	0
Alfred U.	422	0	1	1	1	0	0	0	1
Mercyhurst U.	422	2 i	1 i	1 i	1	0	1	0	0
U. Arkansas, Little Rock	422	0	0	0	1	0	1	0	0
All other surveyed institutions	-	15,508	8,090	2,333	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 \$81,763 thousand imputed for total R&D expenditures in geosciences, atmospheric sciences, and ocean sciences in FY 2022. 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 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.

^d The University of Tennessee, Knoxville includes expenditures from the University of Tennessee Institute of Agriculture. Due to a reorganization within the University of Tennessee system, the Institute of Agriculture now falls under the leadership of the University of Tennessee, Knoxville chancellor. Prior to FY 2020, the University of Tennessee, Knoxville, Institute of Agriculture reported to the survey separately.

^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 2022 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.