

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021									
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec
All institutions	-	7,668,193	8,121,089	8,714,829	1,110,088	960,152	572,307	664,620	2,209,153	384,142	1,274,012	559,447	980,908
Johns Hopkins U. ^a	1	1,100,587	1,154,993	1,183,154	143,676	62,057	19,340	14,081	530,652	95,907	215,395	28,502	73,544
Georgia Institute of Technology	2	506,061	537,693	666,235	234,250	31,464	15,430	13,410	255,395	67,209	34,669	8,275	6,133
Pennsylvania State U., University Park and Hershey Medical Center	3	258,324	277,345	284,244	9,902	11,208	8,872	6,222	98,885	2,898	108,650	37,607	0
Utah State U.	4	183,794	206,998	228,986	218,810	660	0	2,201	4,568	130	2,095	0	522
U. Texas, Austin	5	160,506	175,426	194,110	11,817	6,410	16,274	8,555	60,559	89	56,531	16,633	17,242
Massachusetts Institute of Technology	6	230,312	213,108	193,246	19,648	60,938	15,390	5,024	27,467	48	19,187	12,852	32,692
U. Michigan, Ann Arbor	7	175,137	176,141	180,607	8,535	16,768	9,229	7,646	50,738	2,892	29,551	7,645	47,603
U. Dayton	8	146,841	145,508	171,865	15,823	0	5,501	131	7,430	39,515	7,170	79,405	16,890
U. Illinois, Urbana-Champaign	9	130,075	131,529	139,887	11,049	10,369	12,092	15,785	39,208	0	22,650	10,839	17,895
Purdue U., West Lafayette	10	111,292	122,469	137,052	16,251	6,783	9,647	6,886	27,327	4,494	27,162	11,269	27,233
U. Colorado Boulder	11	92,099	105,890	132,769	79,020	7,461	10,490	11,263	8,686	0	10,975	1,294	3,580
Texas A&M U., College Station and Health Science Center	12	77,456	95,138	123,286	22,741	25,427	6,054	21,942	11,997	5,014	7,974	7,270	14,867
U. Washington, Seattle	13	108,560	114,031	119,758	8,159	21,979	7,577	11,489	31,858	1,363	10,536	3,599	23,198
Virginia Polytechnic Institute and State U.	14	104,138	107,677	108,080	9,620	9,004	2,021	8,934	29,619	10,983	10,804	10,529	16,566
U. California, San Diego	15	88,846	97,602	100,212	0	37,321	70	442	41,776	0	12,248	123	8,232
U. Maryland ^b	16	86,168	86,398	95,898	8,707	13,146	7,632	16,119	14,410	354	9,546	9,990	15,994
Woods Hole Oceanographic Institution	17	72,016	75,442	93,266	0	0	0	0	0	0	0	0	93,266
North Carolina State U.	18	91,264	94,592	91,430	89	7,064	11,044	6,729	29,217	2,715	8,422	12,090	14,060
Stanford U.	19	79,988	81,391	89,861	11,954	14,908	8,952	6,919	20,148	5,229	16,001	4,873	877
Ohio State U.	20	85,547	85,038	88,435	462	2,567	6,583	3,164	15,967	3,738	33,623	13,019	9,312
U. Minnesota, Twin Cities	21	71,695	74,167	78,808	8,859	20,004	13,497	5,096	12,341	326	14,340	4,345	0
U. California, Berkeley	22	81,194	79,645	78,026	0	0	3,497	6,743	59,529	0	0	0	8,257
U. Wisconsin-Madison	23	68,617	73,412	75,104	0	8,872	6,332	5,395	10,024	2,672	8,118	7,103	26,588
Duke U.	24	72,560	73,605	74,308	0	35,586	0	5,006	24,354	0	7,769	1,461	132
Arizona State U.	25	72,655	80,121	73,746	0	7,748	3,916	13,306	26,115	1,776	7,776	4,076	9,033
Cornell U.	26	63,696	69,870	72,771	1,153	15,678	8,664	5,789	12,102	1,841	13,159	11,661	2,724
U. Florida	27	60,844	62,573	72,191	3,048	11,605	2,970	11,861	23,639	1,029	10,809	6,951	279
Northeastern U.	28	61,116	66,614	69,550	0	6,249	2,782	8,800	29,072	6,517	12,442	0	3,688
U. Delaware	29	47,975	53,448	68,504	0	4,723	40,891	7,274	9,582	0	6,030	0	4
SUNY, U. Buffalo	30	50,811	61,140	66,790	12,941	3,501	7,183	3,279	4,592	5,684	17,762	1,661	10,187

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021									
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec
U. Tennessee, Knoxville ^c	31	67,165	66,562	66,556	15,668	1,117	3,867	5,826	11,717	8,226	0	7,362	12,773
Columbia U. in the City of New York	32	59,672	62,020	64,962	2,047	21,666	6,438	1,858	3,293	520	3,221	0	25,919
Wichita State U.	33	22,954	46,023	64,692	63,391	0	0	0	503	504	264	0	30
Carnegie Mellon U.	34	49,854	56,175	63,083	1,360	8,867	6,482	3,513	16,196	0	13,821	7,247	5,597
Iowa State U.	35	43,241	62,369	62,113	3,269	10,305	3,194	9,236	5,634	0	4,473	6,433	19,569
Northwestern U.	36	47,948	49,383	55,739	0	10,847	10,323	3,130	5,784	2,792	5,049	13,026	4,788
U. California, Los Angeles	37	52,488	49,163	53,761	0	4,744	4,057	3,557	19,409	0	12,520	5,032	4,442
U. Southern California	38	52,737	55,089	51,948	720	5,975	1,975	3,337	31,208	2,173	4,496	0	2,064
Harvard U.	39	45,835	52,801	50,918	0	29,970	1,206	598	4,093	0	614	14,437	0
New Jersey Institute of Technology	40	53,994	53,702	50,822	0	3,386	4,395	13,967	1,700	0	410	0	26,964
U. Pennsylvania	41	39,422	44,542	49,526	0	16,932	6,101	0	13,290	0	13,185	0	18
Boston U.	42	45,017	53,265	48,537	1,544	20,842	0	0	10,634	4,093	6,286	0	5,138
Rice U.	43	37,781	42,085	46,799	0	12,615	4,030	7,577	16,368	0	2,306	3,843	60
Clemson U.	44	39,395	38,214	46,693	0	9,047	3,674	6,820	6,228	735	11,320	5,660	3,209
U. California, Santa Barbara	45	33,589	43,340	44,958	0	11,709	4,678	0	19,764	0	5,822	2,649	336
U. Alabama, Huntsville	46	31,957	42,499	44,780	31,051	0	470	2,587	2,880	3,632	3,317	586	257
Princeton U.	47	41,480	40,829	44,201	1,392	2,832	2,542	1,441	10,707	2,577	5,564	13,513	3,633
Mississippi State U.	48	33,935	45,520	44,188	10,732	684	4,203	2,715	2,933	4,159	9,463	333	8,966
George Mason U.	49	31,276	45,977	44,086	0	4,056	0	3,264	17,837	16,815	1,311	213	590
Vanderbilt U. and Vanderbilt U. Medical Center	50	52,742	52,373	43,570	0	9,362	6,308	8,900	11,087	0	6,018	0	1,895
U. Alabama, Birmingham	51	37,724	44,243	43,477	5,974	4,442	942	372	6,474	0	10,454	14,693	126
U. California, Davis	52	37,549	37,203	43,175	0	18,445	188	6,667	8,697	0	4,386	0	4,792
U. Notre Dame	53	40,258	41,771	42,501	11,931	0	6,988	8,325	15,235	0	0	0	22
Auburn U., Auburn	54	25,694	28,796	40,288	2,098	142	3,806	5,034	4,737	3,515	12,943	164	7,849
Montana State U., Bozeman	55	25,349	28,753	39,190	0	2,587	970	4,821	3,658	0	4,699	0	22,455
Oregon State U.	56	36,090	35,946	38,914	0	1,170	1,102	8,442	11,735	3,376	5,498	294	7,297
U. Connecticut	57	26,390	30,450	37,988	0	3,297	3,711	12,966	4,856	0	6,053	6,810	295
Colorado School of Mines	58	31,066	33,432	37,909	927	1,040	3,663	10,535	110	1,605	2,725	10,789	6,515
U. Pittsburgh, Pittsburgh	59	31,347	36,623	37,749	0	11,756	7,635	3,122	6,091	1,271	7,853	0	21
U. Virginia, Charlottesville	60	43,878	41,454	37,143	0	8,788	3,464	275	10,183	0	6,144	7,745	544
U. Central Florida	61	33,413	34,825	36,318	13,128	0	0	2,862	4,018	2,995	5,439	2,404	5,472

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021									
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec
Rutgers, State U. New Jersey, New Brunswick	62	35,917	40,629	35,691	0	4,166	3,955	318	5,905	25	5,565	2,325	13,432
U. North Dakota	63	28,684	20,330	35,155	0	0	237	28,327	566	0	454	227	5,344
Florida State U.	64	39,126	38,126	34,492	811	2,309	565	2,276	13,696	1,065	11,954	1,547	269
U. Arizona	65	35,880	34,459	34,360	1,270	4,157	3,596	495	14,878	2,217	2,444	3,097	2,206
U. California, Santa Cruz	66	25,568	22,817	33,002	0	1	0	0	4,542	0	0	0	28,459
U. Kentucky	67	28,999	26,818	33,001	458	1,998	2,085	6,485	1,390	614	2,948	2,834	14,189
U. New Mexico	67	30,449	34,153	33,001	6,916	419	1,859	5,842	9,250	320	1,027	530	6,838
U. Massachusetts, Amherst	69	26,896	28,635	32,063	0	3,017	12,630	6,766	4,768	0	4,451	0	431
Mercer U.	70	25,358	29,625	31,923	13,028	0	0	0	900	0	8,397	9,598	0
Rensselaer Polytechnic Institute	71	28,307	28,960	31,832	0	5,185	3,947	943	5,723	346	13,244	2,011	433
Michigan State U.	72	29,787	31,431	31,314	0	3,244	4,703	4,513	8,638	0	6,006	0	4,210
Case Western Reserve U.	73	29,335	27,954	30,483	0	14,713	6,177	499	2,004	0	7,018	0	72
Colorado State U., Fort Collins	74	31,135	30,860	30,424	0	831	2,651	9,493	7,581	742	8,298	0	828
U. Utah	75	32,365	34,915	29,330	0	4,169	4,581	2,898	7,748	0	7,228	1,640	1,066
U. California, Irvine	76	24,021	27,421	29,315	0	7,567	3,290	3,211	6,410	0	4,999	3,715	123
U.S. Air Force Academy	77	28,489	29,812	28,914	2,805	0	0	0	723	482	24,904	0	0
U. Maine	78	13,614	18,038	27,452	0	0	5,817	276	279	15	471	20,111	483
Stevens Institute of Technology	79	18,945	23,906	26,766	0	1,037	639	4,616	2,572	0	2,636	0	15,266
U. Houston	80	23,838	24,929	26,599	1,301	7,090	5,287	3,291	4,387	240	3,709	341	953
Michigan Technological U.	81	21,801	23,332	26,289	0	1,224	882	1,420	6,713	0	14,708	1,230	112
U. South Florida ^d	82	22,743	18,073	26,183	458	3,527	1,151	9,986	6,347	732	3,982	0	0
U. Chicago	83	17,275	20,168	25,909	0	0	0	0	0	0	0	0	25,909
U. Alabama, Tuscaloosa	84	16,390	19,679	25,859	1,087	0	3,185	5,352	8,118	0	4,982	3,135	0
U. Texas, Dallas	85	19,512	21,594	24,793	0	8,819	0	0	5,002	627	6,808	2,006	1,531
Dartmouth C. and Dartmouth Hitchcock Medical Center	86	21,279	21,064	24,126	0	9,724	3,934	763	3,824	0	5,881	0	0
SUNY, Polytechnic Institute	87	36,816	26,696	24,019	0	0	0	0	0	0	22	0	23,997
California Institute of Technology	88	24,690	26,324	24,011	3,637	361	5,520	7,085	2,329	0	213	42	4,824
Florida International U.	89	19,899	21,747	23,801	0	2,986	0	8,538	7,011	253	3,925	320	768
U. Texas, Arlington	90	22,053	22,163	23,581	1,489	2,178	0	2,290	3,321	10,493	1,489	0	2,321
Yale U.	91	24,674	24,172	23,578	0	6,862	2,666	0	8,575	0	5,475	0	0
Washington State U.	92	18,943	20,360	23,129	0	1,196	3,236	3,646	5,291	61	3,762	2,571	3,366

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

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Institution	Rank	2019	2020	2021									
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U. Iowa	93	21,473	20,687	23,116	0	233	207	9,711	1,547	526	919	0	9,973
Washington U., Saint Louis	94	18,895	19,552	22,291	0	9,658	4,629	317	4,253	0	0	2,747	687
Missouri U. of Science and Technology	95	17,811	16,411	21,797	704	0	1,070	3,542	3,316	543	3,481	8,361	780
U. Illinois, Chicago	96	14,707	17,537	21,610	0	7,822	1,135	2,566	3,123	0	6,964	0	0
U. Nebraska, Lincoln	97	20,375	21,149	21,450	0	3,601	935	8,909	3,628	0	2,121	2,243	13
Drexel U.	98	20,443	19,772	20,821	0	4,363	5,389	2,251	2,567	0	2,379	2,674	1,198
Naval Postgraduate School	99	20,124	20,145	20,798	7,236	100	34	263	5,383	751	2,052	84	4,895
U. North Carolina, Chapel Hill	100	19,251	17,813	19,983	0	7,098	0	11,952	0	933	0	0	0
New Mexico State U.	101	17,202	15,583	19,957	3,875	0	1,131	2,739	6,115	63	1,674	0	4,360
Tufts U.	102	26,143	20,397	19,362	102	9,300	2,615	2,219	2,669	0	1,899	0	558
U. Massachusetts, Lowell	103	13,443	14,870	18,884	0	3,780	4,540	916	3,044	0	6,423	0	181
New York U.	104	14,986	15,445	18,633	0	0	2,463	614	7,454	0	2,560	0	5,542
U. California, Riverside	105	16,217	17,034	18,541	0	1,322	5,695	1,977	5,900	0	3,150	497	0
CUNY, City C.	106	16,998	15,704	18,078	0	4,034	2,076	2,964	1,915	0	2,919	0	4,170
West Virginia U.	107	19,835	15,930	18,042	28	0	4,647	1,488	1,980	1,429	6,092	209	2,169
U. Arkansas, Fayetteville	108	14,659	18,074	17,980	0	2,823	2,089	2,051	7,903	1,535	1,332	0	247
SUNY, Stony Brook U.	109	15,637	15,329	17,613	0	4,620	0	636	5,063	0	1,386	5,479	429
Air Force Institute of Technology	110	14,015	15,238	17,065	3,651	0	0	282	3,480	9,524	0	128	0
U. South Carolina, Columbia	111	16,076	15,010	17,042	0	0	3,537	2,340	4,124	0	6,260	0	781
Lehigh U.	112	15,374	16,205	16,976	0	1,255	2,984	2,866	1,677	1,343	4,441	2,410	0
U. Hawaii, Manoa	113	10,777	17,536	16,553	100	411	0	2,252	10,588	0	1,396	0	1,806
Worcester Polytechnic Institute	114	11,735	13,084	16,095	228	1,506	1,849	319	1,097	0	10,448	0	648
Brown U.	115	17,289	17,138	15,963	0	6,437	1,828	0	2,402	0	1,725	2,887	684
U. Missouri, Columbia	116	14,331	16,905	15,905	200	774	916	4,161	5,740	398	3,132	92	492
Brigham Young U., Provo	117	9,188	11,438	15,694	0	0	3,537	966	5,533	724	4,934	0	0
U. Texas, El Paso	118	11,995	11,812	15,602	0	656	0	1,745	2,397	1,101	8,508	114	1,081
Texas Tech U.	119	14,017	14,399	15,359	0	0	3,939	2,973	5,792	349	2,242	0	64
Oklahoma State U., Stillwater	120	11,962	11,969	15,319	4,299	0	3,191	2,301	1,414	381	1,031	987	1,715
U. Oklahoma, Norman and Health Science Center	121	13,783	15,069	15,235	2,298	425	1,010	1,838	8,086	540	0	0	1,038
George Washington U.	122	14,597	15,091	15,052	2,219	4,914	0	1,201	4,515	916	412	36	839
U. Rochester	123	11,814	12,764	14,213	0	5,385	476	0	4,144	0	4,208	0	0

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Kansas State U.	124	12,503	12,530	13,810	698	0	2,224	655	2,466	535	4,674	0	2,558
U. Cincinnati	125	12,015	11,447	12,970	2,189	587	712	3,341	3,756	0	2,145	0	240
U. Kansas	126	14,177	13,829	12,206	925	19	3,915	2,332	3,509	0	1,506	0	0
U. Louisville	127	8,248	9,077	11,844	1	2,994	1,108	447	3,753	454	1,231	0	1,856
U. Nevada, Reno	128	8,785	9,664	11,419	159	1,023	1,154	3,844	77	0	1,425	1,300	2,437
U. Alaska, Fairbanks	129	9,090	11,998	11,355	130	0	0	1,819	7,667	0	35	97	1,607
Illinois Institute of Technology	130	12,061	9,230	11,070	929	5,138	265	470	2,528	325	1,070	0	345
Florida Atlantic U.	131	7,007	6,955	11,045	92	0	0	2,371	556	0	0	0	8,026
Louisiana State U., Baton Rouge	132	11,587	10,268	11,014	0	0	1,602	2,350	1,217	197	2,194	34	3,420
Oregon Health and Science U.	133	10,649	9,549	10,841	0	10,841	0	0	0	0	0	0	0
Rochester Institute of Technology	134	8,136	7,965	10,659	0	1,076	1,072	0	2,329	219	1,037	0	4,926
New Mexico Institute of Mining and Technology	135	13,004	11,869	10,164	336	0	6,106	363	395	0	1,187	1,134	643
Virginia Commonwealth U.	136	9,482	11,779	9,924	0	3,443	2,484	0	1,070	0	2,927	0	0
South Dakota School of Mines and Technology	137	7,570	8,887	9,834	0	261	4,680	888	517	5	248	2,156	1,079
Old Dominion U.	138	8,179	11,802	9,683	866	0	0	523	4,053	3,217	1,024	0	0
Boise State U.	139	6,377	8,245	9,596	90	3,573	474	456	1,895	6	62	2,331	709
U. North Carolina, Charlotte	140	7,845	8,853	9,381	0	0	0	1,587	1,367	0	2,996	0	3,431
Embry-Riddle Aeronautical U.	141	6,291	7,943	9,272	8,734	0	0	89	0	0	396	0	53
North Carolina Agricultural and Technical State U.	142	9,713	8,664	9,071	0	280	0	1,388	2,631	1,299	1,417	0	2,056
U. New Hampshire	143	12,286	11,466	8,984	0	519	1,042	4,560	834	0	2,029	0	0
Emory U.	144	6,256	8,676	8,356	0	8,356	0	0	0	0	0	0	0
U. Georgia	145	6,292	7,208	8,139	0	211	2,210	3,575	2,143	0	0	0	0
U. Puerto Rico, Mayaguez	146	8,892	9,428	8,136	0	0	2,893	1,585	1,040	31	566	1,138	883
Rowan U.	147	4,229	7,616	8,035	0	1,564	2,853	2,497	596	0	316	0	209
Syracuse U.	148	7,616	7,696	8,013	117	2,662	0	1,163	2,706	0	1,365	0	0
U. Rhode Island	149	7,329	6,939	7,962	0	510	755	297	1,520	0	2,000	27	2,853
Cleveland State U.	150	11,036	11,055	7,748	0	6,183	699	68	183	0	615	0	0
U. Toledo	151	6,062	5,921	7,574	0	391	1,406	210	879	0	3,660	0	1,028
U. Nebraska, central administration	152	1,687	8,340	7,510	0	2,022	0	20	310	0	336	1,094	3,728
U. Missouri, Kansas City	153	5,349	6,902	7,506	12	0	0	329	6,666	0	323	0	176
SUNY, Binghamton U.	154	6,356	6,526	7,463	0	1,463	0	0	1,418	3,402	1,180	0	0

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021									
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec
Howard U.	155	6,046	6,241	7,420	0	0	335	1,068	3,872	0	1,335	0	810
U. Wyoming	156	6,075	4,640	7,391	30	49	2,475	2,104	521	0	1,778	0	434
U. Texas, San Antonio	157	5,949	5,961	7,346	0	1,185	0	1,165	1,348	330	962	0	2,356
U.S. Military Academy	158	3,799	5,252	7,334	0	0	339	586	2,122	1,249	1,805	0	1,233
U. North Texas, Denton	159	5,962	3,805	7,232	0	89	0	0	371	0	600	6,172	0
U. Louisiana, Lafayette	160	4,247	3,557	6,909	11	2	1,095	2,223	978	17	319	1,556	708
Missouri State U.	161	3,176	10,096	6,872	0	0	0	0	0	0	0	6,872	0
U. Idaho	162	8,525	8,376	6,705	962	330	548	1,253	701	9	308	414	2,180
Wright State U.	163	25,868	23,496	6,695	0	1,008	0	0	4,955	0	532	0	200
U.S. Naval Academy	164	7,311	7,202	6,604	705	0	0	0	1,728	0	1,123	0	3,048
Indiana U., Bloomington	165	4,864	6,314	5,752	0	0	0	0	0	5,752	0	0	0
Wayne State U.	166	6,640	5,947	5,695	0	938	2,442	1,021	495	254	114	0	431
U. Vermont	167	5,190	4,853	5,537	1,688	0	0	1,238	1,354	0	1,257	0	0
Ohio U.	168	5,252	4,454	5,340	1,865	0	550	1,254	143	0	36	557	935
Medical C. Wisconsin	169	6,029	6,389	5,221	0	5,221	0	0	0	0	0	0	0
Morgan State U.	170	3,376	4,847	5,001	0	0	0	1,934	1,763	42	0	0	1,262
Northern Arizona U.	171	1,106	3,649	4,910	0	764	85	51	3,424	0	422	0	164
Florida A&M U.	172	4,057	4,492	4,852	0	0	1,544	1,228	189	409	604	0	878
Temple U.	173	3,830	4,758	4,734	0	1,414	0	1,007	840	0	1,336	0	137
U. Maryland, Baltimore County	174	4,862	4,651	4,657	776	1,355	472	202	601	124	265	138	724
Montana Technological U.	175	3,606	3,161	4,639	0	0	0	242	200	0	71	4,126	0
U. California, Merced	176	4,652	5,760	4,627	0	1,655	0	169	0	0	1,655	456	692
Clarkson U.	177	5,883	4,584	4,577	0	0	1,142	1,040	1,440	0	928	0	27
San Diego State U.	178	3,801	3,851	4,553	483	113	0	1,526	924	0	1,507	0	0
U. Mississippi	179	4,752	12,422	4,487	580	0	478	558	1,519	154	322	0	876
North Dakota State U.	180	3,254	3,085	4,341	0	0	0	1,205	663	64	1,125	0	1,284
Tuskegee U.	181	4,097	4,177	4,213	44	0	0	0	492	0	415	3,262	0
Western Michigan U. and Homer Stryker M.D. School of Medicine	182	1,945	1,580	4,194	402	4	2,600	346	229	0	613	0	0
Louisiana Tech U.	183	4,263	4,582	4,117	0	720	362	208	205	0	629	270	1,723
Indiana U.-Purdue U., Indianapolis	184	3,298	4,354	4,040	0	1,551	0	0	775	0	1,576	0	138
U. Nevada, Las Vegas	185	6,161	4,946	4,037	0	0	0	1,837	715	0	1,485	0	0

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021									
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec
Portland State U.	186	4,887	4,113	4,021	115	0	0	1,227	1,728	0	420	281	250
Tulane U.	187	4,170	4,050	4,016	0	3,043	973	0	0	0	0	0	0
U. Akron	188	6,447	5,096	3,985	0	650	751	679	196	0	1,691	0	18
Marquette U.	189	3,033	4,291	3,866	0	1,957	0	137	1,130	0	642	0	0
South Dakota State U.	190	2,925	2,674	3,854	0	0	0	610	495	0	439	0	2,310
Southern Methodist U.	191	5,145	5,103	3,590	0	0	0	399	2,258	0	898	0	35
Tennessee Technological U.	192	2,402	2,756	3,392	0	0	96	391	924	208	1,742	0	31
U. South Alabama	193	1,467	2,624	3,209	0	0	1,490	831	343	0	241	0	304
U. Wisconsin-Milwaukee	194	2,537	2,940	3,193	0	0	0	631	958	25	1,393	179	7
U. Colorado Denver ^e	195	na	na	3,152	0	286	0	455	1,067	0	1,121	0	223
U. of the District of Columbia	196	708	1,388	3,134	17	0	0	167	190	1,014	1,746	0	0
California State U., Long Beach	197	2,109	2,533	2,942	128	676	398	452	387	0	563	0	338
Texas A&M U.-Kingsville	198	1,187	1,830	2,923	50	0	0	38	137	0	1,213	0	1,485
Florida Institute of Technology	199	2,391	3,305	2,903	256	2	2	137	226	108	624	0	1,548
Prairie View A&M U.	200	3,183	3,184	2,885	0	0	97	124	1,443	0	534	67	620
U. Texas Rio Grande Valley	200	1,134	1,761	2,885	23	252	0	66	0	1,435	230	15	864
U. Miami	202	2,532	2,128	2,816	0	450	0	989	138	0	721	0	518
Tennessee State U.	203	824	2,584	2,732	0	0	0	26	793	0	987	0	926
California State U., Sacramento	204	3,443	3,150	2,687	0	0	0	2,687	0	0	0	0	0
Catholic U. of America	205	1,961	2,925	2,680	0	1,176	0	11	772	0	721	0	0
California Polytechnic State U., San Luis Obispo	206	1,566	1,338	2,636	1,241	14	0	398	166	14	295	0	508
U. Tennessee, Chattanooga	207	1,216	2,277	2,574	0	0	44	570	385	0	44	0	1,531
U. Massachusetts, Dartmouth	208	2,696	2,170	2,434	0	254	0	709	914	0	557	0	0
U. Tulsa	209	1,520	1,387	2,410	0	0	110	0	362	0	1,822	0	116
Texas A&M U.-Corpus Christi	210	2,020	2,800	2,340	979	0	0	213	94	0	131	0	923
U. Memphis	211	2,489	2,513	2,275	9	699	0	984	153	0	219	92	119
Southern U. and A&M C., Baton Rouge	212	1,454	1,360	2,185	0	0	0	0	171	0	2,014	0	0
Villanova U.	213	1,543	1,375	2,122	0	0	159	832	463	0	668	0	0
Idaho State U.	214	1,203	2,491	2,022	0	0	0	19	13	0	58	0	1,932
U. Southern Mississippi	215	3,286	1,823	1,970	0	0	11	0	0	0	0	0	1,959
U. Michigan, Dearborn	216	1,129	1,681	1,907	0	0	0	0	1,127	72	708	0	0

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021									
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec
Northern Illinois U.	217	222	246	1,856	0	0	0	0	62	1,311	308	0	175
CUNY, Advanced Science Research Center	218	1,289	1,968	1,845	0	0	134	1,053	0	0	0	0	658
Jackson State U.	219	2,908	1,262	1,817	0	0	0	948	770	0	0	0	99
California State U., San Marcos	220	797	2,408	1,680	0	0	0	0	0	0	0	0	1,680
Marshall U.	221	502	434	1,671	0	3	0	1,649	0	0	9	10	0
Baylor U.	222	1,440	1,271	1,598	87	178	0	0	897	0	436	0	0
Texas State U.	223	623	746	1,537	23	0	0	143	250	0	99	172	850
SUNY, U. Albany	224	512	1,039	1,393	0	0	0	0	949	0	0	0	444
East Carolina U.	225	475	366	1,376	0	0	0	189	0	0	0	0	1,187
U. South Carolina, Aiken	226	1,453	1,331	1,322	0	0	0	0	0	0	0	0	1,322
Youngstown State U.	227	2,667	2,818	1,261	0	0	0	881	41	0	339	0	0
Alabama A&M U.	228	1,581	1,078	1,204	0	0	0	203	496	81	297	127	0
U. Colorado Anschutz Medical Campus ^e	229	na	na	1,189	0	1,189	0	0	0	0	0	0	0
Saint Louis U.	230	1,176	1,549	1,183	0	267	0	442	0	0	474	0	0
U. Puerto Rico, Rio Piedras	231	37	270	1,152	0	1,152	0	0	0	0	0	0	0
Norfolk State U.	232	1,940	1,312	1,081	0	0	0	0	174	0	0	0	907
California State U., Northridge	233	604	926	1,069	4	137	0	0	5	0	817	43	63
California State U., Los Angeles	234	688	806	1,067	0	0	0	543	34	0	490	0	0
California State Polytechnic U., Pomona	235	728	1,141	1,040	177	4	252	392	0	15	88	0	112
U. Denver	236	1,879	2,109	1,037	0	461	0	0	249	0	0	327	0
Purdue U., Northwest	237	376	1,128	1,032	0	0	0	22	4	0	1,006	0	0
San Francisco State U.	238	371	981	990	0	95	0	257	638	0	0	0	0
North Carolina Central U.	239	789	1,929	959	0	959	0	0	0	0	0	0	0
Oakland U.	240	720	233	953	0	0	0	0	430	0	523	0	0
Alfred U.	241	1,459	887	933	0	0	0	0	0	0	0	933	0
U. Alaska, Anchorage	242	562	644	869	0	0	0	371	193	0	178	0	127
Kent State U.	243	1,860	1,278	830	13	89	420	0	157	0	110	35	6
Hampton U.	244	1,049	866	827	0	0	57	0	770	0	0	0	0
Santa Clara U.	245	215	393	814	0	58	0	0	59	0	697	0	0
U. of the Virgin Islands	246	61	834	809	762	0	0	0	0	0	0	0	47
Georgia Southern U.	247	174	301	804	0	0	0	502	159	16	127	0	0

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021										
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec	
Western Illinois U.	248	321	71	780	0	0	0	0	0	0	0	0	780	0
California State U., Chico	249	179	613	768	0	0	0	93	276	0	399	0	0	0
Morehead State U.	250	754	1,208	756	723	0	0	0	33	0	0	0	0	0
California State U., Bakersfield	251	1,453	1,179	751	0	0	0	0	12	0	0	0	0	739
CUNY, system office	252	912	662	731	0	0	0	0	0	0	0	0	0	731
U. South Dakota	252	1,280	440	731	0	731	0	0	0	0	0	0	0	0
South Carolina State U.	254	662	687	712	0	0	226	0	0	0	0	0	0	486
U. Arkansas, Little Rock	255	1,224	950	708	640	0	0	0	0	0	68	0	0	0
Milwaukee School of Engineering	256	695	613	704	0	144	0	0	15	0	55	0	0	490
San Jose State U.	257	1,029	1,575	700	0	0	246	0	148	0	51	0	0	255
U. San Diego	258	633	686	692	0	0	0	0	0	0	8	0	0	684
West Texas A&M U.	259	477	500	673	0	0	280	0	0	31	0	0	0	362
U. Ana G. Mendez, Gurabo	260	575	365	667	0	0	0	0	0	0	0	0	0	667
New York Institute of Technology	261	697	372	666	0	0	0	0	479	0	187	0	0	0
Christopher Newport U.	262	575	566	656	559	97	0	0	0	0	0	0	0	0
Franklin W. Olin C. of Engineering	263	111	255	636	0	0	0	15	364	0	92	0	0	165
Lamar U.	264	442	838	635	0	0	424	31	89	91	0	0	0	0
Pace U.	265	404	464	626	0	0	0	0	0	0	626	0	0	0
Pennsylvania State U., Behrend	266	408	337	610	0	41	100	0	4	122	220	123	0	0
Southern Illinois U., Carbondale	267	392	180	606	0	0	0	115	366	0	59	66	0	0
Union C., Schenectady	268	10	81	595	0	21	0	0	4	0	570	0	0	0
Savannah State U.	269	526	639	588	0	241	316	0	0	0	0	0	0	31
U. Hartford	270	791	605	585	0	0	0	8	0	0	577	0	0	0
Smith C.	271	463	725	571	0	88	0	0	0	0	180	0	0	303
U. of St. Thomas (MN)	272	25	19	565	0	0	0	0	52	79	434	0	0	0
Fort Lewis C.	273	702	477	563	22	29	0	0	74	0	0	0	0	438
U. Nebraska, Omaha	274	683	859	545	277	0	0	268	0	0	0	0	0	0
Wake Forest U.	275	148	208	544	0	0	0	0	0	0	0	0	0	544
Bucknell U.	276	533	554	543	0	46	196	116	147	0	33	0	0	5
Miami U.	277	361	667	532	0	0	119	0	406	7	0	0	0	0
California State U., Fullerton	278	288	534	530	0	0	0	0	197	0	113	0	0	220

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021									
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec
U. Massachusetts, Boston	279	533	547	498	0	63	0	0	435	0	0	0	0
U. Colorado Colorado Springs	280	649	877	488	25	0	0	0	130	0	333	0	0
Hofstra U.	281	506	288	478	0	0	0	0	427	0	0	0	51
California State U., Fresno	282	419	526	474	0	0	0	24	297	0	148	0	5
California State U., Maritime Academy	283	617	621	450	0	0	0	0	0	0	0	0	450
U. Texas Medical Branch	284	411	276	425	0	425	0	0	0	0	0	0	0
New School	285	99	116	422	0	0	0	172	1	0	0	0	249
U. Oklahoma, Tulsa	286	919	1,066	421	0	87	0	0	334	0	0	0	0
Brandeis U.	287	0	0	409	409	0	0	0	0	0	0	0	0
SUNY, C. of Environmental Science and Forestry	288	259	158	396	0	102	8	271	0	0	0	0	15
Johnson C. Smith U.	289	0	364	386	0	0	0	370	0	0	0	0	16
Wellesley C.	290	0	633	345	345	0	0	0	0	0	0	0	0
U. Minnesota, Duluth	291	319	180	341	0	0	0	93	9	239	0	0	0
Virginia State U.	292	165	210	321	0	0	0	0	0	209	0	0	112
U. North Florida	293	360	304	316	0	0	0	60	33	0	18	0	205
Pittsburg State U.	294	12	50	314	47	92	0	0	0	0	0	175	0
U. Washington, Tacoma	294	0	59	314	0	174	0	0	140	0	0	0	0
Florida Polytechnic U.	296	283	159	312	0	0	0	0	128	0	11	173	0
U. North Carolina, general administration	297	189	552	306	0	0	0	0	295	0	11	0	0
U. Washington, Bothell	298	146	0	304	0	0	0	0	2	0	302	0	0
U. North Carolina, Wilmington	299	484	335	297	0	0	0	297	0	0	0	0	0
Kennesaw State U.	300	105	74	289	0	0	0	86	0	0	140	0	63
Fayetteville State U.	301	0	0	288	0	0	0	0	0	0	0	0	288
U. Texas of the Permian Basin	302	ne	82	270	0	0	0	0	0	0	0	0	270
U. West Florida	303	0	196	265	0	0	0	0	0	0	204	0	61
Harvey Mudd C.	304	440	175	256	2	10	31	3	57	0	91	8	54
Arkansas State U., Jonesboro	305	180	144	248	0	0	0	173	0	0	75	0	0
Keck Graduate Institute	306	208	215	238	0	238	0	0	0	0	0	0	0
Western Carolina U.	307	269	291	237	0	0	0	0	0	0	0	0	237
CUNY, C. Staten Island	308	0	249	235	0	0	92	73	0	0	0	0	70
Hope C.	309	116	138	232	0	0	0	0	0	0	232	0	0

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021									
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec
Western Washington U.	310	336	475	230	0	0	0	0	0	0	0	0	230
U. of the Pacific	311	68	89	228	0	214	0	0	0	0	0	14	0
Pennsylvania State U., Harrisburg	312	15	44	219	0	11	0	42	166	0	0	0	0
Central State U.	313	340	166	211	0	0	0	195	0	0	0	0	16
Humboldt State U.	314	16	153	208	0	0	0	195	0	0	0	0	13
Southern Illinois U., Edwardsville	314	475	240	208	0	79	0	122	7	0	0	0	0
U. New Orleans	316	344	250	204	0	0	0	2	38	0	51	0	113
Lipscomb U.	317	ne	188 i	203	0	0	0	58	0	0	3	0	142
Delaware State U.	318	1,218	172 i	198	0	0	0	0	0	0	198	0	0
U. Houston-Downtown	319	0	28	189	0	0	0	0	0	0	0	0	189
Alcorn State U.	320	330	126	178	0	0	0	0	0	0	155	0	23
Minnesota State U., Mankato	321	174	244	170	0	0	0	14	0	0	37	0	119
U. Wisconsin-Green Bay	322	147 i	159 i	167 i	0 i	0 i	0 i	34 i	83 i	0 i	50 i	0 i	0 i
Lawrence Technological U.	323	210	227	141	0	0	0	105	0	0	36	0	0
U. of the Incarnate Word	324	0	0	139	0	36	0	0	0	0	103	0	0
Citadel Military C. South Carolina	325	ne	13	136	0	0	0	126	4	0	6	0	0
C. New Jersey	326	ne	8	133	0	82	0	9	42	0	0	0	0
U. Wisconsin-Stevens Point	327	40 i	47	132	0	0	0	132	0	0	0	0	0
Purdue U., Fort Wayne	328	160	194	125	0	0	0	5	0	0	91	0	29
U. Maryland, Eastern Shore	328	0	125	125	125	0	0	0	0	0	0	0	0
Biola U.	330	109 i	113 i	117 i	0 i	0 i	0 i	0 i	0 i	0 i	0 i	0 i	117 i
U. Texas, Tyler	331	71	47	115	0	0	14	25	34	0	42	0	0
Keene State C.	332	8	8	114	0	0	0	0	0	114	0	0	0
Saginaw Valley State U.	333	124	105	110 i	0 i	0 i	0 i	0 i	0 i	0 i	0 i	110 i	0 i
East Tennessee State U.	334	2	52	101	0	0	0	0	0	0	0	0	101
Middle Tennessee State U.	335	3	76	100	0	0	0	82	0	0	0	0	18
Central Michigan U.	336	162	84	95	0	0	0	0	29	0	0	0	66
CUNY, New York City C. of Technology	337	442	353	93	0	0	0	37	0	0	56	0	0
Lafayette C.	338	107	139	84	0	0	69	15	0	0	0	0	0
Western Kentucky U.	339	2	68	82	0	0	82	0	0	0	0	0	0
Eastern Michigan U.	340	9	102	81	0	0	0	81	0	0	0	0	0

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021										
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec	
U. New Haven	340	485	238	81	0	0	0	12	0	69	0	0	0	
U. Wisconsin-Platteville	342	68 i	67 i	80 i	0 i	0 i	0 i	3 i	9 i	3 i	51 i	0 i	14 i	
California State U., Channel Islands	343	0	0	79	0	0	0	0	0	0	79	0	0	
Liberty U.	344	0	442	75	0	0	0	0	0	0	75	0	0	
Alabama State U.	345	0	533	73	0	0	0	0	0	0	0	0	73	
U. Wisconsin-Oshkosh	345	74 i	74 i	73	0	0	0	0	0	0	0	0	73	
C. Charleston	347	0	67	72	0	0	72	0	0	0	0	0	0	
Central Connecticut State U.	348	87	94	71	70	0	0	1	0	0	0	0	0	
Oregon Institute of Technology	348	272 i	203	71 i	0 i	0 i	0 i	3 i	8 i	3 i	45 i	0 i	12 i	
Coastal Carolina U.	350	0	0	68	0	68	0	0	0	0	0	0	0	
Manhattan C.	350	167	170	68	0	0	59	9	0	0	0	0	0	
Suffolk U.	352	ne	76	66	66	0	0	0	0	0	0	0	0	
Clafin U.	353	144	170	65	0	1	0	0	0	0	0	64	0	
Texas A&M International U.	353	3	28	65	0	0	0	0	0	0	0	0	65	
U. Detroit Mercy	355	59	75	64	0	0	0	0	64	0	0	0	0	
Xavier U. Louisiana	356	376	65	57	0	0	0	0	0	0	0	0	57	
Eastern Kentucky U.	357	0	52	56	0	0	0	0	0	0	0	0	56	
Thomas Jefferson U.	358	0	59	55	0	0	0	0	0	0	0	0	55	
James Madison U.	359	181	186	54	0	0	0	0	10	30	0	0	14	
Colorado State U., Pueblo	360	51	47	51	0	0	0	0	0	0	0	0	51	
Andrews U.	361	41	37	50	0	0	0	0	0	0	0	0	50	
Swarthmore C.	361	55	0	50	0	0	0	50	0	0	0	0	0	
Abilene Christian U.	363	ne	ne	45	45	0	0	0	0	0	0	0	0	
Central Washington U.	363	4	34	45	0	0	0	0	0	45	0	0	0	
Bowling Green State U.	365	0	0	35	0	0	0	0	0	0	0	0	35	
Oklahoma State U., Center for Health Sciences	366	54	46	32	0	32	0	0	0	0	0	0	0	
U. Southern Maine	366	0	0	32	32	0	0	0	0	0	0	0	0	
U. Wisconsin-Superior	366	4	9	32	7	0	0	0	0	0	0	0	25	
Dordt U.	369	ne	ne	29	0	0	0	0	0	0	0	0	29	
Texas Southern U.	370	130	76	27	0	0	0	0	0	0	0	0	27	
Calvin U.	371	21	20 i	21 i	0 i	0 i	0 i	0 i	21 i	0 i	0 i	0 i	0 i	

TABLE 57

Federally financed higher education R&D expenditures in engineering subfields, ranked by all FY 2021 engineering R&D: FYs 2019–21 and by subfield for FY 2021

(Dollars in thousands)

Institution	Rank	2019	2020	2021										
				All engineering	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronic, and communications engineering	Industrial and manufacturing engineering	Mechanical engineering	Metallurgical and materials engineering	Engineering nec	
U. Wisconsin-River Falls	372	ne	65	18	0	0	0	0	0	0	0	0	0	18
Providence C.	373	40	0	17	0	0	0	0	0	0	0	17	0	0
Roger Williams U.	373	0	0	17	0	0	0	0	0	0	0	0	0	17
Albany State U.	375	16	3	14	14	0	0	0	0	0	0	0	0	0
Elon U.	376	68	25	13	0	13	0	0	0	0	0	0	0	0
Hawaii Pacific U.	376	10	13	13	13	0	0	0	0	0	0	0	0	0
Clark Atlanta U.	378	44	0	11	0	0	0	0	0	0	0	0	0	11
Seattle U.	379	72	10	10	0	0	0	0	0	0	0	0	0	10
SUNY, Oswego	380	81	13	9	0	0	0	0	0	9	0	0	0	0
Chapman U.	381	0	43	8	0	0	0	0	0	0	0	0	0	8
Southeastern Louisiana U.	381	0	3	8	0	0	0	0	0	0	8	0	0	0
Texas Christian U.	381	0	8	8	8	0	0	0	0	0	0	0	0	0
Jacksonville State U.	384	22	11	6	0	0	0	0	0	0	0	0	0	6
Montclair State U.	385	0	0	5	5	0	0	0	0	0	0	0	0	0
Kettering U.	386	184	114	3	0	0	0	0	0	0	0	3	0	0
Fairfield U.	387	0	0	2	0	0	0	0	0	1	0	1	0	0
CUNY, York C.	388	89	0	1	0	1	0	0	0	0	0	0	0	0
Doane U.	388	0	1	1	0	1	0	0	0	0	0	0	0	0
Trinity C., Hartford	388	19	13	1	0	0	0	0	0	0	0	0	0	1
U. Central Oklahoma	388	0	1	1	0	0	1	0	0	0	0	0	0	0
All other surveyed institutions	-	9,816	6,265	0	0	0	0	0	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, with \$1,088,522 thousand in federally financed R&D expenditures in engineering in FY 2021.

^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 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.

^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 2021 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.