

TABLE 1-11b

Doctoral student enrollment, by detailed fields: 2017–22

(Number)

Detailed field	2017	2018	2019	2020	2021	2022
All fields	270,525	277,096	281,889	283,335	293,543	297,223
Science	186,399	190,928	193,896	196,742	203,988	206,183
Agricultural and veterinary sciences ^a	3,744	3,880	3,889	4,313	4,443	4,647
Agricultural sciences	3,744	3,880	3,889	3,791	3,906	4,145
Veterinary biomedical and clinical sciences ^b	na	na	na	522	537	502
Biological and biomedical sciences ^a	51,291	52,627	53,915	54,905	58,155	59,638
Biochemistry	4,550	4,554	4,534	4,648	4,828	4,994
Biology	7,020	7,054	7,166	7,268	7,400	7,600
Biomedical sciences	3,412	4,030	4,579	4,514	4,826	5,155
Biophysics	843	830	890	860	973	887
Biostatistics and bioinformatics	2,679	2,946	3,192	3,339	3,591	3,799
Biotechnology	91	109	98	101	128	105
Botany and plant biology	1,312	1,317	1,295	1,255	1,269	1,301
Cell, cellular biology, and anatomical sciences	4,786	4,990	4,975	5,008	5,290	5,374
Ecology and population biology	2,566	2,620	2,571	2,725	2,790	2,808
Epidemiology	1,640	1,768	1,916	2,032	2,162	2,213
Genetics	2,021	2,105	2,082	2,182	2,449	2,584
Microbiological sciences and immunology	3,974	3,914	3,937	4,124	4,371	4,466
Molecular biology	1,135	1,128	1,153	1,240	1,265	1,231
Neurobiology and neuroscience	4,871	5,046	5,138	5,275	5,758	5,933
Nutrition science	988	967	948	989	993	1,050
Pathology and experimental pathology	911	880	843	753	849	917
Pharmacology and toxicology	2,244	2,237	2,151	2,174	2,374	2,409
Physiology	2,627	2,631	2,703	2,758	3,041	3,021
Zoology and animal biology	1,195	1,193	1,198	1,178	1,213	1,198
Biological and biomedical sciences nec	2,426	2,308	2,546	2,482	2,585	2,593
Computer and information sciences	14,291	16,127	17,192	18,174	19,531	20,583
Computer science	7,465	8,343	8,646	9,658	10,356	10,832
Computer and information sciences ^c	5,429	6,401	6,952	6,438	6,855	7,195
Computer and information sciences ^d	NA	NA	NA	5,482	6,168	6,432
Artificial intelligence, informatics, and computer and information science topics ^d	NA	NA	NA	956	687	763
Computer and information sciences nec ^c	1,397	1,383	1,594	2,078	2,320	2,556
Computer and information systems security ^d	NA	NA	NA	270	342	441
Information science and studies ^d	NA	NA	NA	1,245	1,351	1,394
Information technology ^d	NA	NA	NA	405	467	550
Computer and information sciences nec ^d	NA	NA	NA	158	160	171
Geosciences, atmospheric sciences, and ocean sciences	6,539	6,704	6,551	6,515	6,770	6,784
Atmospheric sciences and meteorology	884	883	866	847	902	945
Geological and earth sciences	4,148	4,370	4,239	4,165	4,337	4,285
Ocean and marine sciences	1,420	1,451	1,446	1,503	1,531	1,554
Geosciences, atmospheric sciences, and ocean sciences nec	87	ne	ne	ne	ne	ne
Mathematics and statistics	13,101	13,388	13,565	13,687	13,619	13,589
Mathematics and applied mathematics ^c	10,124	10,230	10,308	10,300	10,219	10,244
Applied mathematics ^d	NA	NA	NA	2,211	2,255	2,127
Mathematics ^d	NA	NA	NA	8,089	7,964	8,117
Statistics	2,977	3,158	3,257	3,387	3,400	3,345
Multidisciplinary and interdisciplinary sciences ^c	2,931	2,924	2,978	3,553	3,774	4,014
Biological and physical sciences ^d	NA	NA	NA	815	887	956

TABLE 1-11b

Doctoral student enrollment, by detailed fields: 2017–22

(Number)

Detailed field	2017	2018	2019	2020	2021	2022
Computational science ^d	NA	NA	NA	298	347	335
Data science and data analytics ^d	NA	NA	NA	42	46	104
International and global studies ^d	NA	NA	NA	173	183	175
Multidisciplinary and interdisciplinary sciences nec ^d	NA	NA	NA	2,225	2,311	2,444
Natural resources and conservation	3,568	3,716	3,677	3,705	3,910	3,955
Environmental science and studies	1,621	1,744	1,738	1,799	1,956	1,980
Forestry, natural resources, and conservation	1,947	1,972	1,939	1,906	1,954	1,975
Physical sciences	35,461	36,000	36,506	36,341	37,732	37,836
Astronomy and astrophysics	1,236	1,281	1,373	1,430	1,539	1,603
Chemistry	19,367	19,547	19,748	19,389	20,149	19,695
Materials sciences	927	875	1,013	1,028	1,002	1,223
Physics	13,505	13,913	13,951	13,985	14,501	14,747
Physical sciences nec	426	384	421	509	541	568
Psychology ^a	20,395	20,303	20,231	21,115	21,447	21,121
Clinical psychology	3,751	3,814	3,785	3,668	3,389	3,274
Counseling and applied psychology ^c	6,825	6,946	6,537	6,193	6,371	6,504
Applied psychology ^d	NA	NA	NA	4,833	4,910	5,104
Counseling psychology ^d	NA	NA	NA	1,360	1,461	1,400
Human development ^b	na	na	na	742	797	768
Psychology, general	7,353	6,683	6,749	6,601	6,554	5,835
Research and experimental psychology	2,466	2,860	3,160	3,911	4,336	4,740
Social sciences ^a	35,078	35,259	35,392	34,434	34,607	34,016
Agricultural and natural resource economics	872	919	806	639	522	416
Anthropology	4,562	4,471	4,365	4,296	4,129	4,047
Criminal justice and safety studies	538	663	900	988	1,227	1,390
Economics (except agricultural and natural resource)	7,831	7,917	8,045	7,959	8,266	8,201
Geography and cartography	1,856	1,849	1,741	1,652	1,729	1,547
Human development ^b	685	793	731	na	na	na
International relations and national security studies	398	439	413	408	474	331
Linguistics	1,646	1,548	1,616	1,686	1,652	1,695
Political science and government	5,609	5,611	5,488	5,366	5,332	5,310
Public policy analysis	2,234	2,320	2,414	2,547	2,740	2,690
Sociology and population studies	5,340	5,128	5,070	5,067	4,875	4,655
Social sciences, nec ^c	3,507	3,601	3,803	3,826	3,661	3,734
Area, ethnic, cultural, gender, and group studies ^d	NA	NA	NA	2,482	2,326	2,345
Criminology ^d	NA	NA	NA	318	308	322
Urban studies and affairs ^d	NA	NA	NA	405	391	398
Social sciences, other ^d	na	na	na	621	636	669
History and philosophy of science and technology ^e	235	270	257	na	na	na
Social sciences, nec ^c	3,272	3,331	3,546	na	na	na
Engineering	68,825	70,237	72,065	71,279	72,924	72,980
Aerospace, aeronautical, and astronautical engineering	2,386	2,506	2,554	2,645	2,773	2,832
Biological, biomedical, and biosystems engineering	7,008	7,481	7,934	8,239	8,867	9,265
Bioengineering and biomedical engineering	6,845	7,278	7,715	na	na	na
Biological and biosystems engineering	163	203	219	na	na	na
Chemical, petroleum, and chemical-related engineering	7,536	7,599	7,664	7,612	7,713	7,590
Chemical engineering	6,874	6,950	7,057	7,031	7,115	7,069
Petroleum engineering	662	649	607	581	598	521

TABLE 1-11b

Doctoral student enrollment, by detailed fields: 2017–22

(Number)

Detailed field	2017	2018	2019	2020	2021	2022
Civil, environmental, transportation and related engineering fields ^c	7,626	7,732	7,752	7,485	7,878	7,754
Civil engineering ^d	7,626	7,732	7,752	6,517	6,760	6,629
Architectural, environmental, construction and surveying engineering ^d	NA	NA	NA	968	1,118	1,125
Electrical, electronics, communications and computer engineering	17,936	18,119	18,577	17,720	17,570	17,585
Electrical, electronics, and communications engineering ^c	17,936	18,119	18,577	14,694	14,767	14,780
Computer engineering ^d	NA	NA	NA	3,026	2,803	2,805
Industrial, manufacturing, systems engineering and operations research	3,633	3,598	3,762	3,839	3,921	3,856
Industrial and manufacturing engineering ^c	3,633	3,598	3,762	2,413	2,322	2,301
Systems engineering and operations research ^d	NA	NA	NA	1,426	1,599	1,555
Mechanical engineering	11,149	11,159	11,247	11,477	11,540	11,523
Metallurgical, mining, materials and related engineering fields	4,655	4,821	4,817	4,882	4,904	4,573
Metallurgical and materials engineering ^e	4,426	4,610	4,616	na	na	na
Mining engineering ^e	229	211	201	na	na	na
Other engineering	6,896	7,222	7,758	7,380	7,758	8,002
Agricultural engineering	681	661	662	654	668	631
Engineering mechanics, physics, and science	1,457	1,428	1,447	1,468	1,457	1,588
Nuclear engineering	998	1,046	1,031	1,038	1,032	1,085
Engineering, other	na	na	na	4,220	4,601	4,698
Engineering, nec	3,665	4,016	4,472	na	na	na
Nanotechnology	95	71	146	na	na	na
Health	15,301	15,931	15,928	15,314	16,631	18,060
Clinical medicine ^a	4,410	4,508	4,571	4,796	5,612	5,966
Medical clinical sciences and clinical and medical laboratory sciences	NA	NA	NA	443	677	954
Public health	4,087	4,104	4,191	4,353	4,935	5,012
Clinical medicine nec	323	404	380	ne	ne	ne
Other health	10,891	11,423	11,357	10,518	11,019	12,094
Communication disorders sciences	1,305	1,099	911	844	792	821
Dental sciences	248	247	208	217	219	228
Nursing science	3,598	3,551	3,439	3,359	3,512	3,657
Pharmaceutical sciences	2,566	2,954	3,121	2,893	2,936	3,059
Veterinary biomedical and clinical sciences ^b	577	575	692	na	na	na
Other health nec ^c	na	na	na	3,205	3,560	4,329
Kinesiology and exercise science ^d	NA	NA	NA	1,024	1,031	981
Other health nec ^d	2,597	2,997	2,986	2,181	2,529	3,348

na = not applicable; NA = not available (data not collected at this level of detail); ne = not eligible for graduate student reporting; the fields collected have changed over time.

nec = not elsewhere classified.

^a Broad field is not comparable between 2019 and 2020 due to changes in detailed fields.

^b Detailed field moved between broad fields between 2019 and 2020.

^c Detailed field split into multiple fields in 2020; data after 2020 represent the aggregate counts of all the new detailed fields.

^d New detailed field in 2020.

^e Code reported under a different detailed field code in 2020 and later years.

Note(s):

Percentages may not add to total because of rounding. Detailed fields under clinical medicine only list fields where graduate students can be reported. For more information on the comparability of these counts to other NCSSES published data, see the "Technical Notes." Field titles match the 2020 and later titles in the few cases where field titles changed. Prior to 2020, there were no broad fields in engineering. All fields have been moved to match the current broad field organization. For information on the current of fields and codes in the Survey of Graduate Students and Postdoctorates in Science and Engineering, see technical tables A-16 and A-17.

Source(s):

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.