

TABLE 4-3

Master's and doctoral students within science, engineering, and health fields, by enrollment intensity: 2023

(Number and percent)

Detailed field	All graduate students										Master's students								Doctoral students									
	Total		Full time				Part time				Total		Full time				Part time		Total		Full time				First time, full time		Part time	
			All full time		First time, full time								All full time		First time, full time													
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All detailed fields	818,095	100.0	598,588	100.0	203,798	100.0	219,507	100.0	510,866	100.0	329,971	100.0	153,545	100.0	180,895	100.0	307,229	100.0	268,617	100.0	50,253	100.0	38,612	100.0				
Science	561,489	68.6	411,971	68.8	139,799	68.6	149,518	68.1	348,520	68.2	222,976	67.6	104,385	68.0	125,544	69.4	212,969	69.3	188,995	70.4	35,414	70.5	23,974	62.1				
Agricultural and veterinary sciences	11,755	1.4	8,319	1.4	2,240	1.1	3,436	1.6	6,901	1.4	4,186	1.3	1,612	1.0	2,715	1.5	4,854	1.6	4,133	1.5	628	1.2	721	1.9				
Agricultural sciences	10,572	1.3	7,541	1.3	2,050	1.0	3,031	1.4	6,218	1.2	3,854	1.2	1,492	1.0	2,364	1.3	4,354	1.4	3,687	1.4	558	1.1	667	1.7				
Veterinary biomedical and clinical sciences	1,183	0.1	778	0.1	190	0.1	405	0.2	683	0.1	332	0.1	120	0.1	351	0.2	500	0.2	446	0.2	70	0.1	54	0.1				
Biological and biomedical sciences	105,566	12.9	86,153	14.4	25,552	12.5	19,413	8.8	44,703	8.8	29,180	8.8	15,106	9.8	15,523	8.6	60,863	19.8	56,973	21.2	10,446	20.8	3,890	10.1				
Biochemistry	5,763	0.7	5,236	0.9	1,099	0.5	527	0.2	778	0.2	532	0.2	291	0.2	246	0.1	4,985	1.6	4,704	1.8	808	1.6	281	0.7				
Biology	15,531	1.9	11,405	1.9	3,342	1.6	4,126	1.9	7,988	1.6	4,508	1.4	2,100	1.4	3,480	1.9	7,543	2.5	6,897	2.6	1,242	2.5	646	1.7				
Biomedical sciences	11,806	1.4	9,587	1.6	4,109	2.0	2,219	1.0	6,391	1.3	4,435	1.3	2,699	1.8	1,956	1.1	5,415	1.8	5,152	1.9	1,410	2.8	263	0.7				
Biophysics	952	0.1	940	0.2	173	0.1	12	*	9	*	8	*	4	*	1	*	943	0.3	932	0.3	169	0.3	11	*				
Biostatistics and bioinformatics	8,283	1.0	6,884	1.2	2,232	1.1	1,399	0.6	4,240	0.8	3,171	1.0	1,562	1.0	1,069	0.6	4,043	1.3	3,713	1.4	670	1.3	330	0.9				
Biotechnology	4,543	0.6	2,607	0.4	1,244	0.6	1,936	0.9	4,420	0.9	2,498	0.8	1,220	0.8	1,922	1.1	123	*	109	*	24	*	14	*				
Botany and plant biology	1,677	0.2	1,565	0.3	306	0.2	112	0.1	378	0.1	330	0.1	108	0.1	48	*	1,299	0.4	1,235	0.5	198	0.4	64	0.2				
Cell, cellular biology, and anatomical sciences	6,478	0.8	5,980	1.0	1,387	0.7	498	0.2	1,031	0.2	739	0.2	470	0.3	292	0.2	5,447	1.8	5,241	2.0	917	1.8	206	0.5				
Ecology and population biology	3,833	0.5	3,192	0.5	712	0.3	641	0.3	1,035	0.2	713	0.2	297	0.2	322	0.2	2,798	0.9	2,479	0.9	415	0.8	319	0.8				
Epidemiology	6,138	0.8	4,728	0.8	1,741	0.9	1,410	0.6	3,837	0.8	2,788	0.8	1,379	0.9	1,049	0.6	2,301	0.7	1,940	0.7	362	0.7	361	0.9				
Genetics	3,187	0.4	2,929	0.5	592	0.3	258	0.1	693	0.1	507	0.2	252	0.2	186	0.1	2,494	0.8	2,422	0.9	340	0.7	72	0.2				
Microbiological sciences and immunology	6,588	0.8	5,298	0.9	1,035	0.5	1,290	0.6	1,934	0.4	843	0.3	376	0.2	1,091	0.6	4,654	1.5	4,455	1.7	659	1.3	199	0.5				
Molecular biology	1,668	0.2	1,481	0.2	351	0.2	187	0.1	388	0.1	269	0.1	143	0.1	119	0.1	1,280	0.4	1,212	0.5	208	0.4	68	0.2				
Neurobiology and neuroscience	6,580	0.8	6,316	1.1	1,106	0.5	264	0.1	480	0.1	359	0.1	176	0.1	121	0.1	6,100	2.0	5,957	2.2	930	1.9	143	0.4				
Nutrition science	4,068	0.5	3,020	0.5	1,213	0.6	1,048	0.5	2,959	0.6	2,063	0.6	1,033	0.7	896	0.5	1,109	0.4	957	0.4	180	0.4	152	0.4				
Pathology and experimental pathology	1,106	0.1	1,048	0.2	178	0.1	58	*	143	*	120	*	56	*	23	*	963	0.3	928	0.3	122	0.2	35	0.1				
Pharmacology and toxicology	3,304	0.4	2,861	0.5	616	0.3	443	0.2	844	0.2	508	0.2	267	0.2	336	0.2	2,460	0.8	2,353	0.9	349	0.7	107	0.3				
Physiology	6,101	0.7	5,144	0.9	1,658	0.8	957	0.4	2,951	0.6	2,155	0.7	1,202	0.8	796	0.4	3,150	1.0	2,989	1.1	456	0.9	161	0.4				
Zoology and animal biology	2,042	0.2	1,577	0.3	365	0.2	465	0.2	901	0.2	563	0.2	213	0.1	338	0.2	1,141	0.4	1,014	0.4	152	0.3	127	0.3				
Biological and biomedical sciences nec	5,918	0.7	4,355	0.7	2,093	1.0	1,563	0.7	3,303	0.6	2,071																	

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			All full time		First time, full time						All full time		First time, full time							All full time		First time, full time				
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Computer and information sciences nec	7,382	0.9	5,298	0.9	2,348	1.2	2,084	0.9	7,265	1.4	5,214	1.6	2,333	1.5	2,051	1.1	117	*	84	*	15	*	33	0.1		
Geosciences, atmospheric, and ocean sciences	11,594	1.4	9,519	1.6	2,483	1.2	2,075	0.9	4,793	0.9	3,376	1.0	1,443	0.9	1,417	0.8	6,801	2.2	6,143	2.3	1,040	2.1	658	1.7		
Atmospheric sciences and meteorology	1,431	0.2	1,284	0.2	327	0.2	147	0.1	441	0.1	384	0.1	180	0.1	57	*	990	0.3	900	0.3	147	0.3	90	0.2		
Geological and earth sciences	7,240	0.9	5,870	1.0	1,537	0.8	1,370	0.6	2,984	0.6	2,021	0.6	861	0.6	963	0.5	4,256	1.4	3,849	1.4	676	1.3	407	1.1		
Ocean and marine sciences	2,923	0.4	2,365	0.4	619	0.3	558	0.3	1,368	0.3	971	0.3	402	0.3	397	0.2	1,555	0.5	1,394	0.5	217	0.4	161	0.4		
Geosciences, atmospheric, and ocean sciences nec	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
Mathematics and statistics	33,893	4.1	26,832	4.5	9,842	4.8	7,061	3.2	20,105	3.9	14,237	4.3	7,311	4.8	5,868	3.2	13,788	4.5	12,595	4.7	2,531	5.0	1,193	3.1		
Applied mathematics	11,140	1.4	9,042	1.5	4,320	2.1	2,098	1.0	8,977	1.8	7,101	2.2	3,910	2.5	1,876	1.0	2,163	0.7	1,941	0.7	410	0.8	222	0.6		
Mathematics	11,801	1.4	9,519	1.6	2,410	1.2	2,282	1.0	3,623	0.7	1,969	0.6	897	0.6	1,654	0.9	8,178	2.7	7,550	2.8	1,513	3.0	628	1.6		
Statistics	10,952	1.3	8,271	1.4	3,112	1.5	2,681	1.2	7,505	1.5	5,167	1.6	2,504	1.6	2,338	1.3	3,447	1.1	3,104	1.2	608	1.2	343	0.9		
Multidisciplinary and interdisciplinary sciences	26,429	3.2	17,187	2.9	7,733	3.8	9,242	4.2	21,928	4.3	13,413	4.1	6,928	4.5	8,515	4.7	4,501	1.5	3,774	1.4	805	1.6	727	1.9		
Biological and physical sciences	1,896	0.2	1,559	0.3	635	0.3	337	0.2	921	0.2	657	0.2	386	0.3	264	0.1	975	0.3	902	0.3	249	0.5	73	0.2		
Computational science	3,228	0.4	2,001	0.3	960	0.5	1,227	0.6	2,939	0.6	1,784	0.5	911	0.6	1,155	0.6	289	0.1	217	0.1	49	0.1	72	0.2		
Data science and data analytics	10,416	1.3	5,749	1.0	3,139	1.5	4,667	2.1	10,243	2.0	5,613	1.7	3,097	2.0	4,630	2.6	173	0.1	136	0.1	42	0.1	37	0.1		
International and global studies	996	0.1	750	0.1	314	0.2	246	0.1	865	0.2	648	0.2	300	0.2	217	0.1	131	*	102	*	14	*	29	0.1		
Multidisciplinary and interdisciplinary sciences nec	9,893	1.2	7,128	1.2	2,685	1.3	2,765	1.3	6,960	1.4	4,711	1.4	2,234	1.5	2,249	1.2	2,933	1.0	2,417	0.9	451	0.9	516	1.3		
Natural resources and conservation	13,490	1.6	9,028	1.5	2,964	1.5	4,462	2.0	9,486	1.9	5,764	1.7	2,436	1.6	3,722	2.1	4,004	1.3	3,264	1.2	528	1.1	740	1.9		
Environmental science and studies	6,348	0.8	4,483	0.7	1,606	0.8	1,865	0.8	4,359	0.9	2,824	0.9	1,332	0.9	1,535	0.8	1,989	0.6	1,659	0.6	274	0.5	330	0.9		
Forestry, natural resources, and conservation	7,142	0.9	4,545	0.8	1,358	0.7	2,597	1.2	5,127	1.0	2,940	0.9	1,104	0.7	2,187	1.2	2,015	0.7	1,605	0.6	254	0.5	410	1.1		
Physical sciences	44,329	5.4	39,475	6.6	8,858	4.3	4,854	2.2	6,000	1.2	3,471	1.1	1,591	1.0	2,529	1.4	38,329	12.5	36,004	13.4	7,267	14.5	2,325	6.0		
Astronomy and astrophysics	1,657	0.2	1,535	0.3	314	0.2	122	0.1	100	*	50	*	25	*	50	*	1,557	0.5	1,485	0.6	289	0.6	72	0.2		
Chemistry	23,007	2.8	20,741	3.5	4,895	2.4	2,266	1.0	2,891	0.6	1,703	0.5	777	0.5	1,188	0.7	20,116	6.5	19,038	7.1	4,118	8.2	1,078	2.8		
Materials sciences	1,571	0.2	1,395	0.2	356	0.2	176	0.1	373	0.1	280	0.1	159	0.1	93	0.1	1,198	0.4	1,115	0.4	197	0.4	83	0.2		
Physics	17,119	2.1	15,190	2.5	3,118	1.5	1,929	0.9	2,179	0.4	1,216	0.4	537	0.3	963	0.5	14,940	4.9	13,974	5.2	2,581	5.1	966	2.5		
Physical sciences nec	975	0.1	614	0.1	175	0.1	361	0.2	457	0.1	222	0.1	93	0.1	235	0.1	518	0.2	392	0.1	82	0.2	126	0.3		
Psychology	73,828	9.0	47,479	7.9	14,913	7.3	26,349	12.0	49,474	9.7	28,571	8.7	11,234	7.3	20,903	11.6	24,354	7.9	18,908	7.0	3,679	7.3	5,446	14.1		
Applied psychology	25,198	3.1	13,646	2.3	4,914	2.4	11,552	5.3	20,430	4.0	10,318	3.1	4,226	2.8	10,112	5.6	4,768	1.								

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	Total		Full time				Part time		Total		Full time				Part time		Total		Full time				Part time			
			All full time		First time, full time						All full time		First time, full time							All full time		First time, full time				
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agricultural and natural resource economics	740	0.1	592	0.1	190	0.1	148	0.1	436	0.1	326	0.1	142	0.1	110	0.1	304	0.1	266	0.1	48	0.1	38	0.1		
Anthropology	5,796	0.7	4,568	0.8	1,032	0.5	1,228	0.6	1,971	0.4	1,243	0.4	573	0.4	728	0.4	3,825	1.2	3,325	1.2	459	0.9	500	1.3		
Area, ethnic, cultural, gender, and group studies	4,920	0.6	3,709	0.6	1,220	0.6	1,211	0.6	2,582	0.5	1,834	0.6	901	0.6	748	0.4	2,338	0.8	1,875	0.7	319	0.6	463	1.2		
Criminal justice and safety studies	6,424	0.8	3,208	0.5	1,175	0.6	3,216	1.5	4,942	1.0	2,263	0.7	977	0.6	2,679	1.5	1,482	0.5	945	0.4	198	0.4	537	1.4		
Criminology	1,477	0.2	845	0.1	344	0.2	632	0.3	1,161	0.2	585	0.2	301	0.2	576	0.3	316	0.1	260	0.1	43	0.1	56	0.1		
Economics (except agricultural and natural resource)	14,559	1.8	12,558	2.1	3,958	1.9	2,001	0.9	6,398	1.3	4,957	1.5	2,554	1.7	1,441	0.8	8,161	2.7	7,601	2.8	1,404	2.8	560	1.5		
Geography and cartography	3,837	0.5	2,293	0.4	733	0.4	1,544	0.7	2,517	0.5	1,184	0.4	543	0.4	1,333	0.7	1,320	0.4	1,109	0.4	190	0.4	211	0.5		
International relations and national security studies	7,473	0.9	4,654	0.8	2,051	1.0	2,819	1.3	7,147	1.4	4,404	1.3	2,003	1.3	2,743	1.5	326	0.1	250	0.1	48	0.1	76	0.2		
Linguistics	2,727	0.3	2,111	0.4	528	0.3	616	0.3	1,117	0.2	667	0.2	286	0.2	450	0.2	1,610	0.5	1,444	0.5	242	0.5	166	0.4		
Political science and government	7,684	0.9	5,973	1.0	1,513	0.7	1,711	0.8	2,649	0.5	1,463	0.4	721	0.5	1,186	0.7	5,035	1.6	4,510	1.7	792	1.6	525	1.4		
Public policy analysis	7,370	0.9	4,842	0.8	1,883	0.9	2,528	1.2	4,645	0.9	3,101	0.9	1,555	1.0	1,544	0.9	2,725	0.9	1,741	0.6	328	0.7	984	2.5		
Sociology and population studies	6,404	0.8	5,041	0.8	1,232	0.6	1,363	0.6	1,888	0.4	1,129	0.3	587	0.4	759	0.4	4,516	1.5	3,912	1.5	645	1.3	604	1.6		
Urban studies and affairs	966	0.1	503	0.1	159	0.1	463	0.2	648	0.1	301	0.1	134	0.1	347	0.2	318	0.1	202	0.1	25	*	116	0.3		
Social sciences, other	4,214	0.5	3,449	0.6	1,653	0.8	765	0.3	3,499	0.7	2,804	0.8	1,557	1.0	695	0.4	715	0.2	645	0.2	96	0.2	70	0.2		
Engineering	175,559	21.5	131,607	22.0	42,684	20.9	43,952	20.0	100,567	19.7	65,160	19.7	30,781	20.0	35,407	19.6	74,992	24.4	66,447	24.7	11,903	23.7	8,545	22.1		
Aerospace, aeronautical, and astronautical engineering	8,264	1.0	5,447	0.9	1,680	0.8	2,817	1.3	5,380	1.1	2,883	0.9	1,262	0.8	2,497	1.4	2,884	0.9	2,564	1.0	418	0.8	320	0.8		
Biological, biomedical, and biosystems engineering	15,203	1.9	13,267	2.2	4,143	2.0	1,936	0.9	5,204	1.0	3,961	1.2	2,345	1.5	1,243	0.7	9,999	3.3	9,306	3.5	1,798	3.6	693	1.8		
Chemical, petroleum, and chemical-related engineering	10,546	1.3	9,328	1.6	2,451	1.2	1,218	0.6	2,658	0.5	1,827	0.6	921	0.6	831	0.5	7,888	2.6	7,501	2.8	1,530	3.0	387	1.0		
Chemical engineering	9,701	1.2	8,644	1.4	2,252	1.1	1,057	0.5	2,271	0.4	1,549	0.5	799	0.5	722	0.4	7,430	2.4	7,095	2.6	1,453	2.9	335	0.9		
Petroleum engineering	845	0.1	684	0.1	199	0.1	161	0.1	387	0.1	278	0.1	122	0.1	109	0.1	458	0.1	406	0.2	77	0.2	52	0.1		
Civil, environmental, transportation and related engineering fields	19,934	2.4	14,930	2.5	4,935	2.4	5,004	2.3	12,082	2.4	7,984	2.4	3,738	2.4	4,098	2.3	7,852	2.6	6,946	2.6	1,197	2.4	906	2.3		
Civil engineering	15,851	1.9	12,011	2.0	3,906	1.9	3,840	1.7	9,149	1.8	6,085	1.8	2,908	1.9	3,064	1.7	6,702	2.2	5,926	2.2	998	2.0	776	2.0		
Architectural, environmental, construction and surveying engineering	4,083	0.5	2,919	0.5	1,029	0.5	1,164	0.5	2,933	0.6	1,899	0.6	830	0.5	1,034	0.6	1,150	0.4	1,020	0.4	199	0.4	130	0.3		
Electrical, electronics, communications and computer engineering	48,799	6.0	37,357	6.2	12,529	6.1	11,442	5.2	31,093	6.1	21,886	6.6	9,920	6.5	9,207	5.1	17,706	5.8	15,471	5.8	2,609	5.2	2,235	5.8		
Electrical, electronics, and communications engineering	32,988	4.0	24,699	4.1	7,728	3.8	8,289	3.8	18,215	3.6	11,750	3.6	5,564	3.6	6,465	3.6	14,773	4.8	12,949	4.8	2,164	4.3	1,824	4.7		
Computer engineering	15,811	1.9	12,658	2.1	4,801	2.4	3,153	1.4	12,878	2.5	10,136	3.1	4,356	2.8	2,742	1.5	2,933	1.0	2,522	0.9	445	0.9	411	1.1		
Industrial, manufacturing, systems engineering and operations research	15																									

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	Total		Full time				Part time		Total		Full time				Part time		Total		Full time				Part time	
			All full time		First time, full time						All full time		First time, full time							All full time		First time, full time		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Engineering mechanics, physics, and science	2,390	0.3	2,070	0.3	508	0.2	320	0.1	696	0.1	492	0.1	263	0.2	204	0.1	1,694	0.6	1,578	0.6	245	0.5	116	0.3
Nuclear engineering	1,606	0.2	1,251	0.2	308	0.2	355	0.2	516	0.1	330	0.1	149	0.1	186	0.1	1,090	0.4	921	0.3	159	0.3	169	0.4
Engineering, other	17,765	2.2	11,490	1.9	4,327	2.1	6,275	2.9	12,891	2.5	7,742	2.3	3,610	2.4	5,149	2.8	4,874	1.6	3,748	1.4	717	1.4	1,126	2.9
Health	81,047	9.9	55,010	9.2	21,315	10.5	26,037	11.9	61,779	12.1	41,835	12.7	18,379	12.0	19,944	11.0	19,268	6.3	13,175	4.9	2,936	5.8	6,093	15.8
Clinical medicine	34,658	4.2	20,426	3.4	8,217	4.0	14,232	6.5	28,484	5.6	16,700	5.1	7,345	4.8	11,784	6.5	6,174	2.0	3,726	1.4	872	1.7	2,448	6.3
Medical clinical sciences and clinical and medical laboratory sciences	2,117	0.3	1,165	0.2	454	0.2	952	0.4	1,242	0.2	730	0.2	330	0.2	512	0.3	875	0.3	435	0.2	124	0.2	440	1.1
Public health	32,541	4.0	19,261	3.2	7,763	3.8	13,280	6.0	27,242	5.3	15,970	4.8	7,015	4.6	11,272	6.2	5,299	1.7	3,291	1.2	748	1.5	2,008	5.2
Other health	46,389	5.7	34,584	5.8	13,098	6.4	11,805	5.4	33,295	6.5	25,135	7.6	11,034	7.2	8,160	4.5	13,094	4.3	9,449	3.5	2,064	4.1	3,645	9.4
Communication disorders sciences	19,109	2.3	16,692	2.8	6,951	3.4	2,417	1.1	18,183	3.6	15,900	4.8	6,785	4.4	2,283	1.3	926	0.3	792	0.3	166	0.3	134	0.3
Dental sciences	2,231	0.3	2,101	0.4	678	0.3	130	0.1	1,420	0.3	1,300	0.4	468	0.3	120	0.1	811	0.3	801	0.3	210	0.4	10	*
Kinesiology and exercise science	5,254	0.6	3,657	0.6	1,645	0.8	1,597	0.7	4,286	0.8	2,908	0.9	1,492	1.0	1,378	0.8	968	0.3	749	0.3	153	0.3	219	0.6
Nursing science	5,510	0.7	2,919	0.5	770	0.4	2,591	1.2	1,701	0.3	737	0.2	225	0.1	964	0.5	3,809	1.2	2,182	0.8	545	1.1	1,627	4.2
Pharmaceutical sciences	5,219	0.6	3,872	0.6	1,105	0.5	1,347	0.6	2,265	0.4	1,214	0.4	587	0.4	1,051	0.6	2,954	1.0	2,658	1.0	518	1.0	296	0.8
Other health nec	9,066	1.1	5,343	0.9	1,949	1.0	3,723	1.7	5,440	1.1	3,076	0.9	1,477	1.0	2,364	1.3	3,626	1.2	2,267	0.8	472	0.9	1,359	3.5

* = value < 0.05%; ne = not eligible.

nec = not elsewhere classified.

Note(s):

Percentages may not add to total because of rounding. For more information on the mapping of Survey of Graduate Students and Postdoctorates in Science and Engineering fields and codes, see technical table A-17. Graduate student data in this table include master's students in health sciences. For more information on the comparability of these counts to other data published by the National Center for Science and Engineering Statistics, see the "Technical Notes."

Source(s):

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2023.