TABLE 4-3

Master's and doctoral students within science, engineering and health fields, by enrollment intensity: 2019

(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				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
All detailed fields	690,117	100.0	502,442	100.0	163,032	100.0	187,675	100.0	408,228	100.0	254,532	100.0	116,507	100.0	153,696	100.0	281,889	100.0	247,910	100.0	46,525	100.0	33,979	100.0
Science	453,691	65.7	331,673	66.0	105,525	64.7	122,018	65.0	259,795	63.6	158,704	62.4	72,625	62.3	101,091	65.8	193,896	68.8	172,969	69.8	32,900	70.7	20,927	61.6
Agricultural sciences	9,518	1.4	6,749	1.3	1,699	1.0	2,769	1.5	5,629	1.4	3,504	1.4	1,230	1.1	2,125	1.4	3,889	1.4	3,245	1.3	469	1.0	644	1.9
Biological and biomedical sciences	91,993	13.3	76,233	15.2	23,071	14.2	15,760	8.4	38,078	9.3	25,757	10.1	13,522	11.6	12,321	8.0	53,915	19.1	50,476	20.4	9,549	20.5	3,439	10.1
Biochemistry	5,342	0.8	4,797	1.0	1,061	0.7	545	0.3	808	0.2	554	0.2	310	0.3	254	0.2	4,534	1.6	4,243	1.7	751	1.6	291	0.9
Biology	15,801	2.3	11,264	2.2	3,143	1.9	4,537	2.4	8,635	2.1	4,723	1.9	1,995	1.7	3,912	2.5	7,166	2.5	6,541	2.6	1,148	2.5	625	1.8
Biomedical sciences	9,820	1.4	8,876	1.8	4,385	2.7	944	0.5	5,241	1.3	4,559	1.8	3,187	2.7	682	0.4	4,579	1.6	4,317	1.7	1,198	2.6	262	0.8
Biophysics	897	0.1	881	0.2	159	0.1	16	*	7	*	3	*	0	0.0	4	*	890	0.3	878	0.4	159	0.3	12	*
Biostatistics and bioinformatics	6,228	0.9	5,200	1.0	1,780	1.1	1,028	0.5	3,036	0.7	2,281	0.9	1,193	1.0	755	0.5	3,192	1.1	2,919	1.2	587	1.3	273	0.8
Biotechnology	3,255	0.5	1,421	0.3	684	0.4	1,834	1.0	3,157	0.8	1,332	0.5	673	0.6	1,825	1.2	98	*	89	*	11	*	9	*
Botany and plant biology	1,687	0.2	1,545	0.3	301	0.2	142	0.1	392	0.1	320	0.1	113	0.1	72	*	1,295	0.5	1,225	0.5	188	0.4	70	0.2
Cell, cellular biology, and anatomical sciences	5,902	0.9	5,577	1.1	1,294	0.8	325	0.2	927	0.2	755	0.3	434	0.4	172	0.1	4,975	1.8	4,822	1.9	860	1.8	153	0.5
Ecology and population biology	3,510	0.5	2,911	0.6	629	0.4	599	0.3	939	0.2	637	0.3	228	0.2	302	0.2	2,571	0.9	2,274	0.9	401	0.9	297	0.9
Epidemiology	4,692	0.7	3,754	0.7	1,315	0.8	938	0.5	2,776	0.7	2,135	0.8	971	0.8	641	0.4	1,916	0.7	1,619	0.7	344	0.7	297	0.9
Genetics	2,663	0.4	2,507	0.5	531	0.3	156	0.1	581	0.1	494	0.2	230	0.2	87	0.1	2,082	0.7	2,013	0.8	301	0.6	69	0.2
Microbiological sciences and immunology	5,307	0.8	4,484	0.9	918	0.6	823	0.4	1,370	0.3	709	0.3	351	0.3	661	0.4	3,937	1.4	3,775	1.5	567	1.2	162	0.5
Molecular biology	1,531	0.2	1,304	0.3	317	0.2	227	0.1	378	0.1	232	0.1	119	0.1	146	0.1	1,153	0.4	1,072	0.4	198	0.4	81	0.2
Neurobiology and neuroscience	5,500	0.8	5,290	1.1	1,058	0.6	210	0.1	362	0.1	280	0.1	165	0.1	82	0.1	5,138	1.8	5,010	2.0	893	1.9	128	0.4
Nutrition science	3,333	0.5	2,505	0.5	888	0.5	828	0.4	2,385	0.6	1,650	0.6	735	0.6	735	0.5	948	0.3	855	0.3	153	0.3	93	0.3
Pathology and experimental pathology	930	0.1	859	0.2	154	0.1	71	*	87	*	69	*	34	*	18	*	843	0.3	790	0.3	120	0.3	53	0.2
Pharmacology and toxicology	3,074	0.4	2,575	0.5	603	0.4	499	0.3	923	0.2	502	0.2	289	0.2	421	0.3	2,151	0.8	2,073	0.8	314	0.7	78	0.2
Physiology	5,297	0.8	4,550	0.9	1,473	0.9	747	0.4	2,594	0.6	1,993	0.8	1,090	0.9	601	0.4	2,703	1.0	2,557	1.0	383	0.8	146	0.4
Zoology and animal biology	2,089	0.3	1,677	0.3	373	0.2	412	0.2	891	0.2	624	0.2	205	0.2	267	0.2	1,198	0.4	1,053	0.4	168	0.4	145	0.4
Biological and biomedical sciences nec	5,135	0.7	4,256	0.8	2,005	1.2	879	0.5	2,589	0.6	1,905	0.7	1,200	1.0	684	0.4	2,546	0.9	2,351	0.9	805	1.7	195	0.6
Computer and information sciences	101,284	14.7	62,120	12.4	23,781	14.6	39,164	20.9	84,092	20.6	47,535	18.7	20,788	17.8	36,557	23.8	17,192	6.1	14,585	5.9	2,993	6.4	2,607	7.7
Computer science	33,274	4.8	25,824	5.1	9,479	5.8	7,450	4.0	24,628	6.0	18,227	7.2	7,909	6.8	6,401	4.2	8,646	3.1	7,597	3.1	1,570	3.4	1,049	3.1
Computer and information sciences, general	40,650	5.9	22,841	4.5	8,883	5.4	17,809	9.5	33,698	8.3	16,865	6.6	7,667	6.6	16,833	11.0	6,952	2.5	5,976	2.4	1,216	2.6	976	2.9
Computer and information sciences nec	27,360	4.0	13,455	2.7	5,419	3.3	13,905	7.4	25,766	6.3	12,443	4.9	5,212	4.5	13,323	8.7	1,594	0.6	1,012	0.4	207	0.4	582	1.7
Geosciences, atmospheric sciences, and ocean sciences	11,878	1.7	9,521	1.9	2,501	1.5	2,357	1.3	5,327	1.3	3,675	1.4	1,487	1.3	1,652	1.1	6,551	2.3	5,846	2.4	1,014	2.2	705	2.1
Atmospheric sciences and meteorology	1,339	0.2	1,181	0.2	309	0.2	158	0.1	473	0.1	416	0.2	171	0.1	57	*	866	0.3	765	0.3	138	0.3	101	0.3
Geological and earth sciences	7,849	1.1	6,087	1.2	1,595	1.0	1,762	0.9	3,610	0.9	2,317	0.9	947	0.8	1,293	0.8	4,239	1.5	3,770	1.5	648	1.4	469	1.4
Ocean and marine sciences	2,690	0.4	2,253	0.4	597	0.4	437	0.2	1,244	0.3	942	0.4	369	0.3	302	0.2	1,446	0.5	1,311	0.5	228	0.5	135	0.4
Mathematics and statistics	33,159	4.8	25,681	5.1	9,348	5.7	7,478	4.0	19,594	4.8	13,359	5.2	6,772	5.8	6,235	4.1	13,565	4.8	12,322	5.0	2,576	5.5	1,243	3.7

TABLE 4-3

Master's and doctoral students within science, engineering and health fields, by enrollment intensity: 2019

(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				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
Mathematics and applied mathematics	22,241	3.2	17,778	3.5	6,124	3.8	4,463	2.4	11,933	2.9	8,392	3.3	4,194	3.6	3,541	2.3	10,308	3.7	9,386	3.8	1,930	4.1	922	2.7
Statistics	10,918	1.6	7,903	1.6	3,224	2.0	3,015	1.6	7,661	1.9	4,967	2.0	2,578	2.2	2,694	1.8	3,257	1.2	2,936	1.2	646	1.4	321	0.9
Multidisciplinary and interdisciplinary studies	11,181	1.6	7,033	1.4	2,886	1.8	4,148	2.2	8,203	2.0	4,669	1.8	2,397	2.1	3,534	2.3	2,978	1.1	2,364	1.0	489	1.1	614	1.8
Natural resources and conservation	11,743	1.7	8,101	1.6	2,536	1.6	3,642	1.9	8,066	2.0	5,176	2.0	2,081	1.8	2,890	1.9	3,677	1.3	2,925	1.2	455	1.0	752	2.2
Environmental science and studies	5,621	0.8	3,926	0.8	1,360	0.8	1,695	0.9	3,883	1.0	2,525	1.0	1,112	1.0	1,358	0.9	1,738	0.6	1,401	0.6	248	0.5	337	1.0
Forestry, natural resources, and conservation	6,122	0.9	4,175	0.8	1,176	0.7	1,947	1.0	4,183	1.0	2,651	1.0	969	0.8	1,532	1.0	1,939	0.7	1,524	0.6	207	0.4	415	1.2
Physical sciences	42,867	6.2	38,162	7.6	8,308	5.1	4,705	2.5	6,361	1.6	3,878	1.5	1,627	1.4	2,483	1.6	36,506	13.0	34,284	13.8	6,681	14.4	2,222	6.5
Astronomy and astrophysics	1,450	0.2	1,389	0.3	275	0.2	61	*	77	*	47	*	26	*	30	*	1,373	0.5	1,342	0.5	249	0.5	31	0.1
Chemistry	22,900	3.3	20,508	4.1	4,537	2.8	2,392	1.3	3,152	0.8	1,914	0.8	795	0.7	1,238	0.8	19,748	7.0	18,594	7.5	3,742	8.0	1,154	3.4
Materials sciences	1,552	0.2	1,373	0.3	380	0.2	179	0.1	539	0.1	407	0.2	193	0.2	132	0.1	1,013	0.4	966	0.4	187	0.4	47	0.1
Physics	16,115	2.3	14,384	2.9	2,949	1.8	1,731	0.9	2,164	0.5	1,362	0.5	535	0.5	802	0.5	13,951	4.9	13,022	5.3	2,414	5.2	929	2.7
Physical sciences nec	850	0.1	508	0.1	167	0.1	342	0.2	429	0.1	148	0.1	78	0.1	281	0.2	421	0.1	360	0.1	89	0.2	61	0.2
Psychology	61,069	8.8	41,093	8.2	13,001	8.0	19,976	10.6	40,838	10.0	24,547	9.6	9,668	8.3	16,291	10.6	20,231	7.2	16,546	6.7	3,333	7.2	3,685	10.8
Clinical psychology	7,372	1.1	5,459	1.1	1,453	0.9	1,913	1.0	3,587	0.9	2,353	0.9	838	0.7	1,234	0.8	3,785	1.3	3,106	1.3	615	1.3	679	2.0
Counseling and applied psychology	35,859	5.2	21,591	4.3	7,327	4.5	14,268	7.6	29,322	7.2	16,978	6.7	6,404	5.5	12,344	8.0	6,537	2.3	4,613	1.9	923	2.0	1,924	5.7
Psychology, general	13,106	1.9	10,119	2.0	3,169	1.9	2,987	1.6	6,357	1.6	4,182	1.6	1,934	1.7	2,175	1.4	6,749	2.4	5,937	2.4	1,235	2.7	812	2.4
Research and experimental psychology	4,732	0.7	3,924	0.8	1,052	0.6	808	0.4	1,572	0.4	1,034	0.4	492	0.4	538	0.4	3,160	1.1	2,890	1.2	560	1.2	270	0.8
Social sciences	78,999	11.4	56,980	11.3	18,394	11.3	22,019	11.7	43,607	10.7	26,604	10.5	13,053	11.2	17,003	11.1	35,392	12.6	30,376	12.3	5,341	11.5	5,016	14.8
Agricultural economics	1,506	0.2	1,330	0.3	424	0.3	176	0.1	700	0.2	609	0.2	297	0.3	91	0.1	806	0.3	721	0.3	127	0.3	85	0.3
Anthropology	6,598	1.0	5,211	1.0	1,210	0.7	1,387	0.7	2,233	0.5	1,394	0.5	666	0.6	839	0.5	4,365	1.5	3,817	1.5	544	1.2	548	1.6
Criminal justice and safety studies	5,817	0.8	2,641	0.5	978	0.6	3,176	1.7	4,917	1.2	2,030	0.8	836	0.7	2,887	1.9	900	0.3	611	0.2	142	0.3	289	0.9
Economics (except agricultural)	14,129	2.0	12,072	2.4	4,026	2.5	2,057	1.1	6,084	1.5	4,638	1.8	2,596	2.2	1,446	0.9	8,045	2.9	7,434	3.0	1,430	3.1	611	1.8
Geography and cartography	4,401	0.6	2,882	0.6	883	0.5	1,519	0.8	2,660	0.7	1,410	0.6	648	0.6	1,250	0.8	1,741	0.6	1,472	0.6	235	0.5	269	0.8
History and philosophy of science	289	*	250	*	46	*	39	*	32	*	19	*	7	*	13	*	257	0.1	231	0.1	39	0.1	26	0.1
Human development	2,070	0.3	1,346	0.3	452	0.3	724	0.4	1,339	0.3	794	0.3	344	0.3	545	0.4	731	0.3	552	0.2	108	0.2	179	0.5
International relations and national security studies	7,070	1.0	4,397	0.9	1,951	1.2	2,673	1.4	6,657	1.6	4,060	1.6	1,894	1.6	2,597	1.7	413	0.1	337	0.1	57	0.1	76	0.2
Linguistics	2,769	0.4	2,115	0.4	564	0.3	654	0.3	1,153	0.3	642	0.3	304	0.3	511	0.3	1,616	0.6	1,473	0.6	260	0.6	143	0.4
Political science and government	8,385	1.2	6,298	1.3	1,533	0.9	2,087	1.1	2,897	0.7	1,475	0.6	661	0.6	1,422	0.9	5,488	1.9	4,823	1.9	872	1.9	665	2.0
Public policy analysis	8,711	1.3	5,994	1.2	2,626	1.6	2,717	1.4	6,297	1.5	4,386	1.7	2,305	2.0	1,911	1.2	2,414	0.9	1,608	0.6	321	0.7	806	2.4
Sociology	7,333	1.1	5,662	1.1	1,299	0.8	1,671	0.9	2,263	0.6	1,254	0.5	596	0.5	1,009	0.7	5,070	1.8	4,408	1.8	703	1.5	662	1.9
Social sciences nec	9,921	1.4	6,782	1.3	2,402	1.5	3,139	1.7	6,375	1.6	3,893	1.5	1,899	1.6	2,482	1.6	3,546	1.3	2,889	1.2	503	1.1	657	1.9
Engineering	164,004	23.8	121,117	24.1	38,631	23.7	42,887	22.9	91,939	22.5	57,723	22.7	27,307	23.4	34,216	22.3	72,065	25.6	63,394	25.6	11,324	24.3	8,671	25.5
Aerospace, aeronautical, and astronautical engineering	6,255	0.9	4,435	0.9	1,327	0.8	1,820	1.0	3,701	0.9	2,197	0.9	979	0.8	1,504	1.0	2,554	0.9	2,238	0.9	348	0.7	316	0.9

TABLE 4-3

Master's and doctoral students within science, engineering and health fields, by enrollment intensity: 2019

(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				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
Agricultural engineering	1,156	0.2	954	0.2	259	0.2	202	0.1	494	0.1	393	0.2	172	0.1	101	0.1	662	0.2	561	0.2	87	0.2	101	0.3
Bioengineering and biomedical engineering	12,050	1.7	10,453	2.1	3,364	2.1	1,597	0.9	4,335	1.1	3,353	1.3	1,934	1.7	982	0.6	7,715	2.7	7,100	2.9	1,430	3.1	615	1.8
Biological and biosystems engineering	308	*	231	*	70	*	77	*	89	*	64	*	38	*	25	*	219	0.1	167	0.1	32	0.1	52	0.2
Chemical engineering	9,689	1.4	8,565	1.7	2,348	1.4	1,124	0.6	2,632	0.6	1,888	0.7	969	0.8	744	0.5	7,057	2.5	6,677	2.7	1,379	3.0	380	1.1
Civil engineering	19,625	2.8	14,302	2.8	4,700	2.9	5,323	2.8	11,873	2.9	7,576	3.0	3,586	3.1	4,297	2.8	7,752	2.8	6,726	2.7	1,114	2.4	1,026	3.0
Electrical, electronics, and communications engineering	46,754	6.8	35,426	7.1	11,632	7.1	11,328	6.0	28,177	6.9	19,138	7.5	8,801	7.6	9,039	5.9	18,577	6.6	16,288	6.6	2,831	6.1	2,289	6.7
Engineering mechanics, physics, and science	2,299	0.3	1,883	0.4	555	0.3	416	0.2	852	0.2	563	0.2	297	0.3	289	0.2	1,447	0.5	1,320	0.5	258	0.6	127	0.4
Industrial and manufacturing engineering	15,674	2.3	9,186	1.8	3,682	2.3	6,488	3.5	11,912	2.9	6,247	2.5	3,157	2.7	5,665	3.7	3,762	1.3	2,939	1.2	525	1.1	823	2.4
Mechanical engineering	26,108	3.8	19,345	3.9	5,854	3.6	6,763	3.6	14,861	3.6	9,394	3.7	4,217	3.6	5,467	3.6	11,247	4.0	9,951	4.0	1,637	3.5	1,296	3.8
Metallurgical and materials engineering	6,590	1.0	5,652	1.1	1,440	0.9	938	0.5	1,974	0.5	1,409	0.6	683	0.6	565	0.4	4,616	1.6	4,243	1.7	757	1.6	373	1.1
Mining engineering	493	0.1	361	0.1	112	0.1	132	0.1	292	0.1	202	0.1	92	0.1	90	0.1	201	0.1	159	0.1	20	*	42	0.1
Nanotechnology	195	*	179	*	61	*	16	*	49	*	38	*	23	*	11	*	146	0.1	141	0.1	38	0.1	5	*
Nuclear engineering	1,449	0.2	1,186	0.2	260	0.2	263	0.1	418	0.1	307	0.1	127	0.1	111	0.1	1,031	0.4	879	0.4	133	0.3	152	0.4
Petroleum engineering	1,249	0.2	984	0.2	243	0.1	265	0.1	642	0.2	441	0.2	155	0.1	201	0.1	607	0.2	543	0.2	88	0.2	64	0.2
Engineering nec	14,110	2.0	7,975	1.6	2,724	1.7	6,135	3.3	9,638	2.4	4,513	1.8	2,077	1.8	5,125	3.3	4,472	1.6	3,462	1.4	647	1.4	1,010	3.0
Health	72,422	10.5	49,652	9.9	18,876	11.6	22,770	12.1	56,494	13.8	38,105	15.0	16,575	14.2	18,389	12.0	15,928	5.7	11,547	4.7	2,301	4.9	4,381	12.9
Clinical medicine[a]	30,822	4.5	18,924	3.8	7,684	4.7	11,898	6.3	26,251	6.4	15,638	6.1	7,046	6.0	10,613	6.9	4,571	1.6	3,286	1.3	638	1.4	1,285	3.8
Public health	29,594	4.3	18,119	3.6	7,328	4.5	11,475	6.1	25,403	6.2	15,144	5.9	6,772	5.8	10,259	6.7	4,191	1.5	2,975	1.2	556	1.2	1,216	3.6
Clinical medicine nec	1,228	0.2	805	0.2	356	0.2	423	0.2	848	0.2	494	0.2	274	0.2	354	0.2	380	0.1	311	0.1	82	0.2	69	0.2
Other health	41,600	6.0	30,728	6.1	11,192	6.9	10,872	5.8	30,243	7.4	22,467	8.8	9,529	8.2	7,776	5.1	11,357	4.0	8,261	3.3	1,663	3.6	3,096	9.1
Communication disorders sciences	17,257	2.5	15,247	3.0	6,283	3.9	2,010	1.1	16,346	4.0	14,442	5.7	6,128	5.3	1,904	1.2	911	0.3	805	0.3	155	0.3	106	0.3
Dental sciences	1,523	0.2	1,399	0.3	388	0.2	124	0.1	1,315	0.3	1,200	0.5	353	0.3	115	0.1	208	0.1	199	0.1	35	0.1	9	*
Nursing science	5,300	0.8	2,614	0.5	602	0.4	2,686	1.4	1,861	0.5	733	0.3	199	0.2	1,128	0.7	3,439	1.2	1,881	0.8	403	0.9	1,558	4.6
Pharmaceutical sciences	4,308	0.6	3,617	0.7	937	0.6	691	0.4	1,187	0.3	832	0.3	368	0.3	355	0.2	3,121	1.1	2,785	1.1	569	1.2	336	1.0
Veterinary biomedical and clinical sciences	1,573	0.2	962	0.2	265	0.2	611	0.3	881	0.2	344	0.1	134	0.1	537	0.3	692	0.2	618	0.2	131	0.3	74	0.2
Other health nec	11,639	1.7	6,889	1.4	2,717	1.7	4,750	2.5	8,653	2.1	4,916	1.9	2,347	2.0	3,737	2.4	2,986	1.1	1,973	0.8	370	0.8	1,013	3.0

* = value < 0.05%.

nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec.

Note(s):
Percentages may not add to total because of rounding.