

## AACP REPORT

# The Pharmacy Student Population: Applications Received 2018-19, Degrees Conferred 2018-19, Fall 2019 Enrollments

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### INTRODUCTION

This report presents data that describe the 2018-19 pharmacy application pool, degrees conferred in 2018-19, and fall 2019 pharmacy program enrollments. Data for this report were requested from 144 U.S. colleges and schools of pharmacy recognized by the Accreditation Council for Pharmacy Education (ACPE) using five separate survey instruments.

There were previously two professional education programs at U.S. colleges and schools of pharmacy: one leading to a baccalaureate in pharmacy, and the other leading to the Doctor of Pharmacy (Pharm.D.) degree. However, June 30, 2005 marked the official expiration of the ACPE standards to the baccalaureate in pharmacy (B.S. Pharmacy) degree programs in accordance with the transition to the Doctor of Pharmacy (Pharm.D.) degree as the sole professional degree program for the pharmacy profession in the U.S. Some colleges and schools of pharmacy conferred degrees in the B.S. Pharmacy program until 2004-05.

Additionally, some students with a B.S. Pharmacy degree return to school to obtain their Pharm.D. degree. For the purpose of this report, students in Doctor of Pharmacy programs are categorized under *Pharm.D.1* where the program leads to a Doctor of Pharmacy degree conferred as their first professional degree in pharmacy. Students who have already received a baccalaureate in pharmacy and enroll in a Doctor of Pharmacy degree program are categorized under *Pharm.D.2*.

The following definitions refer to the race and ethnicity groups used in this report. *White* refers to U.S. citizens or permanent residents having origins in any of the original peoples of Europe, the Middle East, or North Africa. *Black or African American* refers to U.S. citizens or permanent residents having origins in any of the black racial groups of Africa. *Hispanic or Latino* refers to U.S. citizens or permanent residents of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. *Asian* refers to U.S. citizens or permanent residents having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian Subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan,

the Philippine Islands, Thailand, and Vietnam. *Native Hawaiian or Other Pacific Islander* refers to U.S. citizens or permanent residents having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. Prior to 2011, these students were included in the *Asian* category. *American Indian or Alaska Native* refers to U.S. citizens or permanent residents having origins in any of the original peoples of North and South America (including Central America) who maintains cultural identification through tribal affiliation or community attachment. *Two or More Races* refers to U.S. citizens or permanent residents who are not Hispanic or Latino and identify themselves by more than one race. *Unknown* refers to U.S. citizens or permanent residents whose race and ethnicity are not known. Prior to 2011, this category was labeled *Other/Unknown* and students that were of two or more races were included in this category. *International/Foreign* refers to citizens of a foreign country/permanent residents of a country other than the U.S. *Unknown/Other Gender* refers to individuals with unknown or other gender, regardless of race/ethnicity or citizenship.

### 2018-19 Application Pool

The 2018-19 Application Pool Survey was conducted online in October 2019 with an announcement and request for participation sent to the survey coordinator at each of the 144 colleges and schools of pharmacy in the U.S. recognized by ACPE. After follow-up correspondence, 144 colleges and schools (100%) submitted the requested information. Included in the application pool are applicants who applied for admission and submitted all required application materials as defined by the Pharmacy College Application Service (PharmCAS) between September 2018 and August 2019 for the entering class of fall 2019. Numbers reported represent the number of applications, not applicants, and may represent multiple applications submitted by individual applicants.

During the period September 2018 through August 2019, 143 institutions reported received 50,842 applications for admission. This total represents the total number of applications reported by race/ethnicity and gender of the applicant.

Table 1. Distribution of 2018-19 Applications by Gender and Race/Ethnicity of Applicant<sup>a</sup>

Race/Ethnicity	Male	Female	Gender Not Specified	Total (%)
White <sup>b</sup>	6,927	12,056	16	18,999 (37.4)
Black or African American <sup>b</sup>	2,444	4,400	1	6,845 (13.5)
Hispanic or Latino <sup>b</sup>	1,846	2,822	5	4,673 (9.2)
Asian <sup>b</sup>	5,184	9,375	4	14,563 (28.6)
Native Hawaiian or Other Pacific Islander <sup>b</sup>	26	33	0	59 (0.1)
American Indian or Alaska Native <sup>b</sup>	27	48	1	76 (0.1)
Two or more races <sup>b</sup>	601	974	0	1,575 (3.1)
Unknown <sup>b</sup>	552	691	21	1,264 (2.5)
International/Foreign <sup>c</sup>	1,013	1,766	9	2,788 (5.5)
Total	18,620	32,165	57	

<sup>a</sup> Represents data submitted by 143 schools

<sup>b</sup> U.S. citizen or permanent resident

<sup>c</sup> Citizens of a foreign country/permanent residents of a country other than the U.S

In 2018-19, females submitted 63.3% of the applications to pharmacy colleges and schools; males submitted 36.6%; gender unknown/not reported submitted 0.1%. The two largest applicant groups by race/ethnicity were White Americans, submitting 37.4% and Asian Americans representing 28.6% of the total applications. Underrepresented minorities submitted 22.9% of total applications (Black or African American, 13.5%; Hispanic or Latino, 9.2%; Native Hawaiian or Other Pacific Islander, 0.1%; American Indian or Alaska Native, 0.1%). Applications submitted from students that identified as two or more races totaled 3.1 % and 5.5 % of the applications were submitted by foreign, nonpermanent residents [Table 1]. Applications were split between in-state and out of state residents where 49.6 applications came from in-state residents and 50.4 % came from out-of-state residents.

Over 77 % (77.5 %) of the applications to colleges and schools of pharmacy were submitted by individuals who had 3 or more years of postsecondary experience (3 or more years of college/no degree, 36.6 %; baccalaureate, 38.1 %; master’s, 2.4 %; doctoral degree, 0.4 %), [Table 2].

### 2018-19 Degrees Conferred

The 2018-19 Undergraduate and Professional Pharmacy Degrees Conferred and Graduate Pharmacy Degrees Conferred surveys were conducted online in October 2019, with an announcement and request for participation sent to the survey coordinator at each of the 144 colleges and schools of pharmacy in the U.S. recognized by ACPE. Submission of the data was requested by December 2019. After follow-up correspondence, 144 colleges and schools (100 %) submitted the Undergraduate and Professional Degrees Conferred Survey and the Graduate Degrees Conferred Survey.

### Professional Degrees Conferred

Numbers of degrees conferred by U.S. colleges and schools of pharmacy from 1965 to 2019 are presented in Table 3.

### First Professional Degrees Conferred

In 2018-19, 137 colleges and schools of pharmacy reported conferring the Doctor of Pharmacy as a first professional degree (Pharm.D.1). Graduating Pharm.D.1 class sizes ranged from 34 students to 310 students

Table 2. Distribution of 2018-19 Applications to First Professional Degree Programs by Gender and Previous Postsecondary Experience of Applicant<sup>a</sup>

Postsecondary Experience	Male	Female	Gender Not Specified	Total (%)
0 Years of College	2,009	3,829	9	5,847 (11.5)
1-2 Years of College/No Degree	609	1,199	1	1,809 (3.6)
Associate degree	1,413	2,331	2	3,746 (7.4)
3 or More Years of College/No Degree	6,571	11,964	11	18,546 (36.6)
Baccalaureate Degree	7,350	11,939	34	19,323 (38.1)
Master’s Degree	491	701	0	1,192 (2.4)
Doctoral Degree	139	86	0	225 (0.4)

<sup>a</sup> Represents data submitted by 143 schools

Table 3. Number of Pharmacy Degrees Conferred 1965-2019 by Degree and Gender

Year	B.S. Pharmacy <sup>a</sup>						First Professional <sup>c</sup>						Pharm.D.2 <sup>d</sup>						M.S.						Ph.D.				
	Pharm.D.1 <sup>b</sup>			Pharm.D.2 <sup>d</sup>			First Professional <sup>c</sup>			Pharm.D.2 <sup>d</sup>			M.S.			Ph.D.			Ph.D.										
	M	F	U/O	T	U/O	T	M	F	U/O	T	U/O	T	M	F	U/O	T	U/O	T	M	F	U/O	T	U/O	T	M	F	U/O	T	U/O
1965	2,723	454	NA	3,177	162	21	NA	183	2,885	475	NA	3,360	NA	NA	NA	150	26	NA	176	105	3	NA	108						
1966	2,970	500	NA	3,470	161	28	NA	189	3,131	528	NA	3,659	NA	NA	NA	152	38	NA	190	108	15	NA	123						
1967	3,078	493	NA	3,571	136	37	NA	173	3,214	530	NA	3,744	NA	NA	NA	235	32	NA	267	118	8	NA	126						
1968	3,194	572	NA	3,766	183	39	NA	222	3,377	611	NA	3,988	NA	NA	NA	219	44	NA	263	124	10	NA	134						
1969	3,384	695	NA	4,079	178	31	NA	209	3,562	726	NA	4,288	NA	NA	NA	235	42	NA	277	136	9	NA	145						
1970	3,664	853	NA	4,517	192	49	NA	241	3,856	902	NA	4,758	NA	NA	NA	236	54	NA	290	131	10	NA	141						
1971	3,589	935	NA	4,524	160	63	NA	223	3,749	998	NA	4,747	NA	NA	NA	219	56	NA	275	169	8	NA	177						
1972	3,498	1,072	NA	4,570	215	73	NA	288	3,713	1,145	NA	4,858	NA	NA	NA	205	56	NA	261	155	13	NA	168						
1973	3,674	1,259	NA	4,933	184	67	NA	251	3,858	1,326	NA	5,184	99	18	NA	117	273	53	NA	326	172	15	NA	187					
1974	4,104	1,559	NA	5,663	205	89	NA	294	4,309	1,648	NA	5,957	117	23	NA	140	250	70	NA	320	165	19	NA	184					
1975	4,607	1,792	NA	6,399	218	95	NA	313	4,825	1,887	NA	6,712	110	26	NA	136	250	89	NA	339	165	24	NA	189					
1976	4,940	2,165	NA	7,105	250	109	NA	359	5,190	2,274	NA	7,464	88	38	NA	126	301	92	NA	393	163	26	NA	189					
1977	5,108	2,541	NA	7,649	255	107	NA	362	5,363	2,648	NA	8,011	147	42	NA	189	309	90	NA	399	147	19	NA	166					
1978	4,715	2,715	NA	7,430	246	109	NA	355	4,961	2,824	NA	7,785	132	65	NA	197	305	117	NA	422	158	20	NA	178					
1979	4,260	2,835	NA	7,095	278	183	NA	461	4,538	3,018	NA	7,556	139	51	NA	190	301	134	NA	435	125	28	NA	153					
1980	4,154	2,831	NA	6,985	267	180	NA	447	4,421	3,011	NA	7,432	120	60	NA	180	315	150	NA	465	155	34	NA	189					
1981	3,753	3,116	NA	6,869	265	189	NA	454	4,018	3,305	NA	7,323	109	101	NA	210	271	163	NA	434	152	28	NA	180					
1982	3,417	3,031	NA	6,448	217	194	NA	411	3,634	3,225	NA	6,859	119	88	NA	207	293	165	NA	458	146	36	NA	182					
1983	2,994	2,925	NA	5,919	240	215	NA	455	3,234	3,140	NA	6,374	136	135	NA	271	277	149	NA	426	154	54	NA	208					
1984	2,826	2,720	NA	5,546	188	229	NA	417	3,014	2,949	NA	5,963	169	162	NA	331	253	141	NA	394	174	53	NA	227					
1985	2,362	2,785	NA	5,147	281	307	NA	588	2,643	3,092	NA	5,735	121	103	NA	224	210	128	NA	338	175	57	NA	232					
1986	2,370	2,820	NA	5,190	278	332	NA	610	2,648	3,152	NA	5,800	97	113	NA	210	245	170	NA	415	192	68	NA	260					
1987	2,235	2,929	NA	5,164	291	399	NA	690	2,526	3,328	NA	5,854	86	126	NA	212	197	151	NA	348	203	80	NA	283					
1988	2,245	3,126	NA	5,371	322	491	NA	813	2,567	3,617	NA	6,184	74	85	NA	159	194	159	NA	353	188	75	NA	263					
1989	2,313	3,408	NA	5,721	314	525	NA	839	2,627	3,933	NA	6,560	99	123	NA	222	226	165	NA	391	175	112	NA	287					
1990	2,393	3,617	NA	6,010	388	558	NA	946	2,781	4,175	NA	6,956	118	184	NA	302	202	183	NA	385	181	92	NA	273					
1991	2,268	3,659	NA	5,927	436	759	NA	1,195	2,704	4,418	NA	7,122	106	165	NA	271	189	175	NA	364	201	112	NA	313					
1992	2,261	3,636	NA	5,897	436	780	NA	1,216	2,697	4,416	NA	7,113	124	162	NA	286	148	134	NA	282	195	122	NA	317					
1993	2,244	3,787	NA	6,031	460	889	NA	1,349	2,704	4,676	NA	7,380	141	255	NA	396	148	153	NA	301	223	125	NA	348					
1994	2,274	3,871	NA	6,145	435	924	NA	1,359	2,709	4,795	NA	7,504	208	367	NA	575	182	173	NA	355	198	122	NA	320					
1995	2,291	3,927	NA	6,218	553	1,066	NA	1,619	2,844	4,993	NA	7,837	270	434	NA	704	187	205	NA	392	218	132	NA	350					
1996	2,311	3,857	NA	6,168	583	1,252	NA	1,835	2,894	5,109	NA	8,003	264	468	NA	732	217	205	NA	422	186	118	NA	304					
1997	2,212	3,556	NA	5,768	691	1,313	NA	2,004	2,903	4,869	NA	7,772	321	538	NA	859	191	209	NA	400	218	140	NA	358					
1998	1,818	2,950	NA	4,768	830	1,802	NA	2,632	2,648	4,752	NA	7,400	351	663	NA	1,014	197	224	NA	421	238	173	NA	411					
1999	1,528	2,348	NA	3,876	1,081	2,184	NA	3,265	2,609	4,532	NA	7,141	315	598	NA	913	172	212	NA	384	221	138	NA	359					
2000	1,115	1,841	NA	2,956	1,432	2,872	NA	4,304	2,547	4,713	NA	7,260	469	800	NA	1,269	154	200	NA	354	174	149	NA	323					
2001	754	1,160	NA	1,914	1,730	3,356	NA	5,086	2,484	4,516	NA	7,000	367	612	NA	979	182	279	NA	461	211	164	NA	375					
2002	540	875	NA	1,415	2,055	4,103	NA	6,158	2,595	4,978	NA	7,573	276	504	NA	780	178	265	NA	443	216	160	NA	376					

(Continued)

Table 3. (Continued)

Year	B.S. Pharmacy <sup>a</sup>			Pharm.D.1 <sup>b</sup>			First Professional <sup>c</sup>			Pharm.D.2 <sup>d</sup>			M.S.			Ph.D.								
	M	F	U/O	M	F	U/O	T	M	F	U/O	T	M	F	U/O	T	M	F	U/O	T	M	F	U/O	T	
2003	303	536	NA	839	2,333	4,316	NA	6,649	2,636	4,852	NA	7,488	338	557	NA	895	199	273	NA	472	210	174	NA	384
2004	153	235	NA	388	2,568	5,202	NA	7,770	2,721	5,437	NA	8,158	277	479	NA	756	274	377	NA	651	176	159	NA	335
2005	16	10	NA	26	2,618	5,624	NA	8,242	2,634	5,634	NA	8,268	241	427	NA	668	233	393	NA	626	215	214	NA	429
2006	0	0	NA	0	2,875	6,165	NA	9,040	2,875	6,165	NA	9,040	202	313	NA	515	241	403	NA	644	252	190	NA	442
2007	0	0	NA	0	3,171	6,641	NA	9,812	3,171	6,641	NA	9,812	97	373	NA	470	236	368	NA	604	220	192	NA	412
2008	0	0	NA	0	3,575	6,925	NA	10,500	3,575	6,925	NA	10,500	225	402	NA	627	275	457	NA	732	262	206	NA	468
2009	0	0	NA	0	3,912	7,076	NA	10,988	3,912	7,076	NA	10,988	179	349	NA	528	371	396	NA	767	228	230	NA	458
2010	0	0	NA	0	4,287	7,200	NA	11,487	4,287	7,200	NA	11,487	191	336	NA	527	343	430	NA	773	243	207	NA	450
2011	0	0	NA	0	4,553	7,378	NA	11,931	4,553	7,378	NA	11,931	167	248	NA	415	352	470	NA	822	250	221	NA	471
2012	0	0	NA	0	4,937	7,782	NA	12,719	4,937	7,782	NA	12,719	163	281	NA	444	298	383	NA	681	275	222	NA	497
2013	0	0	NA	0	5,063	8,144	NA	13,207	5,063	8,144	NA	13,207	132	212	NA	344	265	390	NA	655	293	296	NA	589
2014	0	0	NA	0	5,483	8,355	NA	13,838	5,483	8,355	NA	13,838	110	229	NA	339	340	435	NA	775	298	267	NA	565
2015	0	0	NA	0	5,369	8,625	NA	13,994	5,369	8,625	NA	13,994	88	185	NA	273	326	394	NA	720	312	249	NA	561
2016	0	0	NA	0	5,635	8,921	NA	14,556	5,635	8,291	NA	14,556	120	206	NA	326	411	612	NA	1,023	297	250	NA	547
2017	0	0	0	0	5,524	8,970	8	14,502	5,524	8,970	8	14,502	63	154	0	217	358	602	2	962	296	241	0	537
2018	0	0	0	0	5,639	9,246	20	14,905	5,639	9,246	20	14,905	62	143	0	205	383	664	0	1,047	306	294	0	600
2019	0	0	0	0	5,526	9,180	94	14,800	5,526	9,180	94	14,800	100	212	0	312	405	720	3	1,128	315	271	14	600

<sup>a</sup> Includes B.Pharm. degree

<sup>b</sup> Pharm.D.1 refers to the doctor of pharmacy degree awarded as the first professional degree

<sup>c</sup> Includes B.S. Pharmacy, B.Pharm., and Pharm.D.1

<sup>d</sup> Pharm.D.2 refers to the doctor of pharmacy degree awarded as a postbaccalaureate degree

U/O: Individuals with unknown/other gender regardless of race/ethnicity

(median, 94.5 students). Seven of the 143 colleges and schools with Pharm.D.1 enrollments did not confer degrees in 2018-19. These schools were new programs whose students had not yet progressed through the entire curriculum (American, Marshall B. Ketchum, William Carey, Binghamton, High Point, Texas at El Paso, and Medical College of WI). Lebanese American reclassified their enrollments beginning in 2018-19 as Pharm.D.2 students; therefore, they are no longer included in these counts.

In 2018-19 there were 14,800 first professional degrees conferred by colleges and schools compared to 14,905 in 2017-18 [Table 4], representing a 0.7 % decrease from the number of degrees conferred the prior year [Table 5].

In 1979-80, men received 59.5 % of the first professional degrees conferred by colleges and schools and women received 40.5 %. Over the past 35 years, these % ages have shifted dramatically where women now receive the majority of first professional Doctor of Pharmacy degrees. In 2018-19 women received 62.0 % of the first professional degrees conferred and 37.3 % were received by men. Individuals with Unknown/Other Gender received 0.6 % of the degrees conferred. Women received the highest %age of degrees conferred in 2005-06 (68.2 %) [Table 6].

White Americans received 49.8 % of first professional degrees conferred in 2018-19. Asian Americans received 25.6 % of the first professional degrees. Nearly 15 % (14.8 %) of graduates in 2018-19 were underrepresented minorities (Black or African American, 8.5 %; Hispanic or Latino, 5.7 %; Native Hawaiian or Other Pacific Islander, 0.3 %; American Indian or Alaska Native, 0.3 %). The %age of first professional degree recipients who were of two or more races was 3.0 % and the %age of recipients who were foreign, nonpermanent residents of the U.S. was 2.6 % [Table 7].

**Doctor of Pharmacy Degrees Conferred to Post Baccalaureate Students**

Seven colleges and schools conferred the Pharm.D. degree to post baccalaureate students in 2018-19. The number of graduates per institution ranged from 8 to 145 students (median, 32 students). The number of Doctor of Pharmacy degrees conferred as postbaccalaureate degrees (Pharm.D.2) increased 52.2 % to 312 in 2018-19 from 205 in 2017-18 [Table 5]. More women than men received Pharm.D.2 degrees in 2018-19 (women, 67.9 %; men, 32.1 %) [Table 6].

White Americans received 29.8 % of Pharm.D.2 degrees conferred in 2018-19. Asian Americans received 18.6 % of the Pharm.D.2 degrees conferred.

Table 4. Baccalaureate and Doctor of Pharmacy (Pharm.D.1) Degrees as Percentages of Total First Professional Degrees Conferred 1981-2019

Year	B.S. Pharmacy <sup>a</sup>	Pharm.D.1 <sup>b</sup>	First Professional <sup>c</sup>
	n (%)	n (%)	n
1981	6,869 (93.8)	454 (6.2)	7,323
1982	6,448 (94.0)	411 (6.0)	6,859
1983	5,919 (92.9)	455 (7.1)	6,374
1984	5,546 (93.0)	417 (7.0)	5,963
1985	5,147 (89.7)	588 (10.3)	5,735
1986	5,190 (89.5)	610 (10.5)	5,800
1987	5,164 (88.2)	690 (11.8)	5,854
1988	5,371 (86.9)	813 (13.1)	6,184
1989	5,721 (87.3)	839 (12.7)	6,560
1990	6,010 (86.4)	946 (13.6)	6,956
1991	5,927 (83.2)	1,195 (16.8)	7,122
1992	5,897 (82.9)	1,216 (17.1)	7,113
1993	6,031 (81.7)	1,349 (18.3)	7,380
1994	6,145 (81.9)	1,359 (18.1)	7,504
1995	6,218 (79.3)	1,619 (20.7)	7,837
1996	6,168 (77.1)	1,835 (22.9)	8,003
1997	5,768 (74.2)	2,004 (25.8)	7,772
1998	4,768 (64.4)	2,632 (35.6)	7,400
1999	3,876 (54.3)	3,265 (45.7)	7,141
2000	2,956 (40.7)	4,304 (59.3)	7,260
2001	1,914 (27.3)	5,086 (72.7)	7,000
2002	1,415 (18.7)	6,158 (81.3)	7,573
2003	839 (11.2)	6,649 (88.8)	7,488
2004	388 (4.8)	7,770 (95.2)	8,158
2005	26 (0.3)	8,242 (99.7)	8,268
2006	0 (0.0)	9,040 (100.0)	9,040
2007	0 (0.0)	9,812 (100.0)	9,812
2008	0 (0.0)	10,500 (100.0)	10,500
2009	0 (0.0)	10,988 (100.0)	10,988
2010	0 (0.0)	11,487 (100.0)	11,487
2011	0 (0.0)	11,931 (100.0)	11,931
2012	0 (0.0)	12,719 (100.0)	12,719
2013	0 (0.0)	13,207 (100.0)	13,207
2014	0 (0.0)	13,838 (100.0)	13,838
2015	0 (0.0)	13,994 (100.0)	13,994
2016	0 (0.0)	14,556 (100.0)	14,556
2017	0 (0.0)	14,502 (100.0)	14,502
2018	0 (0.0)	14,905 (100.0)	14,905
2019	0 (0.0)	14,800 (100.0)	14,800

<sup>a</sup> Includes B.Pharm. degree

<sup>b</sup> Pharm.D.1 refers to the Doctor of Pharmacy degree awarded as the first professional degree

<sup>c</sup> Includes B.S. Pharmacy, B.Pharm., and Pharm.D.1

Underrepresented minorities received 20.8 % of the Pharm.D.2 degrees conferred (Black or African American, 17.9 %; Hispanic or Latino, 2.9 %; Native Hawaiian or Other Pacific Islander, 0.0 %; American Indian or Alaska Native, 0.0 %). Students of two or more races received 1.3 of Pharm.D.2 degrees conferred in 2018-19.

Table 5. Annual Percentage Change in Number of Pharmacy Degrees Conferred 1981-2019 Over Previous Year

Year	First Professional <sup>a</sup>	Pharm.D.2 <sup>b</sup>	M.S.	Ph.D.
	No. (% Change)	No. (% Change)	No. (% Change)	No. (% Change)
1981	7,323 (-1.5)	210 (+16.7)	434 (-6.7)	180 (-4.8)
1982	6,859 (-6.3)	207 (-1.4)	458 (+5.5)	182 (+1.1)
1983	6,374 (-7.1)	271 (+30.9)	426 (-7.0)	208 (+14.3)
1984	5,963 (-6.4)	331 (+22.2)	394 (-7.5)	227 (+9.1)
1985	5,735 (-3.8)	224 (-32.3)	338 (-14.2)	232 (+2.2)
1986	5,800 (+1.1)	210 (-6.3)	415 (+22.8)	260 (+12.1)
1987	5,854 (+0.9)	212 (+1.0)	348 (-16.1)	283 (+8.8)
1988	6,184 (+5.6)	159 (-25.0)	353 (+1.4)	263 (-7.1)
1989	6,560 (+6.0)	222 (+39.6)	391 (+10.8)	287 (+9.1)
1990	6,956 (+6.0)	302 (+36.0)	385 (-1.5)	273 (-4.9)
1991	7,122 (+2.4)	271 (-10.3)	364 (-5.5)	313 (+14.7)
1992	7,113 (-0.1)	286 (+5.5)	282 (-22.5)	317 (+1.3)
1993	7,380 (+3.8)	396 (+38.5)	301 (+6.7)	348 (+9.8)
1994	7,504 (+1.7)	575 (+45.2)	355 (+17.9)	320 (-8.0)
1995	7,837 (+4.4)	704 (+22.4)	392 (+10.4)	350 (+9.4)
1996	8,003 (+2.1)	732 (+4.0)	422 (+7.7)	304 (-13.1)
1997	7,772 (-2.9)	859 (+17.3)	400 (-5.2)	358 (+17.8)
1998	7,400 (-4.8)	1,014 (+18.0)	421 (+5.3)	411 (+14.8)
1999	7,141 (-3.5)	913 (-10.0)	384 (-8.8)	359 (-12.7)
2000	7,260 (+1.7)	1,269 (+39.0)	354 (-7.8)	323 (-10.0)
2001	7,000 (-3.6)	979 (-22.9)	461 (+30.2)	375 (+16.1)
2002	7,573 (+8.2)	780 (-20.3)	443 (-3.9)	376 (+0)
2003	7,488 (-1.1)	895 (+14.7)	472 (+6.5)	384 (+2.1)
2004	8,158 (+8.9)	756 (-15.5)	651 (+37.9)	335 (-12.8)
2005	8,268 (+1.3)	668 (-11.6)	626 (-3.8)	429 (+28.1)
2006	9,040 (+9.3)	515 (-22.9)	644 (+2.9)	442 (+3.0)
2007	9,812 (+8.5)	470 (-8.7)	604 (-6.2)	412 (-6.8)
2008	10,500 (+7.0)	627 (+33.4)	732 (+21.2)	468 (+13.6)
2009	10,988 (+4.6)	528 (-15.8)	767 (+4.8)	458 (-2.1)
2010	11,487 (+4.5)	527 (-0.2)	773 (+0.8)	450 (-1.7)
2011	11,931 (+3.9)	415 (-21.3)	822 (+6.3)	471 (+4.7)
2012	12,719 (+6.6)	444 (+7.0)	681 (-17.2)	497 (+5.5)
2013	13,207 (+3.8)	344 (-22.5)	655 (-3.8)	589 (+18.5)
2014	13,838 (+4.8)	339 (-1.5)	775 (+18.3)	565 (-4.1)
2015	13,994 (+1.1)	273 (-19.5)	720 (-7.1)	561 (-0.7)
2016	14,556 (+4.0)	326 (+19.4)	1,023 (+42.1)	547 (-2.5)
2017	14,502 (-0.4)	217 (-33.4)	962 (-6.0)	537 (-1.8)
2018	14,905 (+2.8)	205 (-5.5)	1,047 (+8.8)	600 (+11.7)
2019	14,800 (-0.7)	312 (+52.2)	1,128 (+7.7)	600 (0.0)

<sup>a</sup> Includes B.S. Pharmacy, B.Pharm., and Pharm.D.1 from 1981-2005. Includes only Pharm.D.1 beginning in 2006

<sup>b</sup> Pharm.D.2 refers to the doctor of pharmacy degree awarded as a postbaccalaureate degree

The %age of Pharm.D.2-degree recipients who were foreign, nonpermanent residents of the U.S. was 14.1 %, down slightly from 14.6 % in 2017-18 [Table 8].

### Graduate Degrees Conferred

The number of graduate degrees (M.S. and Ph.D.) conferred has shown annual fluctuations over the 50 years data have been consistently gathered and reported [Table 3]. The number of M.S. degrees conferred increased to

1,128 in 2018-19 from 1,047 in 2017-18, a 7.7% increase. The number of Ph.D. degrees conferred remained flat at 600 in 2018-19 [Table 5].

The highest percentage of M.S. degrees awarded in 2018-19 (37.9%) was in social and administrative sciences. The second highest percentage of M.S. degrees was in pharmaceuticals (27.7%); followed by medicinal chemistry (16.4%); pharmacology (8.2%); pharmacy practice (8.0%), and other disciplines (1.9%). The highest number

Table 6. Percentage of Pharmacy Degrees Conferred 1980-2019 by Gender

Year	B.S. Pharmacy <sup>a</sup>			Pharm.D.1 <sup>b</sup>			First Professional <sup>c</sup>			Pharm.D.2 <sup>d</sup>			M.S.			Ph.D.		
	M	F	U/O	M	F	U/O	M	F	U/O	M	F	U/O	M	F	U/O	M	F	U/O
1980	59.5	40.5	NA	59.7	40.3	NA	59.5	40.5	NA	66.7	33.3	NA	67.7	32.3	NA	82	18	NA
1981	54.6	45.4	NA	58.4	41.6	NA	54.9	45.1	NA	51.9	48.1	NA	62.4	37.6	NA	84.4	15.6	NA
1982	53	47	NA	52.8	47.2	NA	53	47	NA	57.5	42.5	NA	64	36	NA	80.2	19.8	NA
1983	50.6	49.4	NA	52.7	47.3	NA	50.7	49.3	NA	50.2	49.8	NA	65	35	NA	74	26	NA
1984	51	49	NA	45.1	54.9	NA	50.5	49.5	NA	51.1	48.9	NA	64.2	35.8	NA	76.7	23.3	NA
1985	45.9	54.1	NA	47.8	52.2	NA	46.1	53.9	NA	54	46	NA	62.1	37.9	NA	75.4	24.6	NA
1986	45.7	54.3	NA	45.6	54.4	NA	45.7	54.3	NA	46.2	53.8	NA	59	41	NA	73.8	26.2	NA
1987	43.3	56.7	NA	42.2	57.8	NA	43.1	56.9	NA	40.6	59.4	NA	56.6	43.4	NA	71.7	28.3	NA
1988	41.8	58.2	NA	39.6	60.4	NA	41.5	58.5	NA	46.5	53.5	NA	55	45	NA	71.5	28.5	NA
1989	40.4	59.6	NA	37.4	62.6	NA	40	60	NA	44.6	55.4	NA	57.8	42.2	NA	61	39	NA
1990	39.8	60.2	NA	41	59	NA	40	60	NA	39.1	60.9	NA	52.5	47.5	NA	66.3	33.7	NA
1991	38.3	61.7	NA	36.5	63.5	NA	38	62	NA	39.1	60.9	NA	51.9	48.1	NA	64.2	35.8	NA
1992	38.3	61.7	NA	35.9	64.1	NA	37.9	62.1	NA	43.4	56.6	NA	52.5	47.5	NA	61.5	38.5	NA
1993	37.2	62.8	NA	34.1	65.9	NA	36.6	63.4	NA	35.6	64.4	NA	49.2	50.8	NA	64.1	35.9	NA
1994	37	63	NA	32	68	NA	36.1	63.9	NA	36.2	63.8	NA	51.3	48.7	NA	61.9	38.1	NA
1995	36.8	63.2	NA	34.2	65.8	NA	36.3	63.7	NA	38.4	61.6	NA	47.7	52.3	NA	62.3	37.7	NA
1996	37.5	62.5	NA	31.8	68.2	NA	36.2	63.8	NA	36.1	63.9	NA	51.4	48.6	NA	61.2	38.8	NA
1997	38.4	61.7	NA	34.5	65.5	NA	37.4	62.6	NA	37.4	62.6	NA	47.8	52.2	NA	60.9	39.1	NA
1998	38.1	61.9	NA	31.5	68.5	NA	35.8	64.2	NA	34.6	65.4	NA	46.8	53.2	NA	57.9	42.1	NA
1999	39.4	60.6	NA	33.1	66.9	NA	36.5	63.5	NA	34.5	65.5	NA	44.8	55.2	NA	61.6	38.4	NA
2000	37.7	62.3	NA	33.3	66.7	NA	35.1	64.9	NA	37	63	NA	43.5	56.5	NA	53.9	46.1	NA
2001	39.4	60.6	NA	34	66	NA	35.5	64.5	NA	37.5	62.5	NA	39.5	60.5	NA	56.3	43.7	NA
2002	38.2	61.8	NA	33.4	66.6	NA	34.3	65.7	NA	35.4	64.6	NA	40.2	59.8	NA	57.4	42.6	NA
2003	36.1	63.9	NA	35.1	64.9	NA	35.2	64.8	NA	37.8	62.2	NA	42.2	57.8	NA	54.7	45.3	NA
2004	39.4	60.6	NA	33.1	66.9	NA	33.4	66.6	NA	36.6	63.4	NA	42.1	57.9	NA	52.5	47.5	NA
2005	61.5	38.5	NA	31.8	68.2	NA	31.9	68.1	NA	36.1	63.9	NA	37.2	62.8	NA	50.1	49.9	NA
2006	NA	NA	NA	31.8	68.2	NA	31.8	68.2	NA	39.2	60.8	NA	37.5	62.5	NA	57	43	NA
2007	NA	NA	NA	32.3	67.7	NA	32.3	67.7	NA	20.6	79.4	NA	39.1	60.9	NA	53.4	46.6	NA
2008	NA	NA	NA	34	66	NA	34	66	NA	35.9	64.1	NA	37.6	62.4	NA	56	44	NA
2009	NA	NA	NA	35.6	64.4	NA	35.6	64.4	NA	33.9	66.1	NA	48.4	51.6	NA	49.8	50.2	NA
2010	NA	NA	NA	37.3	62.7	NA	37.3	62.7	NA	36.2	63.8	NA	44.4	55.6	NA	54	46	NA
2011	NA	NA	NA	38.2	61.8	NA	38.2	61.8	NA	40.2	59.8	NA	42.8	57.2	NA	53.1	46.9	NA
2012	NA	NA	NA	38.8	61.2	NA	38.8	61.2	NA	36.7	63.3	NA	43.8	56.2	NA	55.3	44.7	NA
2013	NA	NA	NA	38.3	61.7	NA	38.3	61.7	NA	38.4	61.6	NA	40.5	59.5	NA	49.7	50.3	NA
2014	NA	NA	NA	39.6	60.4	NA	39.6	60.4	NA	32.4	67.6	NA	43.9	56.1	NA	52.7	47.3	NA
2015	NA	NA	NA	38.4	61.6	NA	38.4	61.6	NA	32.2	67.8	NA	45.3	54.7	NA	55.6	44.4	NA
2016	NA	NA	NA	38.7	61.3	NA	38.7	61.3	NA	36.8	63.2	NA	40.2	59.8	NA	54.3	45.7	NA
2017	NA	NA	NA	38.1	61.9	0.1	38.1	61.9	0.1	29	71	0.0	37.2	62.6	0.2	55.1	44.9	0
2018	NA	NA	NA	37.8	62.0	0.1	37.8	62	0.1	30.2	69.8	0.0	36.6	63.4	0	51	49	0
2019	NA	NA	NA	37.3	62.0	0.6	37.3	62.0	0.6	32.1	67.9	0.0	35.9	63.8	0.3	52.5	45.2	2.3

<sup>a</sup> Includes B.Pharm. Degree

<sup>b</sup> Pharm.D.1 refers to the doctor of pharmacy degree awarded as the first professional degree

<sup>c</sup> Includes B.S. Pharmacy, B.Pharm., and Pharm.D.1 from 1981-2005. Includes only Pharm.D.1 beginning in 2006

<sup>d</sup> Pharm.D.2 refers to the doctor of pharmacy degree awarded as a postbaccalaureate degree

U/O: Individuals with unknown/other gender regardless of race/ethnicity

of Ph.D. degrees awarded in 2018-19 was in the discipline of pharmaceuticals (39.3 %). The second highest number was in medicinal chemistry (19.3%); followed by pharmacology (17.2%); pharmacy practice (10.8%), social

and administrative sciences (9.8%); and other disciplines (3.5%) [Table 9].

More women than men earned M.S. degrees (women, 63.8%; men, 35.9%; Unknown/Other Gender 0.3%);

Table 7. Percentage of First Professional Degree (B.S. Pharmacy, B.Pharm., and Pharm.D.1) Recipients 1980-2019 by Race/Ethnicity

Year	White <sup>a</sup>		Black or African American <sup>a</sup>		Hispanic or Latino <sup>a</sup>		Asian <sup>a</sup>		Native Hawaiian or Other Pacific Islander <sup>a</sup>		American Indian or Alaska Native <sup>a</sup>		Two or More Races <sup>a</sup>		Unknown <sup>a</sup>		International/Foreign <sup>b</sup>		Unknown/Other Gender	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1980	6,335 (85.2)	249 (3.4)	277 (3.7)	292 (3.9)	NA	NA	8 (0.1)	NA	49 (0.7)	222 (3.0)	NA	NA	49 (0.7)	222 (3.0)	NA	NA				
1981	6,205 (84.7)	230 (3.1)	361 (4.9)	288 (3.9)	NA	NA	5 (0.1)	NA	7 (0.1)	227 (3.1)	NA	NA	7 (0.1)	227 (3.1)	NA	NA				
1982	5,810 (84.7)	250 (3.6)	241 (3.5)	317 (4.6)	NA	NA	13 (0.2)	NA	18 (0.3)	210 (3.1)	NA	NA	18 (0.3)	210 (3.1)	NA	NA				
1983	5,189 (81.4)	241 (3.8)	261 (4.1)	316 (5.0)	NA	NA	8 (0.1)	NA	93 (1.5)	266 (4.2)	NA	NA	93 (1.5)	266 (4.2)	NA	NA				
1984	4,676 (78.4)	242 (4.1)	217 (3.6)	339 (5.7)	NA	NA	10 (0.2)	NA	174 (2.9)	305 (5.1)	NA	NA	174 (2.9)	305 (5.1)	NA	NA				
1985	4,591 (80.1)	250 (4.4)	245 (4.3)	320 (5.6)	NA	NA	6 (0.1)	NA	8 (0.1)	315 (5.5)	NA	NA	8 (0.1)	315 (5.5)	NA	NA				
1986	4,534 (78.2)	306 (5.3)	217 (3.7)	333 (5.7)	NA	NA	11 (0.2)	NA	0 (0.0)	399 (6.9)	NA	NA	0 (0.0)	399 (6.9)	NA	NA				
1987	4,559 (77.9)	298 (5.1)	258 (4.4)	371 (6.3)	NA	NA	8 (0.1)	NA	15 (0.3)	345 (5.9)	NA	NA	15 (0.3)	345 (5.9)	NA	NA				
1988	4,943 (79.9)	282 (4.6)	248 (4.0)	335 (5.4)	NA	NA	12 (0.2)	NA	27 (0.4)	337 (5.4)	NA	NA	27 (0.4)	337 (5.4)	NA	NA				
1989	5,040 (76.8)	310 (4.7)	249 (3.8)	454 (6.9)	NA	NA	12 (0.2)	NA	90 (1.4)	405 (6.2)	NA	NA	90 (1.4)	405 (6.2)	NA	NA				
1990	5,303 (76.2)	368 (5.3)	254 (3.7)	586 (8.4)	NA	NA	11 (0.2)	NA	88 (1.3)	346 (5.0)	NA	NA	88 (1.3)	346 (5.0)	NA	NA				
1991	5,381 (75.6)	350 (4.9)	288 (4.1)	745 (10.5)	NA	NA	20 (0.3)	NA	58 (0.8)	280 (3.9)	NA	NA	58 (0.8)	280 (3.9)	NA	NA				
1992	5,304 (74.6)	381 (5.4)	289 (4.1)	771 (10.8)	NA	NA	20 (0.3)	NA	40 (0.6)	308 (4.3)	NA	NA	40 (0.6)	308 (4.3)	NA	NA				
1993	5,346 (72.4)	452 (6.1)	260 (3.5)	873 (11.8)	NA	NA	19 (0.3)	NA	124 (1.7)	306 (4.1)	NA	NA	124 (1.7)	306 (4.1)	NA	NA				
1994	5,476 (73.0)	385 (5.1)	269 (3.6)	972 (13.0)	NA	NA	23 (0.3)	NA	122 (1.6)	257 (3.4)	NA	NA	122 (1.6)	257 (3.4)	NA	NA				
1995	5,584 (71.3)	445 (5.7)	282 (3.6)	1,161 (14.8)	NA	NA	28 (0.4)	NA	48 (0.6)	289 (3.7)	NA	NA	48 (0.6)	289 (3.7)	NA	NA				
1996	5,527 (69.1)	528 (6.6)	266 (3.3)	1,328 (16.6)	NA	NA	25 (0.3)	NA	56 (0.7)	273 (3.4)	NA	NA	56 (0.7)	273 (3.4)	NA	NA				
1997	5,364 (69.0)	446 (5.7)	282 (3.6)	1,363 (17.5)	NA	NA	34 (0.4)	NA	45 (0.6)	238 (3.1)	NA	NA	45 (0.6)	238 (3.1)	NA	NA				
1998	5,041 (68.1)	444 (6.0)	264 (3.6)	1,404 (19.0)	NA	NA	26 (0.4)	NA	58 (0.8)	163 (2.2)	NA	NA	58 (0.8)	163 (2.2)	NA	NA				
1999	4,597 (64.4)	401 (5.6)	266 (3.7)	1,327 (18.6)	NA	NA	36 (0.5)	NA	366 (5.1)	148 (2.1)	NA	NA	366 (5.1)	148 (2.1)	NA	NA				
2000	4,517 (62.2)	480 (6.6)	287 (4.0)	1,505 (20.7)	NA	NA	44 (0.6)	NA	223 (3.1)	204 (2.8)	NA	NA	223 (3.1)	204 (2.8)	NA	NA				
2001	4,469 (63.8)	428 (6.1)	253 (3.6)	1,456 (20.8)	NA	NA	26 (0.4)	NA	194 (2.8)	174 (2.5)	NA	NA	194 (2.8)	174 (2.5)	NA	NA				
2002	4,648 (61.4)	575 (7.6)	303 (4.0)	1,625 (21.5)	NA	NA	47 (0.6)	NA	198 (2.6)	177 (2.3)	NA	NA	198 (2.6)	177 (2.3)	NA	NA				
2003	4,473 (59.7)	591 (7.9)	310 (4.1)	1,691 (22.6)	NA	NA	38 (0.5)	NA	182 (2.4)	203 (2.7)	NA	NA	182 (2.4)	203 (2.7)	NA	NA				
2004	4,954 (60.7)	612 (7.5)	295 (3.6)	1,857 (22.8)	NA	NA	32 (0.4)	NA	190 (2.3)	218 (2.7)	NA	NA	190 (2.3)	218 (2.7)	NA	NA				
2005	5,031 (60.8)	720 (8.7)	361 (4.4)	1,683 (20.4)	NA	NA	52 (0.6)	NA	226 (2.7)	195 (2.4)	NA	NA	226 (2.7)	195 (2.4)	NA	NA				
2006 <sup>c</sup>	5,650 (62.5)	668 (7.4)	377 (4.2)	1,822 (20.2)	NA	NA	39 (0.4)	NA	265 (2.9)	219 (2.4)	NA	NA	265 (2.9)	219 (2.4)	NA	NA				
2007	6,182 (63.0)	682 (7.0)	386 (3.9)	1,970 (20.1)	NA	NA	53 (0.5)	NA	337 (3.4)	202 (2.1)	NA	NA	337 (3.4)	202 (2.1)	NA	NA				
2008	6,560 (62.5)	702 (6.7)	407 (3.9)	2,106 (20.1)	NA	NA	61 (0.6)	NA	424 (4.0)	240 (2.3)	NA	NA	424 (4.0)	240 (2.3)	NA	NA				
2009	6,660 (60.6)	688 (6.3)	454 (4.1)	2,333 (21.2)	NA	NA	64 (0.6)	NA	497 (4.5)	292 (2.7)	NA	NA	497 (4.5)	292 (2.7)	NA	NA				
2010	6,880 (59.9)	744 (6.5)	489 (4.3)	2,463 (21.4)	NA	NA	50 (0.4)	NA	602 (5.2)	259 (2.3)	NA	NA	602 (5.2)	259 (2.3)	NA	NA				
2011	7,136 (59.8)	763 (6.4)	512 (4.3)	2,570 (21.5)	43 (0.4)	43 (0.4)	42 (0.4)	37 (0.3)	520 (4.4)	308 (2.6)	NA	NA	520 (4.4)	308 (2.6)	NA	NA				
2012	7,396 (58.1)	832 (6.5)	532 (4.2)	2,784 (21.9)	198 (1.6)	198 (1.6)	61 (0.5)	98 (0.8)	537 (4.2)	281 (2.2)	NA	NA	537 (4.2)	281 (2.2)	NA	NA				
2013	7,479 (56.6)	916 (6.9)	563 (4.3)	3,024 (22.9)	45 (0.3)	45 (0.3)	52 (0.4)	91 (0.7)	744 (5.6)	293 (2.2)	NA	NA	744 (5.6)	293 (2.2)	NA	NA				
2014	7,564 (54.7)	942 (6.8)	602 (4.4)	3,335 (24.1)	30 (0.2)	30 (0.2)	44 (0.3)	174 (1.3)	844 (6.1)	303 (2.2)	NA	NA	844 (6.1)	303 (2.2)	NA	NA				
2015	7,653 (54.7)	961 (6.9)	578 (4.1)	3,437 (24.6)	44 (0.3)	44 (0.3)	63 (0.5)	248 (1.8)	605 (4.3)	405 (2.9)	NA	NA	605 (4.3)	405 (2.9)	NA	NA				
2016	7,746 (53.2)	1,057 (7.3)	643 (4.4)	3,586 (24.6)	32 (0.2)	32 (0.2)	48 (0.3)	324 (2.2)	725 (5.0)	395 (2.7)	NA	NA	725 (5.0)	395 (2.7)	NA	NA				
2017	7,717 (53.2)	1,128 (7.8)	735 (5.1)	3,630 (25.0)	39 (0.3)	39 (0.3)	40 (0.3)	258 (1.8)	597 (4.1)	350 (2.4)	8 (0.1)	8 (0.1)	597 (4.1)	350 (2.4)	8 (0.1)	8 (0.1)				
2018	7,546 (50.6)	1,234 (8.3)	805 (5.4)	3,845 (25.8)	33 (0.2)	33 (0.2)	36 (0.2)	359 (2.4)	631 (4.2)	396 (2.7)	20 (0.1)	20 (0.1)	631 (4.2)	396 (2.7)	20 (0.1)	20 (0.1)				
2019	7,370 (49.8)	1,251 (8.5)	847 (5.7)	3,796 (25.6)	50 (0.3)	50 (0.3)	42 (0.3)	444 (3.0)	518 (3.5)	388 (2.6)	94 (0.6)	94 (0.6)	518 (3.5)	388 (2.6)	94 (0.6)	94 (0.6)				

<sup>a</sup> U.S. citizen or permanent resident

<sup>b</sup> Citizens of a foreign country/permanent residents of a country other than the U.S

<sup>c</sup> Includes only Pharm.D.1 degrees from 2006 onward

NA: Not available



Table 8. Percentage of Postbaccalaureate Doctor of Pharmacy Degree (Pharm.D.2) Recipients 1980-2019 by Race/Ethnicity

Year	White <sup>a</sup>		Black or African American <sup>a</sup>		Hispanic or Latino <sup>a</sup>		Asian <sup>a</sup>		Native Hawaiian or Other Pacific Islander <sup>a</sup>		American Indian or Alaska Native <sup>a</sup>		Two or More Races <sup>a</sup>		Unknown <sup>a</sup>		International/Foreign <sup>b</sup>		Unknown/Other Gender	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1980	161 (89.4)	4 (2.2)	2 (1.1)	3 (1.7)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	10 (5.6)	NA	NA	NA	NA	NA
1981	171 (81.4)	7 (3.3)	9 (4.3)	5 (2.4)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	1 (0.5)	17 (8.1)	NA	NA	NA	NA	NA
1982	172 (83.1)	6 (2.9)	3 (1.4)	9 (4.3)	NA	NA	1 (0.5)	1 (0.5)	NA	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	16 (7.7)	NA	NA	NA	NA	NA
1983	217 (80.1)	23 (8.5)	7 (2.6)	9 (3.3)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	15 (5.5)	NA	NA	NA	NA	NA
1984	268 (81.0)	10 (3.0)	5 (1.5)	8 (2.4)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	4 (1.2)	36 (10.9)	NA	NA	NA	NA	NA
1985	174 (77.7)	13 (5.8)	2 (0.9)	7 (3.1)	NA	NA	1 (0.4)	1 (0.4)	NA	0 (0.0)	NA	0 (0.0)	NA	6 (2.7)	21 (9.4)	NA	NA	NA	NA	NA
1986	154 (73.3)	15 (7.1)	6 (2.9)	6 (2.9)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	29 (13.8)	NA	NA	NA	NA	NA
1987	170 (80.2)	5 (2.4)	7 (3.3)	6 (2.8)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	4 (1.9)	20 (9.4)	NA	NA	NA	NA	NA
1988	124 (78.0)	5 (3.1)	1 (0.6)	3 (1.9)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	26 (16.4)	NA	NA	NA	NA	NA
1989	171 (77.0)	9 (4.1)	3 (1.4)	14 (6.3)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	25 (11.3)	NA	NA	NA	NA	NA
1990	244 (80.8)	13 (4.3)	10 (3.3)	10 (3.3)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	4 (1.3)	21 (7.0)	NA	NA	NA	NA	NA
1991	217 (80.1)	11 (4.1)	4 (1.5)	11 (4.1)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	2 (0.7)	26 (9.6)	NA	NA	NA	NA	NA
1992	232 (81.1)	15 (5.2)	2 (0.7)	6 (2.1)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	1 (0.3)	30 (10.5)	NA	NA	NA	NA	NA
1993	308 (77.8)	17 (4.3)	9 (2.3)	16 (4.0)	NA	NA	2 (0.5)	2 (0.5)	NA	0 (0.0)	NA	0 (0.0)	NA	6 (1.5)	38 (9.6)	NA	NA	NA	NA	NA
1994	462 (80.3)	26 (4.5)	12 (2.1)	33 (5.7)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	1 (0.2)	41 (7.1)	NA	NA	NA	NA	NA
1995	573 (81.4)	38 (5.4)	10 (1.4)	47 (6.7)	NA	NA	2 (0.3)	2 (0.3)	NA	0 (0.0)	NA	0 (0.0)	NA	2 (0.3)	32 (4.5)	NA	NA	NA	NA	NA
1996	589 (80.5)	34 (4.6)	11 (1.5)	55 (7.5)	NA	NA	1 (0.1)	1 (0.1)	NA	0 (0.0)	NA	0 (0.0)	NA	6 (0.8)	36 (4.9)	NA	NA	NA	NA	NA
1997	674 (78.5)	59 (6.9)	5 (0.6)	64 (7.5)	NA	NA	3 (0.4)	3 (0.4)	NA	0 (0.0)	NA	0 (0.0)	NA	12 (1.4)	42 (4.9)	NA	NA	NA	NA	NA
1998	786 (77.5)	41 (4.0)	12 (1.2)	125 (12.3)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	6 (0.6)	44 (4.3)	NA	NA	NA	NA	NA
1999	627 (68.7)	59 (6.5)	35 (3.8)	108 (11.8)	NA	NA	7 (0.8)	7 (0.8)	NA	0 (0.0)	NA	0 (0.0)	NA	53 (5.8)	24 (2.6)	NA	NA	NA	NA	NA
2000	897 (70.7)	67 (5.3)	54 (4.3)	175 (13.8)	NA	NA	10 (0.8)	10 (0.8)	NA	0 (0.0)	NA	0 (0.0)	NA	31 (2.4)	35 (2.8)	NA	NA	NA	NA	NA
2001	690 (70.0)	62 (6.3)	23 (2.3)	153 (15.6)	NA	NA	9 (0.9)	9 (0.9)	NA	0 (0.0)	NA	0 (0.0)	NA	20 (2.0)	22 (2.2)	NA	NA	NA	NA	NA
2002	533 (68.3)	43 (5.5)	29 (3.7)	125 (16.0)	NA	NA	4 (0.5)	4 (0.5)	NA	0 (0.0)	NA	0 (0.0)	NA	31 (4.0)	15 (1.9)	NA	NA	NA	NA	NA
2003	567 (63.4)	57 (6.4)	34 (3.8)	149 (16.6)	NA	NA	4 (0.4)	4 (0.4)	NA	0 (0.0)	NA	0 (0.0)	NA	60 (6.7)	24 (2.7)	NA	NA	NA	NA	NA
2004	472 (62.4)	80 (10.6)	43 (5.7)	89 (11.8)	NA	NA	4 (0.5)	4 (0.5)	NA	0 (0.0)	NA	0 (0.0)	NA	30 (4.0)	38 (5.0)	NA	NA	NA	NA	NA
2005	351 (52.5)	55 (8.2)	53 (7.9)	86 (12.9)	NA	NA	3 (0.4)	3 (0.4)	NA	0 (0.0)	NA	0 (0.0)	NA	84 (12.6)	36 (5.4)	NA	NA	NA	NA	NA
2006	284 (55.1)	42 (8.2)	29 (5.6)	68 (13.2)	NA	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	NA	54 (10.5)	38 (7.4)	NA	NA	NA	NA	NA
2007	187 (39.8)	97 (20.6)	47 (10.0)	72 (15.3)	NA	NA	3 (0.6)	3 (0.6)	NA	0 (0.0)	NA	0 (0.0)	NA	32 (6.8)	32 (6.8)	NA	NA	NA	NA	NA
2008	344 (54.9)	61 (9.7)	22 (3.5)	103 (16.4)	NA	NA	1 (0.2)	1 (0.2)	NA	0 (0.0)	NA	0 (0.0)	NA	36 (5.7)	60 (9.6)	NA	NA	NA	NA	NA
2009	254 (48.1)	46 (8.7)	23 (4.4)	97 (18.4)	NA	NA	2 (0.4)	2 (0.4)	NA	0 (0.0)	NA	0 (0.0)	NA	35 (6.6)	71 (13.4)	NA	NA	NA	NA	NA
2010	193 (36.6)	53 (10.1)	33 (6.3)	91 (17.3)	NA	NA	2 (0.4)	2 (0.4)	NA	0 (0.0)	NA	0 (0.0)	NA	65 (12.3)	90 (17.1)	NA	NA	NA	NA	NA
2011	162 (39.0)	47 (11.3)	32 (7.7)	79 (19.0)	4 (1.0)	4 (1.0)	1 (0.2)	1 (0.2)	NA	0 (0.0)	NA	0 (0.0)	0 (0.0)	24 (5.8)	66 (15.9)	NA	NA	NA	NA	NA
2012	182 (41.0)	46 (10.4)	26 (5.9)	96 (21.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	0 (0.0)	42 (9.5)	52 (11.7)	NA	NA	NA	NA	NA
2013	139 (40.4)	36 (10.5)	14 (4.1)	66 (19.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	0 (0.0)	21 (6.1)	68 (19.8)	NA	NA	NA	NA	NA
2014	121 (35.7)	52 (15.3)	17 (5.0)	79 (23.3)	0 (0.0)	0 (0.0)	2 (0.6)	2 (0.6)	NA	0 (0.0)	NA	0 (0.0)	1 (0.3)	33 (9.7)	34 (10.0)	NA	NA	NA	NA	NA
2015	86 (31.5)	29 (10.6)	9 (3.3)	50 (18.3)	0 (0.0)	0 (0.0)	1 (0.4)	1 (0.4)	NA	0 (0.0)	NA	0 (0.0)	0 (0.0)	49 (17.9)	49 (17.9)	NA	NA	NA	NA	NA
2016	93 (28.5)	58 (17.8)	8 (2.5)	63 (19.3)	3 (0.9)	3 (0.9)	1 (0.3)	1 (0.3)	NA	0 (0.0)	NA	0 (0.0)	0 (0.0)	49 (15.0)	51 (15.6)	NA	NA	NA	NA	NA
2017	57 (26.3)	32 (14.7)	5 (2.3)	47 (21.7)	0 (0.0)	0 (0.0)	1 (0.5)	1 (0.5)	NA	0 (0.0)	NA	0 (0.0)	0 (0.0)	42 (19.4)	33 (15.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2018	51 (24.9)	28 (13.7)	4 (2.0)	45 (22.0)	0 (0.0)	0 (0.0)	1 (0.5)	1 (0.5)	NA	0 (0.0)	NA	0 (0.0)	2 (1.0)	44 (21.5)	30 (14.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2019	93 (29.8)	56 (17.9)	9 (2.9)	58 (18.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	0 (0.0)	NA	0 (0.0)	4 (1.3)	48 (15.4)	44 (14.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

<sup>a</sup> U.S. citizen or permanent resident

<sup>b</sup> Citizens of a foreign country/permanent residents of a country other than the U.S

NA: Not available

Table 9. Summary of Master of Science and Doctor of Philosophy Degrees Conferred 2018-19 by Gender and Discipline

Discipline	M.S.					Ph.D.				
	Male	Female	U/O	Total	Percent of M.S.	Male	Female	U/O	Total	Percent of Ph.D.
					Degrees Conferred					Degrees Conferred
Medicinal Chemistry	58	127	0	185	16.4	61	55	0	116	19.3
Pharmacology	36	57	1	93	8.2	52	50	1	103	17.2
Social and Administrative Sciences	150	274	3	427	37.9	31	28	0	59	9.8
Pharmacy Practice	31	59	0	90	8.0	32	33	0	65	10.8
Pharmaceutics	119	193	0	312	27.7	123	100	13	236	39.3
Other <sup>a</sup>	11	10	0	21	1.9	16	5	0	21	3.5
Total	405	720	0	1,128		315	271	14	600	

<sup>a</sup> Includes biological & medical information, chemistry, pharmacogenomics, biomolecular sciences, public health, and pharmacotherapy in M.S. programs and biological & medical informatics, chemistry, biomolecular sciences, and pharmacotherapy in Ph.D. programs

however, more men than women earned Ph.D. degrees (women, 45.2%; men, 52.5%) in 2018-19. There have only been two years (2012-13 and 2008-09) since AACP began collecting data that women received more Ph.D. degrees than men. The percentage of women receiving Ph.D. degrees has grown substantially to almost half of Ph.D. degrees from only 18.0% in 1979-80 [Table 6].

Underrepresented minorities received 11.3% of M.S. degrees in 2018-19 (Black or African American, 5.9%; Hispanic or Latino, 5.0%; Native Hawaiian or Other Pacific Islander, 0.1%; American Indian or Alaska Native, 0.4%), slightly up from 11.1% in 2017-18. Asian Americans received 12.1% of the M.S. degrees conferred, an increase from 10.9% in 2017-18. The percentage of M.S. degree recipients who were of two or more races was 1.4% and the percent of degree recipients who were foreign, nonpermanent residents of the U.S. was 33.2%, down from 38.9% in 2017-18 [Table 11].

Underrepresented minorities earned 6.0% of the Ph.D. degrees awarded in 2018-19 (Black or African American, 2.8%; Hispanic or Latino, 2.3%; Native Hawaiian or Other Pacific Islander, 0.0%; American Indian or Alaska Native, 0.8%), an increase from 4.8% in 2017-18. Asian Americans earned 10.8% of the Ph.D. degrees awarded. The percentage of Ph.D. degree recipients who were of two or more races was 0.8% and the percentage of degree recipients that were foreign, nonpermanent residents of the U.S. was 49.5, a decrease from 57.2% in 2017-18 [Table 12].

### Fall 2019 Enrollments

The 2019 Undergraduate and Professional Pharmacy Degree Enrollment Survey and Graduate Degree Enrollment Survey were conducted online in October 2019,

with an announcement and request for participation sent to the survey coordinator at each of the 144 colleges and schools of pharmacy in the U.S. recognized by ACPE. Submission of the data was requested by December 2019. After follow-up correspondence, 144 colleges and schools (100 %) submitted the requested information.

### Professional Degree Programs

Fall 2019 enrollments in Pharm.D. as the first professional degree programs (n=60,594) represented a 3.1% decrease from enrollments in fall 2018 (n=62,504) [Table 13]. In fall 2019, 63.6% of the students enrolled in the Pharm.D. as the first professional degree programs were females and 35.9% were males [Table 14].

White Americans nearly comprised the majority (48.1%) of students enrolled in the Pharm.D. as the first professional degree programs. Asian Americans accounted for 24.0%; Black or African Americans, 9.3%; Hispanic or Latino, 7.2%; Native Hawaiians/Other Pacific Islanders 0.2%; American Indians/Alaska Natives, 0.4%; and international/foreign students, 3.1%. Students whose race/ethnicity was unknown accounted for 4.2% of enrollees and students that identified as two or more races accounted for 3.1% of all first professional degree enrollments. Students whose race/ethnicity and gender were unknown accounted for 0.5% of enrollments. Enrollments of underrepresented minorities (Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native) as a percentage of total enrollments in the Pharm.D. as a first professional degree programs increased to 17.0% in fall 2019 from 16.2% in fall 2018 [Table 15].

Eight colleges and schools reported 622 students who already held a baccalaureate in pharmacy enrolled in full-time and non-traditional Doctor of Pharmacy degree



Table 11. Percentage of Master of Science (M.S.) Degree Recipients 1990-2019 by Race/Ethnicity

Year	White <sup>a</sup>		Black or African American <sup>a</sup>		Hispanic or Latino <sup>a</sup>		Asian <sup>a</sup>		Native Hawaiian or Other Pacific Islander <sup>a</sup>		American Indian or Alaska Native <sup>a</sup>		Two or More Races <sup>a</sup>		Unknown <sup>a</sup>		International/Foreign <sup>b</sup>		Unknown/Other Gender	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1980	299 (64.3)	10 (2.2)	3 (0.6)	27 (5.8)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	41 (8.8)	85 (18.3)	NA	NA	NA	NA
1981	305 (70.3)	17 (3.9)	2 (0.5)	14 (3.2)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	1 (0.2)	95 (21.9)	NA	NA	NA	NA
1982	282 (61.6)	5 (1.1)	6 (1.3)	6 (1.3)	NA	NA	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	NA	NA	27 (5.9)	131 (28.6)	NA	NA	NA	NA
1983	282 (66.2)	2 (0.5)	4 (0.9)	10 (2.3)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	40 (9.4)	88 (20.7)	NA	NA	NA	NA
1984	254 (64.5)	8 (2.0)	4 (1.0)	16 (4.1)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	21 (5.3)	91 (23.1)	NA	NA	NA	NA
1985	215 (63.6)	10 (3.0)	3 (0.9)	11 (3.3)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	1 (0.3)	98 (29.0)	NA	NA	NA	NA
1986	282 (68.0)	6 (1.4)	8 (1.9)	7 (1.7)	NA	NA	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	NA	NA	0 (0.0)	111 (26.7)	NA	NA	NA	NA
1987	231 (66.4)	6 (1.7)	4 (1.1)	11 (3.2)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	14 (4.0)	82 (23.6)	NA	NA	NA	NA
1988	227 (64.3)	12 (3.4)	4 (1.1)	9 (2.5)	NA	NA	2 (0.6)	2 (0.6)	2 (0.6)	2 (0.6)	2 (0.6)	2 (0.6)	NA	NA	2 (0.6)	97 (27.5)	NA	NA	NA	NA
1989	234 (59.8)	8 (2.0)	7 (1.8)	16 (4.1)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	2 (0.5)	124 (31.7)	NA	NA	NA	NA
1990	209 (54.3)	12 (3.1)	11 (2.9)	28 (7.3)	NA	NA	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	NA	NA	8 (2.1)	116 (30.1)	NA	NA	NA	NA
1991	218 (59.9)	13 (3.6)	7 (1.9)	27 (7.4)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	2 (0.5)	97 (26.6)	NA	NA	NA	NA
1992	140 (49.6)	14 (5.0)	9 (3.2)	14 (5.0)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	5 (1.8)	100 (35.5)	NA	NA	NA	NA
1993	149 (49.5)	9 (3.0)	20 (6.6)	13 (4.3)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	5 (1.7)	105 (34.9)	NA	NA	NA	NA
1994	169 (47.6)	8 (2.3)	13 (3.7)	19 (5.4)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	5 (1.4)	141 (39.7)	NA	NA	NA	NA
1995	206 (52.6)	16 (4.1)	16 (4.1)	32 (8.2)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	1 (0.3)	121 (30.9)	NA	NA	NA	NA
1996	236 (55.9)	12 (2.8)	16 (3.8)	23 (5.5)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	8 (1.9)	127 (30.1)	NA	NA	NA	NA
1997	194 (48.5)	18 (4.5)	17 (4.3)	36 (9.0)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	5 (1.3)	130 (32.5)	NA	NA	NA	NA
1998	213 (50.6)	14 (3.3)	19 (4.5)	38 (9.0)	NA	NA	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	NA	NA	13 (3.1)	123 (29.2)	NA	NA	NA	NA
1999	173 (45.1)	20 (5.2)	8 (2.1)	31 (8.1)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	19 (4.9)	133 (34.6)	NA	NA	NA	NA
2000	172 (48.6)	13 (3.7)	13 (3.7)	36 (10.2)	NA	NA	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	NA	NA	2 (0.6)	117 (33.1)	NA	NA	NA	NA
2001	214 (46.4)	26 (5.6)	18 (3.9)	46 (10.0)	NA	NA	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	NA	NA	12 (2.6)	144 (31.2)	NA	NA	NA	NA
2002	181 (40.9)	17 (3.8)	16 (3.6)	43 (9.7)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	15 (3.4)	171 (38.6)	NA	NA	NA	NA
2003	206 (43.6)	35 (7.4)	11 (2.3)	68 (14.4)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	16 (3.4)	136 (28.8)	NA	NA	NA	NA
2004	280 (43.0)	51 (7.8)	26 (4.0)	89 (13.7)	NA	NA	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	1 (0.2)	NA	NA	39 (6.0)	165 (25.3)	NA	NA	NA	NA
2005	270 (43.1)	42 (6.7)	19 (3.0)	80 (12.8)	NA	NA	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	NA	NA	69 (11.0)	144 (23.0)	NA	NA	NA	NA
2006	274 (42.5)	52 (8.1)	28 (4.3)	49 (7.6)	NA	NA	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	NA	NA	57 (8.9)	182 (28.3)	NA	NA	NA	NA
2007	278 (46.0)	49 (8.1)	12 (2.0)	84 (13.9)	NA	NA	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	2 (0.3)	NA	NA	51 (8.4)	128 (21.2)	NA	NA	NA	NA
2008	318 (43.4)	35 (4.8)	33 (4.5)	75 (10.2)	NA	NA	1 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	NA	NA	64 (8.7)	206 (28.1)	NA	NA	NA	NA
2009	186 (24.3)	30 (3.9)	11 (1.4)	85 (11.1)	NA	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	75 (9.8)	380 (49.5)	NA	NA	NA	NA
2010	222 (28.7)	22 (2.8)	22 (2.8)	78 (10.1)	NA	NA	1 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)	NA	NA	73 (9.4)	355 (45.9)	NA	NA	NA	NA
2011	235 (28.6)	38 (4.6)	16 (1.9)	78 (9.5)	2 (0.2)	2 (0.2)	2 (0.2)	2 (0.2)	2 (0.2)	2 (0.2)	2 (0.2)	2 (0.2)	NA	NA	66 (8.0)	384 (46.7)	NA	NA	NA	NA
2012	217 (31.9)	24 (3.5)	15 (2.2)	81 (11.9)	1 (0.1)	1 (0.1)	4 (0.6)	4 (0.6)	4 (0.6)	4 (0.6)	4 (0.6)	4 (0.6)	NA	NA	27 (4.0)	309 (45.4)	NA	NA	NA	NA
2013	183 (27.9)	24 (3.7)	15 (2.3)	72 (11.0)	1 (0.2)	1 (0.2)	3 (0.5)	3 (0.5)	3 (0.5)	3 (0.5)	3 (0.5)	3 (0.5)	NA	NA	31 (4.7)	319 (48.7)	NA	NA	NA	NA
2014	204 (26.3)	38 (4.9)	15 (1.9)	75 (9.7)	3 (0.4)	3 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	49 (6.3)	386 (49.8)	NA	NA	NA	NA
2015	207 (28.8)	28 (3.9)	20 (2.8)	84 (11.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	NA	22 (3.1)	351 (48.8)	NA	NA	NA	NA
2016	369 (36.1)	68 (6.6)	51 (5.0)	109 (10.7)	4 (0.4)	4 (0.4)	3 (0.3)	3 (0.3)	3 (0.3)	3 (0.3)	3 (0.3)	3 (0.3)	NA	NA	42 (4.1)	361 (35.3)	NA	NA	NA	NA
2017	388 (40.3)	59 (6.1)	39 (4.1)	129 (13.4)	6 (0.6)	6 (0.6)	4 (0.4)	4 (0.4)	4 (0.4)	4 (0.4)	4 (0.4)	4 (0.4)	NA	NA	32 (3.3)	291 (30.2)	NA	NA	2 (0.2)	2 (0.2)
2018	360 (34.4)	60 (5.7)	49 (4.7)	114 (10.9)	2 (0.2)	2 (0.2)	5 (0.5)	5 (0.5)	5 (0.5)	5 (0.5)	5 (0.5)	5 (0.5)	NA	NA	39 (3.7)	407 (38.9)	NA	NA	0 (0.0)	0 (0.0)
2019	422 (37.4)	66 (5.9)	56 (5.0)	136 (12.1)	1 (0.1)	1 (0.1)	4 (0.4)	4 (0.4)	4 (0.4)	4 (0.4)	4 (0.4)	4 (0.4)	NA	NA	49 (4.3)	375 (33.2)	NA	NA	3 (0.3)	3 (0.3)

<sup>a</sup> U.S citizen or permanent resident

<sup>b</sup> Citizen of a foreign country/permanent residents of a country other than the U.S

NA: Not available

Table 12. Percentage of Doctor of Philosophy Degree (Ph.D.) Recipients 1980–2019 by Race/Ethnicity

Year	White <sup>a</sup>		Black or African American <sup>a</sup>		Hispanic or Latino <sup>a</sup>		Asian <sup>a</sup>		Native Hawaiian or Other Pacific Islander <sup>a</sup>		American Indian or Alaska Native <sup>a</sup>		Two or More Races <sup>a</sup>		International/Foreign <sup>b</sup>		Unknown/Other Gender	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1980	112 (59.3)	3 (1.6)	1 (0.5)	12 (6.3)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	3 (1.6)	58 (30.7)	NA	NA	
1981	133 (73.9)	1 (0.6)	1 (0.6)	8 (4.4)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	0 (0.0)	37 (20.6)	NA	NA	
1982	126 (69.2)	1 (0.5)	1 (0.5)	3 (1.6)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	1 (0.5)	50 (27.5)	NA	NA	
1983	132 (63.5)	0 (0.0)	1 (0.5)	9 (4.3)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	4 (1.9)	62 (29.8)	NA	NA	
1984	135 (59.5)	2 (0.9)	7 (3.1)	13 (5.7)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	6 (2.6)	64 (28.2)	NA	NA	
1985	140 (60.3)	2 (0.9)	2 (0.9)	10 (4.3)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	0 (0.0)	77 (33.2)	NA	NA	
1986	160 (61.5)	2 (0.8)	1 (0.4)	6 (2.3)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	0 (0.0)	91 (35.0)	NA	NA	
1987	162 (57.2)	2 (0.7)	4 (1.4)	13 (4.6)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	8 (2.8)	94 (33.2)	NA	NA	
1988	145 (55.1)	2 (0.8)	3 (1.1)	6 (2.3)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	2 (0.8)	105 (39.9)	NA	NA	
1989	154 (53.7)	4 (1.4)	4 (1.4)	10 (3.5)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	6 (2.1)	109 (38.0)	NA	NA	
1990	151 (55.3)	7 (2.6)	1 (0.4)	24 (8.8)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	8 (2.9)	82 (30.0)	NA	NA	
1991	168 (53.7)	8 (2.6)	3 (1.0)	26 (8.3)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	5 (1.6)	103 (32.9)	NA	NA	
1992	138 (43.5)	8 (2.5)	4 (1.3)	21 (6.6)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	4 (1.3)	142 (44.8)	NA	NA	
1993	160 (46.0)	5 (1.4)	3 (0.9)	20 (5.7)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	0 (0.0)	159 (45.7)	NA	NA	
1994	150 (46.9)	6 (1.9)	4 (1.3)	25 (7.8)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	2 (0.6)	133 (41.6)	NA	NA	
1995	148 (42.3)	10 (2.9)	5 (1.4)	33 (9.4)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	4 (1.1)	148 (42.3)	NA	NA	
1996	135 (44.4)	9 (3.0)	5 (1.6)	23 (7.6)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	3 (1.0)	129 (42.4)	NA	NA	
1997	145 (40.5)	10 (2.8)	3 (0.8)	25 (7.0)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	7 (2.0)	168 (46.9)	NA	NA	
1998	166 (40.4)	14 (3.4)	6 (1.5)	32 (7.8)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	4 (1.0)	187 (45.5)	NA	NA	
1999	131 (36.5)	13 (3.6)	6 (1.7)	39 (10.9)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	15 (4.2)	155 (43.2)	NA	NA	
2000	123 (38.1)	11 (3.4)	0 (0.0)	38 (11.8)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	20 (6.2)	131 (40.6)	NA	NA	
2001	129 (34.4)	15 (4.0)	6 (1.6)	54 (14.4)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	4 (1.1)	167 (44.5)	NA	NA	
2002	151 (40.2)	8 (2.1)	5 (1.3)	27 (7.2)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	7 (1.9)	176 (46.8)	NA	NA	
2003	139 (36.2)	13 (3.4)	9 (2.3)	32 (8.3)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	5 (1.3)	186 (48.4)	NA	NA	
2004	114 (34.0)	11 (3.3)	5 (1.5)	31 (9.3)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	4 (1.2)	170 (50.7)	NA	NA	
2005	109 (25.4)	19 (4.4)	8 (1.9)	35 (8.2)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	6 (1.4)	250 (58.3)	NA	NA	
2006	127 (28.7)	17 (3.8)	8 (1.8)	34 (7.7)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	2 (0.5)	254 (57.5)	NA	NA	
2007	128 (31.1)	16 (3.9)	8 (1.9)	35 (8.5)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	5 (1.2)	220 (53.4)	NA	NA	
2008	164 (35.0)	11 (2.4)	9 (1.9)	46 (9.8)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	15 (3.2)	221 (47.2)	NA	NA	
2009	151 (33.0)	18 (3.9)	10 (2.2)	54 (11.8)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	14 (3.1)	211 (46.1)	NA	NA	
2010	162 (36.0)	13 (2.9)	8 (1.8)	48 (10.7)	NA	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	NA	18 (4.0)	200 (44.4)	NA	NA	
2011	141 (29.9)	34 (7.2)	9 (1.9)	50 (10.6)	4 (0.8)	0 (0.0)	0 (0.0)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (1.1)	16 (3.4)	212 (45.0)	NA	NA	
2012	148 (29.8)	25 (5.0)	18 (3.6)	61 (12.3)	1 (0.2)	2 (0.4)	2 (0.4)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.4)	30 (6.0)	210 (42.3)	NA	NA	
2013	157 (26.7)	22 (3.7)	20 (3.4)	68 (11.5)	0 (0.0)	1 (0.2)	1 (0.2)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (1.5)	20 (3.4)	292 (49.6)	NA	NA	
2014	176 (31.2)	25 (4.4)	10 (1.8)	59 (10.4)	2 (0.4)	1 (0.2)	1 (0.2)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.5)	15 (2.7)	274 (48.5)	NA	NA	
2015	171 (30.5)	18 (3.2)	13 (2.3)	90 (16.0)	0 (0.0)	1 (0.2)	1 (0.2)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.4)	10 (1.8)	256 (45.6)	NA	NA	
2016	179 (32.7)	16 (2.9)	15 (2.7)	50 (9.1)	0 (0.0)	1 (0.2)	1 (0.2)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (0.9)	15 (2.7)	266 (48.6)	NA	NA	
2017	156 (29.1)	18 (3.4)	6 (1.1)	33 (6.1)	0 (0.0)	4 (0.7)	4 (0.7)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (0.7)	10 (1.9)	306 (57.0)	0 (0.0)	0 (0.0)	
2018	165 (27.5)	21 (3.5)	7 (1.2)	46 (7.7)	0 (0.0)	1 (0.2)	1 (0.2)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.2)	16 (2.7)	343 (57.2)	0 (0.0)	0 (0.0)	
2019	167 (27.8)	17 (2.8)	14 (2.3)	65 (10.8)	0 (0.0)	5 (0.8)	5 (0.8)	NA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (0.8)	16 (2.7)	297 (49.5)	14 (2.3)	14 (2.3)	

<sup>a</sup> U.S. citizen or permanent resident

<sup>b</sup> Nonpermanent resident/citizen of a country other than the United States

Table 13. Summary of Enrollments in First Professional Degree Programs 1980-2019

Year	First Professional Year Classes <sup>a</sup>	All Professional Years <sup>b</sup>	Total Enrollment
	n (% Change)	n (% Change)	N (% Change)
1980	7,377	22,093	26,617
1981	6,927 (-6.1)	20,468 (-7.4)	24,658 (-7.4)
1982	6,609 (-4.6)	19,350 (-5.5)	23,410 (-5.1)
1983	6,635 (0.4)	18,831 (-2.7)	23,091 (-1.4)
1984	6,986 (5.3)	18,646 (-1.0)	23,312 (1.0)
1985	7,091 (1.5)	19,098 (2.4)	24,820 (6.5)
1986	7,554 (6.5)	20,073 (5.1)	25,643 (3.3)
1987	7,751 (2.6)	21,424 (6.7)	27,292 (6.4)
1988	7,990 (3.1)	22,447 (4.8)	28,891 (5.9)
1989	8,033 (0.5)	23,013 (2.5)	29,560 (2.3)
1990	8,267 (2.9)	23,238 (1.0)	29,797 (0.8)
1991	8,343 (0.9)	23,482 (1.1)	30,314 (1.7)
1992	8,664 (3.8)	26,287 (NA)	31,519 (4.0)
1993	8,970 (3.5)	27,143 (3.3)	32,938 (4.5)
1994	9,157 (2.1)	27,667 (1.9)	33,353 (1.3)
1995	8,740 (-4.6)	28,060 (1.4)	33,415 (0.2)
1996	9,561 (9.4)	28,027 (-0.1)	33,059 (-1.1)
1997	8,571 (-10.4)	28,345 (1.1)	32,529 (-1.6)
1998	8,346 (-2.6)	28,568 (0.8)	33,090 (1.7)
1999	8,123 (-2.7)	29,586 (3.6)	32,537 (-1.7)
2000	8,382 (3.2)	30,301 (2.4)	34,481 (6.0)
2001	8,922 (6.4)	31,769 (4.8)	35,885 (4.1)
2002	9,128 (2.3)	33,437 (5.3)	38,902 (8.4)
2003	9,909 (8.6)	36,454 (9.0)	41,762 (10.7)
2004	10,437 (5.3)	38,544 (5.7)	43,908 (— <sup>c</sup> )
2005	10,506 (0.7)	41,165 (6.8)	46,527 (6.0)
2006	10,992 (4.6)	43,106 (4.7)	48,592 (4.4)
2007	11,533 (4.9)	45,594 (5.8)	50,691 (4.3)
2008	12,379 (7.1)	47,986 (5.2)	52,685 (3.9)
2009	12,705 (2.6)	49,964 (4.1)	54,710 (3.8)
2010	13,077 (2.9)	51,920 (3.9)	56,841 (3.9)
2011	13,464 (3.0)	54,054 (4.1)	58,915 (3.6)
2012	14,011 (4.1)	56,489 (4.5)	61,275 (4.0)
2013	14,008 (0.0)	58,121 (2.9)	62,743 (2.4)
2014	14,276 (1.9)	59,370 (2.1)	63,927 (1.9)
2015	14,190 (-0.6)	59,720 (0.6)	63,460 (-0.7)
2016	13,975 (-1.5)	59,978 (0.4)	63,464 (0.0)
2017	13,881 (-0.7)	59,474 (-0.8)	63,087 (-0.6)
2018	13,546 (-2.4)	59,208 (-0.4)	62,504 (-0.9)
2019	12,795 (-5.5)	57,484 (-2.9)	60,594 (-3.1)

<sup>a</sup> Includes second from last year for baccalaureate and third from last year for Pharm.D.1 and does not include first year enrollees in accelerated programs from 1980-2005. Includes third from last year Pharm.D.1 beginning in 2006

<sup>b</sup> Includes the final three years only of all first professional degree programs for 1980-1991; includes all professional years for 1992-present (3 years for baccalaureate and 4 years for Pharm.D.)

<sup>c</sup> Not able to calculate percent change due to change in how data are reported by select institutions

programs (Pharm.D.2). This was a decrease of 18.6% from fall 2018. Underrepresented minorities accounted for 21.5% of these students (Black or African American, 19.9%; Hispanic or Latino, 1.6%; Native Hawaiians/Other Pacific Islander, 0.0%; American Indians/Alaska

Native, 0.0%). White Americans comprised 37.5%; Asian Americans, 18.8%; students of two or more races, 0.5%; unknown, 8.5%; international/foreign students, 13.2%; and students of unknown race/ethnicity and gender, 0.0%.

Table 14. Summary of Enrollments in First Professional Degree Programs by Gender 1980-2019

Year	Male		Female		Unknown/Other Gender		Total Enrollment	
	n (%)	% Change from Previous Year	n (%)	% Change from Previous Year	n (%)	% Change from Previous Year	N	% Change from Previous Year
1980	13,992 (52.6)		12,625 (47.4)		NA	NA	26,617	
1981	12,413 (50.3)	-11.3	12,245 (49.7)	-3	NA	NA	24,658	-7.4
1982	11,271 (48.1)	-9.2	12,139 (51.9)	-0.9	NA	NA	23,410	-5.1
1983	10,984 (47.6)	-2.5	12,107 (52.4)	-0.3	NA	NA	23,091	-1.4
1984	10,345 (44.4)	-5.8	12,967 (55.6)	7.1	NA	NA	23,312	1
1985	10,685 (43.0)	3.3	14,135 (57.0)	9	NA	NA	24,820	6.5
1986	10,628 (41.4)	-0.5	15,015 (58.6)	6.2	NA	NA	25,643	3.3
1987	10,907 (40.0)	2.6	16,385 (60.0)	9.1	NA	NA	27,292	6.4
1988	11,382 (39.4)	4.4	17,509 (60.6)	6.9	NA	NA	28,891	5.9
1989	11,350 (38.4)	-0.3	18,210 (61.6)	4	NA	NA	29,560	2.3
1990	11,198 (37.6)	-1.3	18,599 (62.4)	2.1	NA	NA	29,797	0.8
1991	11,219 (37.0)	0.2	19,095 (63.0)	2.7	NA	NA	30,314	1.7
1992	11,543 (36.6)	2.9	19,976 (63.4)	4.6	NA	NA	31,519	4
1993	12,117 (36.8)	5	20,821 (63.2)	4.2	NA	NA	32,938	4.5
1994	12,243 (36.7)	1	21,110 (63.3)	1.4	NA	NA	33,353	1.3
1995	12,221 (36.6)	-0.2	21,194 (63.4)	0.4	NA	NA	33,415	0.2
1996	11,966 (36.2)	-2.1	21,093 (63.8)	-0.5	NA	NA	33,059	-1.1
1997	11,652 (35.8)	-2.6	20,877 (64.2)	-1	NA	NA	32,529	-1.6
1998	11,777 (35.6)	1.1	21,313 (64.4)	2.1	NA	NA	33,090	1.7
1999	11,411 (35.1)	-3.1	21,126 (64.9)	-0.9	NA	NA	32,537	-1.7
2000	11,763 (34.1)	3.1	22,718 (65.9)	7.5	NA	NA	34,481	6
2001	12,253 (34.1)	4.2	23,632 (65.9)	4	NA	NA	35,885	4.1
2002	12,815 (33.0)	4.6	26,087 (67.0)	9.1	NA	NA	38902	8.4
2003	13,874 (33.2)	11.3	27,888 (66.8)	10.3	NA	NA	41,762	10.7
2004 <sup>a</sup>	14,696 (33.5)	—	29,212 (66.5)	—	NA	NA	43,908	—
2005	16,069 (34.5)	9.3	30,458 (65.5)	4.3	NA	NA	46,527	6
2006 <sup>b</sup>	17,397 (35.8)	8.3	31,195 (64.2)	2.4	NA	NA	48,592	4.4
2007	18,735 (37.0)	7.7	31,956 (63.0)	2.4	NA	NA	50,691	4.3
2008	19,896 (37.8)	6.2	32,744 (62.2)	2.5	NA	NA	52,685	3.9
2009	21,158 (38.7)	6.3	33,552 (61.3)	2.5	NA	NA	54,710	3.8
2010	22,194 (39.0)	4.9	34,647 (61.0)	3.3	NA	NA	56,841	3.9
2011	23,100 (39.2)	4.1	35,815 (60.8)	3.4	NA	NA	58,915	3.6
2012	23,900 (39.0)	3.5	37,375 (61.0)	4.4	NA	NA	61,275	4
2013	24,326 (38.8)	1.8	38,417 (61.2)	2.8	NA	NA	62,743	2.4
2014	24,655 (38.6)	1.4	39,272 (61.4)	2.2	NA	NA	63,927	1.9
2015	24,476 (38.6)	-0.7	38,984 (61.4)	-0.7	NA	NA	63,460	-0.7
2016	24,174 (38.1)	-1.2	39,278 (61.9)	0.8	NA	NA	63,464	0
2017	23,608 (37.4)	-2.3	39,435 (62.5)	0.4	44 (0.1)	NA	63,087	-0.6
2018	23,084 (36.9)	-2.2	39,349 (63.0)	-0.2	71 (0.1)	61.4	62,504	-0.9
2019	21,783 (25.9)	-5.6	38,528 (63.6)	-2.1	283 (0.5)	298.6	60,594	-3.1

<sup>a</sup> Not able to calculate percent change due to change in how data is reported by select institutions

<sup>b</sup> Includes only Pharm.D.1 degrees beginning in 2006

NA: Not available

### Graduate Degree Programs

In fall 2019, the discipline of pharmaceuticals had the highest percentage of full-time enrollees at both the M.S. and Ph.D. levels (39.8% and 38.2%, respectively). At the master's level, 19.7% of the students were in enrolled in social and administrative sciences programs; 13.3% in pharmacology programs; 12.3% in pharmacy practice programs; 7.9% in other disciplines; and 7.0% in medicinal chemistry programs. At the doctoral level, 23.0%

of the students were enrolled in medicinal chemistry programs; 16.0% in pharmacology programs; 12.4% in social and administrative science programs; 6.5% in other disciplines; and 3.8% in pharmacy practice [Table 16].

In fall 2019, more females than males were enrolled full-time in both M.S. and Ph.D. degree programs. This is the second year in a row that more women than men were enrolled in Ph.D. programs. In M.S. programs females accounted for 64.5% of enrollments and males, 35.4%.

Table 15. Summary of Enrollments in First Professional Degree Programs by Race/Ethnicity 1980-2019

Year	Black or African American <sup>a</sup>	Hispanic or Latino <sup>a</sup>	% Change From Previous Year	Asian <sup>a</sup>	% Change From Previous Year	Native Hawaiian or Other Pacific Islander <sup>a</sup>	% Change From Previous Year	American Indian or Alaska Native <sup>a</sup>	% Change From Previous Year	Two or More Races <sup>a</sup>	% Change From Previous Year
1980 <sup>b</sup>	945	934		1,035		NA		36		NA	
1981 <sup>b</sup>	932	787	-15.7	1,040	0.5	NA	NA	38	5.6	NA	NA
1982 <sup>b</sup>	935	784	-0.4	1,072	3.1	NA	NA	36	-5.6	NA	NA
1983 <sup>b</sup>	1,019	787	0.4	922	-14	NA	NA	42	16.7	NA	NA
1984 <sup>b</sup>	1,098	763	-3	1,086	17.8	NA	NA	37	-11.9	NA	NA
1985	1,664	927	NA	1,410	NA	NA	NA	42	NA	NA	NA
1986	1,647	1,018	9.8	1,740	23.4	NA	NA	39	-7.1	NA	NA
1987	1,729	1,055	3.6	2,000	14.9	NA	NA	45	15.4	NA	NA
1988	1,891	1,089	3.2	2,362	18.1	NA	NA	78	73.3	NA	NA
1989	1,983	1,096	0.6	2,706	14.6	NA	NA	81	3.8	NA	NA
1990	2,103	1,118	2	3,346	23.7	NA	NA	85	4.9	NA	NA
1991	2,395	1,055	-5.6	3,540	5.8	NA	NA	98	15.3	NA	NA
1992	2,340	1,088	3.1	4,135	16.8	NA	NA	96	-2	NA	NA
1993	2,380	1,143	5.1	4,731	14.4	NA	NA	128	33.3	NA	NA
1994	2,582	1,171	2.4	5,408	14.3	NA	NA	128	0	NA	NA
1995	2,548	1,150	-1.8	5,695	5.3	NA	NA	151	18	NA	NA
1996	2,529	1,140	-0.9	6,152	8	NA	NA	147	-2.6	NA	NA
1997	2,632	1,130	-0.9	6,451	4.9	NA	NA	150	2	NA	NA
1998	2,757	1,157	2.4	6,741	4.5	NA	NA	160	6.7	NA	NA
1999	2,697	1,086	-6.1	6,414	-4.9	NA	NA	156	-2.5	NA	NA
2000	3,132	1,255	15.6	7,392	15.2	NA	NA	137	-12.2	NA	NA
2001	3,407	1,322	5.3	7,405	0.2	NA	NA	179	30.7	NA	NA
2002	3,826	1,466	10.9	8,263	11.6	NA	NA	168	-6.1	NA	NA
2003	4,183	1,605	9.5	8,991	8.8	NA	NA	191	13.7	NA	NA
2004 <sup>c</sup>	3,784	1,691		9,103		NA	NA	210		NA	NA
2005	3,703	1,778	5.1	9,690	6.1	NA	NA	234	11.4	NA	NA
2006 <sup>d</sup>	3,275	1,888	6.2	10,312	6.4	NA	NA	220	-6	NA	NA
2007	3,229	2,044	8.3	10,974	6.4	NA	NA	248	12.7	NA	NA
2008	3,395	2,186	6.9	11,638	6.1	NA	NA	263	6	NA	NA
2009	3,581	2,278	4.2	12,497	7.4	NA	NA	264	0.4	NA	NA
2010	3,711	2,369	4	13,666	9.4	NA	NA	259	-1.9	NA	NA
2011 <sup>c</sup>	3,964	2,317		14,124		264		205		629	
2012	4,226	2,537	9.5	14,441	2.2	594	12.5	238	16.1	968	53.9
2013	4,376	2,681	5.7	15,438	6.9	203	-65.8	222	-6.7	1,172	21.1
2014	4,690	2,907	8.4	15,955	3.3	152	-25.1	205	-7.7	1,370	16.9
2015	5,031	3,185	9.6	16,073	0.7	231	52	194	-5.4	1,491	8.8
2016	5,308	3,391	6.5	15,838	-1.5	235	1.7	192	-1	1,531	2.7
2017	5,673	3,675	8.4	15,970	0.8	105	-55.3	218	13.5	1,596	4.2
2018	5,719	4,049	10.2	15,430	-3.4	133	26.7	228	4.6	1,993	24.9
2019	5,624	4,361	7.7	14,566	-5.6	124	-6.8	219	-3.9	1,876	-5.9

<sup>a</sup> U.S. citizen or permanent resident

<sup>b</sup> Totals for 1980-1984 are for enrollments in final three years of program only

<sup>c</sup> Not able to calculate percent change due to change in how data are reported

<sup>d</sup> Includes B.S. Pharmacy, B.Pharm., and Pharm.D.1 from 1980-2005. Includes only Pharm.D.1 beginning in 2006



Table 16. Summary of Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) Fall 2019 Full-Time Enrollments by Gender and Discipline

Discipline	M.S. Degree					Ph.D. Degree				
	M	F	U/O	T	Percent of M.S. Program Enrollments	M	F	U/O	T	Percent of Ph.D. Program Enrollments
Medicinal Chemistry	39	44	0	83	7.0	399	341	0	740	23.0
Pharmacology	56	103	0	159	13.3	233	282	0	515	16.0
Social and Administrative Sciences	84	151	0	235	19.7	160	240	0	400	12.4
Pharmacy Practice	50	95	2	147	12.3	56	67	0	123	3.8
Pharmaceutics	168	307	0	475	39.8	604	625	1	1,230	38.2
Other <sup>a</sup>	25	69	0	94	7.9	106	103	0	209	6.5
<b>Total</b>	<b>422</b>	<b>769</b>	<b>2</b>	<b>1193</b>		<b>1,558</b>	<b>1,658</b>	<b>1</b>	<b>3,217</b>	

<sup>a</sup> Includes genetic counseling/genomic data analytics at Keck (KGI), chemistry at Pacific-CA, pharmacogenomics at Manchester, interdisciplinary at Northeastern, undecided at Wayne State, biomolecular sciences at Mississippi, pharmacometrics & personalized medicine at New York at Buffalo, pharmaceutical development and management at Lebanese American in M.S. programs and includes bio & med informatics/biophysics at California-SF, chemistry at Pacific, pharmacogenetics at Mercer, pharmacy at Georgia, bio pharm analysis and undecided at Idaho State, undecided at Wayne State, biomolecular sciences at Mississippi, translational science at Ohio State, undeclared at Tennessee, and pharmacotherapy at Texas at Austin for Ph.D. programs

Women accounted for 51.5% of Ph.D. full-time enrollments, a slight increase from 51.0% in fall 2018.

Of the 1,193 students enrolled full-time in M.S. degree programs in fall 2019, nearly half (47.9%) were international/foreign students. The next largest group were White Americans, comprising 25.6% of enrollees and Asian Americans accounted for 11.0%. Underrepresented

minorities accounted for 11.1% of M.S. enrollees (Black or African American, 3.9%; Hispanic or Latino, 6.9%; Native Hawaiian or Other Pacific Islander, 0.1%; American Indian or Alaska Native, 0.3%). Americans of two or more races made up 1.7% of enrollees and 2.6% of all full-time M.S. degree enrollees were reported as race/ethnicity unknown.

Table 17. Fall 2019 Enrollments in Ph.D. Programs by Type of Enrollment (Full-Time, Part-Time), Discipline, and Source of Previous Degree Earned<sup>a</sup>

School at which previous degree was received	U.S. School		Canadian School		Foreign School		All Schools	
	Pharm	Non-pharm	Pharm	Non-pharm	Pharm	Non-pharm	Pharm	Non-pharm
<b>Full-time</b>								
Medicinal Chemistry	74	350	0	1	111	115	185	466
Pharmacology	48	210	1	0	150	75	199	285
Social and Administrative Sciences	65	130	0	2	118	65	183	197
Pharmacy Practice	28	50	0	0	26	24	54	74
Pharmaceutics	125	369	0	2	400	226	525	597
Other	3	30	0	0	30	18	33	48
<b>Total Full-time</b>	<b>343</b>	<b>1,139</b>	<b>1</b>	<b>5</b>	<b>835</b>	<b>523</b>	<b>1,179</b>	<b>1,667</b>
<b>Part-time</b>								
Medicinal Chemistry	2	2	0	0	7	1	9	3
Pharmacology	8	13	0	0	3	5	11	18
Social and Administrative Sciences	1	12	1	0	3	0	5	12
Pharmacy Practice	1	2	0	0	0	0	1	2
Pharmaceutics	6	13	1	0	20	3	27	16
Other	0	0	0	0	0	0	0	0
<b>Total Part-time</b>	<b>18</b>	<b>42</b>	<b>2</b>	<b>0</b>	<b>33</b>	<b>9</b>	<b>53</b>	<b>51</b>

<sup>a</sup> Includes only those students for whom source of degree was reported

Of the 3,217 students enrolled full-time in Ph.D. degree programs in fall 2019, international/foreign students were also the largest group, accounting for 48.6% of the enrollees. White Americans were the next largest group at 30.4% of full-time enrollments, followed by Asian Americans at 9.6%. Underrepresented minorities accounted for 8.8% of Ph.D. enrollees (Black or African American, 4.4%; Hispanic or Latino, 4.0%; Native Hawaiian or Other Pacific Islander, 0.1%; American Indian or Alaska Native, 0.3%). Americans of two or more races accounted for 1.7%, 0.8% of all full-time Ph.D. degree enrollees had unknown race/ethnicity. For graduate students whose source of degree was reported, nearly 42% (41.8) of full-time and part-time students in Ph.D. programs

held a professional pharmacy degree, 12.2% of Ph.D. students held a professional pharmacy degree from a U.S. college or school of pharmacy and 29.5% held a pharmacy degree conferred by a non-U.S. institution [Table 17].

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