

## AACP REPORTS

### The Pharmacy Student Population: Applications Received 2008-09, Degrees Conferred 2008-09, Fall 2009 Enrollments

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#### INTRODUCTION

This report presents data that describe the 2008-09 pharmacy application pool, degrees conferred in 2008-09, and fall 2009 pharmacy program enrollments. Data for this report were requested from the one hundred and sixteen (116) 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 in the U.S. Some colleges and schools of pharmacy conferred degrees in the B.S. Pharmacy program until 2004-05.

For the purpose of this report, students in doctor of pharmacy programs are categorized under *Pharm.D.1* when the program leads to a doctor of pharmacy degree conferred as the first professional degree. Students who have already received a baccalaureate in pharmacy and are enrolled in a doctor of pharmacy degree program are categorized under *Pharm.D.2*.

The following definitions refer to the race/ethnicity groups as used in this report. *White, black or African American, and Hispanic or Latino* refer to students of the respective race/ethnicity who are U.S. citizens or permanent residents of the U.S. or its territories. The *Asian, native Hawaiian, or other Pacific Islander* group includes students who are Chinese, Filipino, Hawaiian, Korean, Vietnamese, Japanese, Asian Indian, Guamanian, Samoan, or Pacific Islanders who are U.S. citizens or permanent residents of the U.S. or its territories. The *American Indian or Alaska native* classification includes Native Americans,

Eskimos, and Aleuts who are U.S. citizens or permanent residents of the U.S. or its territories. Students listed under *Other* are those who are U.S. citizens or permanent residents of the U.S. or its territories, but for whom race/ethnicity is unknown. Included in *Foreign* are all students who are foreign, nonpermanent residents of the U.S., regardless of race/ethnicity.

#### 2008-09 APPLICATION POOL

The 2008-09 Application Pool Survey was conducted online in October 2009, with an announcement and request for participation sent to the dean at each of the 116 colleges and schools of pharmacy in the U.S. recognized by ACPE. After follow-up correspondence and telephone calls, one hundred and sixteen (116) colleges and schools (100.0 percent) submitted the requested information. The Pharmacy College Application Service (PharmCAS) provided application data for the 59 full-participating colleges and schools of pharmacy. Included in the application pool are students who applied for admission and submitted all required application materials between September 2008 and August 2009 for the entering class of fall 2009. Numbers reported represent the number of applications, not applicants, and may represent multiple applications submitted by individual applicants.

During the period September 2008 through August 2009, the 116 reporting institutions received 108,396 applications for admission. The Medical University of South Carolina and the University of South Carolina merged to become the South Carolina College of Pharmacy and only accepted applications to the South Carolina College of Pharmacy. Therefore, 114 of the 116 reporting institutions received applications. When compared with entering class enrollment data for fall 2009 at these institutions, the resultant ratio was 8.1 applications received for every one entering student enrolled. The corresponding data for the 109 colleges and schools reporting for the same period in 2007-08 were 103,747 applications received; 8.0 applications for every one entering student enrolled in fall 2008. For the one hundred and nine (109) colleges and schools reporting application data for both 2007-08 and

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Table 1. Distribution of 2008-2009 Applications by Gender and Race/Ethnicity of Applicant <sup>a</sup>

Race/Ethnicity	Male	Female	Gender Not Specified	Total (%)
White <sup>b</sup>	15168	21544	66	36778 (33.9%)
Black or African American <sup>b</sup>	4598	6332	26	10956 (10.1%)
Hispanic or Latino <sup>b</sup>	1863	2511	3	4377 (4.0%)
Asian, Native Hawaiian or Other Pacific Islander <sup>b</sup>	13222	21245	117	34584 (31.9%)
American Indian <sup>b</sup>	162	157	1	320 (0.3%)
Other <sup>b,c</sup>	5980	8761	1939	16680 (15.4%)
Foreign <sup>d</sup>	1959	2670	72	4701 (4.3%)
Total	42952	63220	2224	108396

<sup>a</sup> Represents data, some incomplete, submitted by 114 schools

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

<sup>c</sup> Includes students for whom ethnic origin is unknown

<sup>d</sup> Nonpermanent resident/citizen of a country other than the U.S.

2008-09, there was a 1.9 percent increase in the number of applications received. This is the ninth annual increase after six consecutive decreases.

In 2008-09, females submitted 58.3 percent of the applications to pharmacy colleges and schools; males submitted 39.6 percent; gender unknown/not reported submitted 2.1 percent. White Americans submitted 33.9 percent of the applications, Asian Americans submitted 31.9 percent of the applications, and underrepresented minorities submitted 14.4 percent of the applications (black, 10.1 percent; Hispanic, 4.0 percent; American Indian, 0.3 percent). 4.3 percent of the applications to the Pharm.D. as the first professional degree pharmacy programs were submitted by foreign, nonpermanent residents [Table 1]. For the sixth consecutive year, colleges and schools of pharmacy received more applications from out-of-state residents (59.9 percent) compared to 40.1 percent from in-state residents. This increase in out-of-state applicants can be attributed to the ease of applying to colleges and schools of pharmacy in different states through PharmCAS.

Twenty-nine percent (29.0 percent) of the applications to the Pharm.D. as the first professional degree pro-

grams were submitted by individuals who had previously obtained a baccalaureate degree or higher (baccalaureate, 27.2 percent; master's, 1.5 percent; doctorate, 0.3 percent), down from 40.7 percent the previous year [Table 2]. Nearly 72 percent (71.7 percent) of the applications to colleges and schools of pharmacy were submitted by individuals who had 3 or more years of postsecondary experience.

### 2008-09 DEGREES CONFERRED

The 2008-09 Professional Degrees Conferred and Graduate Degrees Conferred surveys were conducted online in October 2009, with an announcement and request for participation sent to the dean at each of the 116 colleges and schools of pharmacy in the U.S. recognized by ACPE. Submission of the data was requested by December 2009. After follow-up correspondence and telephone calls, 116 colleges and schools (100.0 percent) submitted the requested information.

### Professional Degrees Conferred

Numbers of degrees conferred by U.S. colleges and schools of pharmacy from 1965 to 2009 are presented in Table 3.

Table 2. Distribution of 2008-2009 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	5354	8050	104	13508 (13.1%)
1-2 Years of College/No Degree	2671	4159	171	7001 (6.8%)
Associate Degree	2971	3734	123	6828 (6.6%)
3 or More Years of College/No Degree	18108	26768	959	45835 (44.5%)
Baccalaureate Degree				
Master's Degree	11293	16174	587	28054 (27.2%)
Doctoral Degree	703	801	23	1527 (1.5%)
0 Years of College	204	109	2	315 (0.3%)

<sup>a</sup> Represents data, some incomplete, submitted by 112 schools

Table 3. Number of Pharmacy Degrees Conferred 1965-2009 by Degree and 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	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1965	2723	454	3177	162	21	183	2885	475	3360				150	26	176	105	3	108
1966	2970	500	3470	161	28	189	3131	528	3659				152	38	190	108	15	123
1967	3078	493	3571	136	37	173	3214	530	3744				235	32	267	118	8	126
1968	3194	572	3766	183	39	222	3377	611	3988				219	44	263	124	10	134
1969	3384	695	4079	178	31	209	3562	726	4288				235	42	277	136	9	145
1970	3664	853	4517	192	49	241	3856	902	4758				236	54	290	131	10	141
1971	3589	935	4524	160	63	223	3749	998	4747				219	56	275	169	8	177
1972	3498	1072	4570	215	73	288	3713	1145	4858				205	56	261	155	13	168
1973	3674	1259	4933	184	67	251	3858	1326	5184	99	18	117	273	53	326	172	15	187
1974	4104	1559	5663	205	89	294	4309	1648	5957	117	23	140	250	70	320	165	19	184
1975	4607	1792	6399	218	95	313	4825	1887	6712	110	26	136	250	89	339	165	24	189
1976	4940	2165	7105	250	109	359	5190	2274	7464	88	38	126	301	92	393	163	26	189
1977	5108	2541	7649	255	107	362	5363	2648	8011	147	42	189	309	90	399	147	19	166
1978	4715	2715	7430	246	109	355	4961	2824	7785	132	65	197	305	117	422	158	20	178
1979	4260	2835	7095	278	183	461	4538	3018	7556	139	51	190	301	134	435	125	28	153
1980	4154	2831	6985	267	180	447	4421	3011	7432	120	60	180	315	150	465	155	34	189
1981	3753	3116	6869	265	189	454	4018	3305	7323	109	101	210	271	163	434	152	28	180
1982	3417	3031	6448	217	194	411	3634	3225	6859	119	88	207	293	165	458	146	36	182
1983	2994	2925	5919	240	215	455	3234	3140	6374	136	135	271	277	149	426	154	54	208
1984	2826	2720	5546	188	229	417	3014	2949	5963	169	162	331	253	141	394	174	53	227
1985	2362	2785	5147	281	307	588	2643	3092	5735	121	103	224	210	128	338	175	57	232
1986	2370	2820	5190	278	332	610	2648	3152	5800	97	113	210	245	170	415	192	68	260
1987	2235	2929	5164	291	399	690	2526	3328	5854	86	126	212	197	151	348	203	80	283
1988	2245	3126	5371	322	491	813	2567	3617	6184	74	85	159	194	159	353	188	75	263
1989	2313	3408	5721	314	525	839	2627	3933	6560	99	123	222	226	165	391	175	112	287
1990	2393	3617	6010	388	558	946	2781	4175	6956	118	184	302	202	183	385	181	92	273
1991	2268	3659	5927	436	759	1195	2704	4418	7122	106	165	271	189	175	364	201	112	313
1992	2261	3636	5897	436	780	1216	2697	4416	7113	124	162	286	148	134	282	195	122	317
1993	2244	3787	6031	460	889	1349	2704	4676	7380	141	255	396	148	153	301	223	125	348
1994	2274	3871	6145	435	924	1359	2709	4795	7504	208	367	575	182	173	355	198	122	320
1995	2291	3927	6218	553	1066	1619	2844	4993	7837	270	434	704	187	205	392	218	132	350
1996	2311	3857	6168	583	1252	1835	2894	5109	8003	264	468	732	217	205	422	186	118	304
1997	2212	3556	5768	691	1313	2004	2903	4869	7772	321	538	859	191	209	400	218	140	358
1998	1818	2950	4768	830	1802	2632	2648	4752	7400	351	663	1014	197	224	421	238	173	411
1999	1528	2348	3876	1081	2184	3265	2609	4532	7141	315	598	913	172	212	384	221	138	359
2000	1115	1841	2956	1432	2872	4304	2547	4713	7260	469	800	1269	154	200	354	174	149	323
2001	754	1160	1914	1730	3356	5086	2484	4516	7000	367	612	979	182	279	461	211	164	375
2002	540	875	1415	2055	4103	6158	2595	4978	7573	276	504	780	178	265	443	216	160	376
2003	303	536	839	2333	4316	6649	2636	4852	7488	338	557	895	199	273	472	210	174	384
2004	153	235	388	2568	5202	7770	2721	5437	8158	277	479	756	274	377	651	176	159	335
2005	16	10	26	2618	5624	8242	2634	5634	8268	241	427	668	233	393	626	215	214	429
2006	0	0	0	2875	6165	9040	2875	6165	9040	202	313	515	241	403	644	252	190	442
2007	0	0	0	3171	6641	9812	3171	6641	9812	97	373	470	236	368	604	220	192	412
2008	0	0	0	3575	6925	10500	3575	6925	10500	225	402	627	275	457	732	262	206	468
2009	0	0	0	3912	7076	10988	3912	7076	10988	179	349	528	371	396	767	228	230	458

<sup>a</sup> Includes BPharm 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

**First Professional Degrees Conferred.** In 2008-09, ninety-four (94) colleges and schools conferred the doctor of pharmacy as a first professional degree (Pharm.D.1). Graduating Pharm.D.1 class sizes ranged from 26 students to 302 students (median, 113 students). Twenty-two (22) of the 116 colleges and schools of pharmacy did not confer degrees in 2008-09. Most were new programs whose students had not yet progressed through the entire curriculum (Harding, California Northstate, Regis, Hawaii-Hilo, Chicago State, Sullivan, Husson, New England, Notre Dame, St. John Fisher, Touro-New York, Northeastern Ohio, Findlay, Thomas Jefferson, Belmont, East Tennessee State, Lipscomb, Union, Texas A&M, Incarnate Word, and Charleston). The Medical University of South Carolina and University of South Carolina merged to become the South Carolina College of Pharmacy, but still reported data for each institution separately.

In 2008-09 there were 10,988 first professional degrees conferred by colleges and schools of pharmacy compared to 10,500 in 2007-08. [Table 4]. The total number of first professional degrees conferred in 2008-09 represented a 4.6 percent increase from the total number of first professional degrees conferred in 2007-08 [Table 5].

In 1979-80, men received 59.5 percent of the first professional degrees conferred by colleges and schools of pharmacy and women received 40.5 percent. Over the past 30 years, these percentages have shifted dramatically and, in 2008-09, men received 35.6 percent of the first professional degrees conferred, and 64.4 percent of these degrees were received by women [Table 6].

White Americans received 60.6 percent of first professional degrees conferred in 2008-09. Underrepresented minorities received 11.0 percent of the first professional degrees conferred in 2008-09 (black, 6.3 percent; Hispanic, 4.1 percent; American Indian, 0.6 percent). Asian Americans received 21.2 percent of the first professional degrees. The percentage of first professional degree recipients who were foreign, nonpermanent residents of the U.S. was 2.7 percent. [Table 7].

**Doctor of Pharmacy Degrees Conferred to Postbaccalaureate Students.** Twenty-nine (29) colleges and schools conferred the Pharm.D. degree to postbaccalaureate students in 2008-09. The number of graduates per institution ranged from 1 to 156 students (median, 7 students). The number of doctor of pharmacy degrees conferred as postbaccalaureate degrees (Pharm.D.2) decreased by 15.8 percent to 528 in 2008-09 from 627 in 2007-08 [Table 5]. More women than men received Pharm.D.2 degrees in 2008-09 (women, 66.1 percent; men, 33.9 percent) [Table 6].

White Americans received 48.1 percent of Pharm.D.2 degrees conferred in 2008-09. Underrepresented minori-

Table 4. Baccalaureate and Doctor of Pharmacy (Pharm.D.1) Degrees as Percentages of Total First Professional Degrees Conferred 1981-2009

Year	B.S. Pharmacy <sup>a</sup> n (%)	Pharm.D.1 <sup>b</sup> n (%)	First Professional <sup>c</sup> n
1981	6869 (93.8)	454 (6.2)	7323
1982	6448 (94.0)	411 (6.0)	6859
1983	5919 (92.9)	455 (7.1)	6374
1984	5546 (93.0)	417 (7.0)	5963
1985	5147 (89.7)	588 (10.3)	5735
1986	5190 (89.5)	610 (10.5)	5800
1987	5164 (88.2)	690 (11.8)	5854
1988	5371 (86.9)	813 (13.1)	6184
1989	5721 (87.3)	839 (12.7)	6560
1990	6010 (86.4)	946 (13.6)	6956
1991	5927 (83.2)	1195 (16.8)	7122
1992	5897 (82.9)	1216 (17.1)	7113
1993	6031 (81.7)	1349 (18.3)	7380
1994	6145 (81.9)	1359 (18.1)	7504
1995	6218 (79.3)	1619 (20.7)	7837
1996	6168 (77.1)	1835 (22.9)	8003
1997	5768 (74.2)	2004 (25.8)	7772
1998	4768 (64.4)	2632 (35.6)	7400
1999	3876 (54.3)	3265 (45.7)	7141
2000	2956 (40.7)	4304 (59.3)	7260
2001	1914 (27.3)	5086 (72.7)	7000
2002	1415 (18.7)	6158 (81.3)	7573
2003	839 (11.2)	6649 (88.8)	7488
2004	388 (4.8)	7770 (95.2)	8158
2005	26 (0.3)	8242 (99.7)	8268
2006	0 (0.0)	9040 (100.0)	9040
2007	0 (0.0)	9812 (100.0)	9812
2008	0 (0.0)	10500 (100.0)	10500
2009	0 (0.0)	10988 (100.0)	10988

<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

ties received 13.5 percent of the Pharm.D.2 degrees conferred (black, 8.7 percent; Hispanic, 3.4 percent; American Indian, 0.4 percent). Asian Americans received 18.4 percent of the Pharm.D.2 degrees conferred in 2008-09. The percentage of Pharm.D.2 degree recipients who were foreign, nonpermanent residents of the U.S. was 13.4 percent, up from 9.6 percent in 2007-08 [Table 8].

**Graduate Degrees Conferred**

The number of master of science (M.S.) degrees conferred has shown annual fluctuations over the 44 years data have been consistently gathered and reported [Table 3]. The number of M.S. degrees conferred increased from 732 in 2007-08 to 767 in 2008-09, a 4.8 percent increase.



Table 5. Annual Percentage Change in Number of Pharmacy Degrees Conferred 1981-2009 Over Previous Year

Year	First Professional <sup>a</sup>		Pharm.D.2 <sup>b</sup>		M.S.		Ph.D.	
	n	% Change	n	% Change	n	% Change	n	% Change
1981	7323	-1.5	210	+16.7	434	-6.7	180	-4.8
1982	6859	-6.3	207	-1.4	458	+5.5	182	+1.1
1983	6374	-7.1	271	+30.9	426	-7.0	208	+14.3
1984	5963	-6.4	331	+22.2	394	-7.5	227	+9.1
1985	5735	-3.8	224	-32.3	338	-14.2	232	+2.2
1986	5800	+1.1	210	-6.3	415	+22.8	260	+12.1
1987	5854	+0.9	212	+1.0	348	-16.1	283	+8.8
1988	6184	+5.6	159	-25.0	353	+1.4	263	-7.1
1989	6560	+6.0	222	+39.6	391	+10.8	287	+9.1
1990	6956	+6.0	302	+36.0	385	-1.5	273	-4.9
1991	7122	+2.4	271	-10.3	364	-5.5	313	+14.7
1992	7113	-0.1	286	+5.5	282	-22.5	317	+1.3
1993	7380	+3.8	396	+38.5	301	+6.7	348	+9.8
1994	7504	+1.7	575	+45.2	355	+17.9	320	-8.0
1995	7837	+4.4	704	+22.4	392	+10.4	350	+9.4
1996	8003	+2.1	732	+4.0	422	+7.7	304	-13.1
1997	7772	-2.9	859	+17.3	400	-5.2	358	+17.8
1998	7400	-4.8	1014	+18.0	421	+5.3	411	+14.8
1999	7141	-3.5	913	-10.0	384	-8.8	359	-12.7
2000	7260	+1.7	1269	+39.0	354	-7.8	323	-10.0
2001	7000	-3.6	979	-22.9	461	+30.2	375	+16.1
2002	7573	+8.2	780	-20.3	443	-3.9	376	+0
2003	7488	-1.1	895	+14.7	472	+6.5	384	+2.1
2004	8158	+8.9	756	-15.5	651	+37.9	335	-12.8
2005	8268	+1.3	668	-11.6	626	-3.8	429	+28.1
2006	9040	+9.3	515	-22.9	644	+2.9	442	+3.0
2007	9812	+8.5	470	-8.7	604	-6.2	412	-6.8
2008	10500	+7.0	627	+33.4	732	+21.2	468	+13.6
2009	10988	+4.6	528	-15.8	767	+4.8	458	-2.1

<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 number of Ph.D. degrees conferred decreased in 2008-09 to 458 from 468 in 2007-08 (2.1 percent decrease) [Table 5].

The highest percentage of M.S. degrees awarded in 2008-09 (34.7 percent) was in pharmaceuticals. The second highest percentage of M.S. degrees was in pharmacology (19.6 percent), followed by other discipline (pharmaceutical and biomedical regulatory affairs, quality assurance and regulatory affairs, drug regulatory affairs, anatomy, and biomedical writing/bioinformatics) (15.0 percent), social and administrative sciences (14.1 percent), pharmacy practice (9.4 percent), and medicinal chemistry (7.3 percent). The highest number of Ph.D. degrees awarded in 2008-09 was in the discipline of pharmaceuticals (41.9 percent). The second highest number was in medicinal chemistry (24.2 percent), followed by pharmacology (15.1 percent), social and administrative sciences (9.4 percent), other discipline (biophysics/biomedical & medical infor-

matics, pharmaceutical & biomedical science, and health outcomes and policy research) (5.0 percent), and pharmacy practice (4.4 percent) [Table 9].

More women than men earned M.S. degrees (women, 51.6 percent; men, 48.4 percent) in 2008-09, and Ph.D. degrees (women, 50.2 percent; men, 49.8 percent). This is the first year that women received more Ph.D. degrees than men. The percentage of women receiving Ph.D. degrees in 2008-09 increased from 44.0 percent in 2007-08. The share of Ph.D. degrees received by women has grown substantially from 18.0 percent in 1979-80 [Table 6]. This increase can be attributed to an increase in the number of foreign females receiving Ph.D. degrees. Black, Hispanic, and American Indian women have a propensity to be underrepresented as Ph.D. recipients. In 2008-09, eleven black women, seven Hispanic women, and zero American Indian women received Ph.D.s. From 1979-80 to 2008-09, 138 Ph.D. degrees were conferred to black women,

Table 6. Percentage of Pharmacy Degrees Conferred 1980-2009 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	M	F	M	F	M	F	M	F	M	F
1980	59.5	40.5	59.7	40.3	59.5	40.5	66.7	33.3	67.7	32.3	82.0	18.0
1981	54.6	45.4	58.4	41.6	54.9	45.1	51.9	48.1	62.4	37.6	84.4	15.6
1982	53.0	47.0	52.8	47.2	53.0	47.0	57.5	42.5	64.0	36.0	80.2	19.8
1983	50.6	49.4	52.7	47.3	50.7	49.3	50.2	49.8	65.0	35.0	74.0	26.0
1984	51.0	49.0	45.1	54.9	50.5	49.5	51.1	48.9	64.2	35.8	76.7	23.3
1985	45.9	54.1	47.8	52.2	46.1	53.9	54.0	46.0	62.1	37.9	75.4	24.6
1986	45.7	54.3	45.6	54.4	45.7	54.3	46.2	53.8	59.0	41.0	73.8	26.2
1987	43.3	56.7	42.2	57.8	43.1	56.9	40.6	59.4	56.6	43.4	71.7	28.3
1988	41.8	58.2	39.6	60.4	41.5	58.5	46.5	53.5	55.0	45.0	71.5	28.5
1989	40.4	59.6	37.4	62.6	40.0	60.0	44.6	55.4	57.8	42.2	61.0	39.0
1990	39.8	60.2	41.0	59.0	40.0	60.0	39.1	60.9	52.5	47.5	66.3	33.7
1991	38.3	61.7	36.5	63.5	38.0	62.0	39.1	60.9	51.9	48.1	64.2	35.8
1992	38.3	61.7	35.9	64.1	37.9	62.1	43.4	56.6	52.5	47.5	61.5	38.5
1993	37.2	62.8	34.1	65.9	36.6	63.4	35.6	64.4	49.2	50.8	64.1	35.9
1994	37.0	63.0	32.0	68.0	36.1	63.9	36.2	63.8	51.3	48.7	61.9	38.1
1995	36.8	63.2	34.2	65.8	36.3	63.7	38.4	61.6	47.7	52.3	62.3	37.7
1996	37.5	62.5	31.8	68.2	36.2	63.8	36.1	63.9	51.4	48.6	61.2	38.8
1997	38.4	61.7	34.5	65.5	37.4	62.6	37.4	62.6	47.8	52.2	60.9	39.1
1998	38.1	61.9	31.5	68.5	35.8	64.2	34.6	65.4	46.8	53.2	57.9	42.1
1999	39.4	60.6	33.1	66.9	36.5	63.5	34.5	65.5	44.8	55.2	61.6	38.4
2000	37.7	62.3	33.3	66.7	35.1	64.9	37.0	63.0	43.5	56.5	53.9	46.1
2001	39.4	60.6	34.0	66.0	35.5	64.5	37.5	62.5	39.5	60.5	56.3	43.7
2002	38.2	61.8	33.4	66.6	34.3	65.7	35.4	64.6	40.2	59.8	57.4	42.6
2003	36.1	63.9	35.1	64.9	35.2	64.8	37.8	62.2	42.2	57.8	54.7	45.3
2004	39.4	60.6	33.1	66.9	33.4	66.6	36.6	63.4	42.1	57.9	52.5	47.5
2005	61.5	38.5	31.8	68.2	31.9	68.1	36.1	63.9	37.2	62.8	50.1	49.9
2006	NA	NA	31.8	68.2	31.8	68.2	39.2	60.8	37.5	62.5	57.0	43.0
2007	NA	NA	32.3	67.7	32.3	67.7	20.6	79.4	39.1	60.9	53.4	46.6
2008	NA	NA	34.0	66.0	34.0	66.0	35.9	64.1	37.6	62.4	56.0	44.0
2009	NA	NA	35.6	64.4	35.6	64.4	33.9	66.1	48.4	51.6	49.8	50.2

<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

54 to Hispanic women, and 4 to American Indian women. [Table 10].

Underrepresented minorities received 5.3 percent of the M.S. degrees conferred in 2008-09 (black, 3.9 percent; Hispanic, 1.4 percent; American Indian, 0.0 percent), a decrease from 9.4 percent in 2007-08. Asian Americans received 11.1 percent of the M.S. degrees conferred, up from 10.2 percent in 2007-08. The percentage of M.S. degree recipients who were foreign, nonpermanent residents of the U.S. was 49.5 percent, up from 28.1 percent in 2007-08 [Table 11].

Underrepresented minorities earned 6.1 percent of the Ph.D. degrees awarded in 2008-09 (black, 3.9 percent; Hispanic, 2.2 percent; American Indian, 0.0 percent), an increase from 4.7 percent in 2007-08. Asian Americans earned 11.8 percent of the Ph.D. degrees awarded. The

percentage of Ph.D. degree recipients who were foreign, nonpermanent residents of the U.S. was 46.1 percent, down from 47.2 percent in 2007-08 [Table 12].

### FALL 2009 ENROLLMENTS

The 2009 Professional Degree Enrollment and Graduate Degree Enrollment Surveys were conducted online in October 2009, with an announcement and request for participation sent to the dean at each of the 116 colleges and schools of pharmacy in the U.S. recognized by ACPE. Submission of the data was requested by December 2009. Follow-up telephone calls were made to non-responding colleges and schools and to those submitting incomplete data. A 100.0 percent response rate for both surveys was achieved.

Table 7. Percentage of First Professional Degree (B.S. Pharmacy, B.Pharm., and Pharm.D.1) Recipients 1980-2009 by Race/Ethnicity

Year	White <sup>a</sup> n (%)	Black or African American <sup>a</sup> n (%)	Hispanic or Latino <sup>a</sup> n (%)	Asian, Native Hawaiian, or Other Pacific Islander <sup>a</sup> n (%)	American Indian or Alaska Native <sup>a</sup> n (%)	Other/ Unknown <sup>a, b</sup> n (%)	Foreign <sup>c</sup> n (%)
1980	6335 (85.2)	249 (3.4)	277 (3.7)	292 (3.9)	8 (0.1)	49 (0.7)	222 (3.0)
1981	6205 (84.7)	230 (3.1)	361 (4.9)	288 (3.9)	5 (0.1)	7 (0.1)	227 (3.1)
1982	5810 (84.7)	250 (3.6)	241 (3.5)	317 (4.6)	13 (0.2)	18 (0.3)	210 (3.1)
1983	5189 (81.4)	241 (3.8)	261 (4.1)	316 (5.0)	8 (0.1)	93 (1.5)	266 (4.2)
1984	4676 (78.4)	242 (4.1)	217 (3.6)	339 (5.7)	10 (0.2)	174 (2.9)	305 (5.1)
1985	4591 (80.1)	250 (4.4)	245 (4.3)	320 (5.6)	6 (0.1)	8 (0.1)	315 (5.5)
1986	4534 (78.2)	306 (5.3)	217 (3.7)	333 (5.7)	11 (0.2)	0 (0.0)	399 (6.9)
1987	4559 (77.9)	298 (5.1)	258 (4.4)	371 (6.3)	8 (0.1)	15 (0.3)	345 (5.9)
1988	4943 (79.9)	282 (4.6)	248 (4.0)	335 (5.4)	12 (0.2)	27 (0.4)	337 (5.4)
1989	5040 (76.8)	310 (4.7)	249 (3.8)	454 (6.9)	12 (0.2)	90 (1.4)	405 (6.2)
1990	5303 (76.2)	368 (5.3)	254 (3.7)	586 (8.4)	11 (0.2)	88 (1.3)	346 (5.0)
1991	5381 (75.6)	350 (4.9)	288 (4.1)	745 (10.5)	20 (0.3)	58 (0.8)	280 (3.9)
1992	5304 (74.6)	381 (5.4)	289 (4.1)	771 (10.8)	20 (0.3)	40 (0.6)	308 (4.3)
1993	5346 (72.4)	452 (6.1)	260 (3.5)	873 (11.8)	19 (0.3)	124 (1.7)	306 (4.1)
1994	5476 (73.0)	385 (5.1)	269 (3.6)	972 (13.0)	23 (0.3)	122 (1.6)	257 (3.4)
1995	5584 (71.3)	445 (5.7)	282 (3.6)	1161 (14.8)	28 (0.4)	48 (0.6)	289 (3.7)
1996	5527 (69.1)	528 (6.6)	266 (3.3)	1328 (16.6)	25 (0.3)	56 (0.7)	273 (3.4)
1997	5364 (69.0)	446 (5.7)	282 (3.6)	1363 (17.5)	34 (0.4)	45 (0.6)	238 (3.1)
1998	5041 (68.1)	444 (6.0)	264 (3.6)	1404 (19.0)	26 (0.4)	58 (0.8)	163 (2.2)
1999	4597 (64.4)	401 (5.6)	266 (3.7)	1327 (18.6)	36 (0.5)	366 (5.1)	148 (2.1)
2000	4517 (62.2)	480 (6.6)	287 (4.0)	1505 (20.7)	44 (0.6)	223 (3.1)	204 (2.8)
2001	4469 (63.8)	428 (6.1)	253 (3.6)	1456 (20.8)	26 (0.4)	194 (2.8)	174 (2.5)
2002	4648 (61.4)	575 (7.6)	303 (4.0)	1625 (21.5)	47 (0.6)	198 (2.6)	177 (2.3)
2003	4473 (59.7)	591 (7.9)	310 (4.1)	1691 (22.6)	38 (0.5)	182 (2.4)	203 (2.7)
2004	4954 (60.7)	612 (7.5)	295 (3.6)	1857 (22.8)	32 (0.4)	190 (2.3)	218 (2.7)
2005	5031 (60.8)	720 (8.7)	361 (4.4)	1683 (20.4)	52 (0.6)	226 (2.7)	195 (2.4)
2006 <sup>d</sup>	5650 (62.5)	668 (7.4)	377 (4.2)	1822 (20.2)	39 (0.4)	265 (2.9)	219 (2.4)
2007	6182 (63.0)	682 (7.0)	386 (3.9)	1970 (20.1)	53 (0.5)	337 (3.4)	202 (2.1)
2008	6560 (62.5)	702 (6.7)	407 (3.9)	2106 (20.1)	61 (0.6)	424 (4.0)	240 (2.3)
2009	6660 (60.6)	688 (6.3)	454 (4.1)	2333 (21.2)	64 (0.6)	497 (4.5)	292 (2.7)

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

<sup>b</sup> Includes students for whom ethnic origin is unknown

<sup>c</sup> Nonpermanent resident/citizen of a country other than the U.S.

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

### Professional Degree Programs

Fall 2009 enrollments in the Pharm.D. as the first professional degree programs (n=54,710) represented a 3.8 percent increase from enrollments in fall 2008 (n=52,685) [Table 13]. In fall 2009, 61.3 percent of the students enrolled in the Pharm.D. as the first professional degree programs were females and 38.7 percent were males [Table 14].

White Americans composed the majority (58.0 percent) of students enrolled in the Pharm.D. as the first professional degree programs. Asian Americans accounted for 22.8 percent; black Americans, 6.5 percent; Hispanic Americans, 4.2 percent; American Indians, 0.5 percent;

and foreign students, 2.6 percent. Over five percent (5.3 percent) of enrollees were listed as other/unknown. Enrollments of underrepresented minorities (black, Hispanic, American Indian) as a percentage of total enrollments in the Pharm.D. as the first professional degree programs increased slightly from fall 2008 to fall 2009 (11.1 percent in fall 2008; 11.2 percent in fall 2009) [Table 15].

Twenty-seven (27) colleges and schools reported 1,931 students who already held a baccalaureate in pharmacy enrolled in doctor of pharmacy degree programs (Pharm.D.2). This was a decrease of 5.2 percent from fall 2008. White Americans composed 40.5 percent; black

Table 8. Percentage of Postbaccalaureate Doctor of Pharmacy Degree (Pharm.D.2) Recipients 1980-2009 by Race/Ethnicity

Year	White <sup>a</sup>	Black or African American <sup>a</sup>	Hispanic or Latino <sup>a</sup>	Asian, Native Hawaiian, or Other Pacific Islander <sup>a</sup>	American Indian or Alaska Native <sup>a</sup>	Other/Unknown <sup>a, b</sup>	Foreign <sup>c</sup>
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
1980	161 (89.4)	4 (2.2)	2 (1.1)	3 (1.7)	0 (0.0)	0 (0.0)	10 (5.6)
1981	171 (81.4)	7 (3.3)	9 (4.3)	5 (2.4)	0 (0.0)	1 (0.5)	17 (8.1)
1982	172 (83.1)	6 (2.9)	3 (1.4)	9 (4.3)	1 (0.5)	0 (0.0)	16 (7.7)
1983	217 (80.1)	23 (8.5)	7 (2.6)	9 (3.3)	0 (0.0)	0 (0.0)	15 (5.5)
1984	268 (81.0)	10 (3.0)	5 (1.5)	8 (2.4)	0 (0.0)	4 (1.2)	36 (10.9)
1985	174 (77.7)	13 (5.8)	2 (0.9)	7 (3.1)	1 (0.4)	6 (2.7)	21 (9.4)
1986	154 (73.3)	15 (7.1)	6 (2.9)	6 (2.9)	0 (0.0)	0 (0.0)	29 (13.8)
1987	170 (80.2)	5 (2.4)	7 (3.3)	6 (2.8)	0 (0.0)	4 (1.9)	20 (9.4)
1988	124 (78.0)	5 (3.1)	1 (0.6)	3 (1.9)	0 (0.0)	0 (0.0)	26 (16.4)
1989	171 (77.0)	9 (4.1)	3 (1.4)	14 (6.3)	0 (0.0)	0 (0.0)	25 (11.3)
1990	244 (80.8)	13 (4.3)	10 (3.3)	10 (3.3)	0 (0.0)	4 (1.3)	21 (7.0)
1991	217 (80.1)	11 (4.1)	4 (1.5)	11 (4.1)	0 (0.0)	2 (0.7)	26 (9.6)
1992	232 (81.1)	15 (5.2)	2 (0.7)	6 (2.1)	0 (0.0)	1 (0.3)	30 (10.5)
1993	308 (77.8)	17 (4.3)	9 (2.3)	16 (4.0)	2 (0.5)	6 (1.5)	38 (9.6)
1994	462 (80.3)	26 (4.5)	12 (2.1)	33 (5.7)	0 (0.0)	1 (0.2)	41 (7.1)
1995	573 (81.4)	38 (5.4)	10 (1.4)	47 (6.7)	2 (0.3)	2 (0.3)	32 (4.5)
1996	589 (80.5)	34 (4.6)	11 (1.5)	55 (7.5)	1 (0.1)	6 (0.8)	36 (4.9)
1997	674 (78.5)	59 (6.9)	5 (0.6)	64 (7.5)	3 (0.4)	12 (1.4)	42 (4.9)
1998	786 (77.5)	41 (4.0)	12 (1.2)	125 (12.3)	0 (0.0)	6 (0.6)	44 (4.3)
1999	627 (68.7)	59 (6.5)	35 (3.8)	108 (11.8)	7 (0.8)	53 (5.8)	24 (2.6)
2000	897 (70.7)	67 (5.3)	54 (4.3)	175 (13.8)	10 (0.8)	31 (2.4)	35 (2.8)
2001	690 (70.0)	62 (6.3)	23 (2.3)	153 (15.6)	9 (0.9)	20 (2.0)	22 (2.2)
2002	533 (68.3)	43 (5.5)	29 (3.7)	125 (16.0)	4 (0.5)	31 (4.0)	15 (1.9)
2003	567 (63.4)	57 (6.4)	34 (3.8)	149 (16.6)	4 (0.4)	60 (6.7)	24 (2.7)
2004	472 (62.4)	80 (10.6)	43 (5.7)	89 (11.8)	4 (0.5)	30 (4.0)	38 (5.0)
2005	351 (52.5)	55 (8.2)	53 (7.9)	86 (12.9)	3 (0.4)	84 (12.6)	36 (5.4)
2006	284 (55.1)	42 (8.2)	29 (5.6)	68 (13.2)	0 (0.0)	54 (10.5)	38 (7.4)
2007	187 (39.8)	97 (20.6)	47 (10.0)	72 (15.3)	3 (0.6)	32 (6.8)	32 (6.8)
2008	344 (54.9)	61 (9.7)	22 (3.5)	103 (16.4)	1 (0.2)	36 (5.7)	60 (9.6)
2009	254 (48.1)	46 (8.7)	23 (4.4)	97 (18.4)	2 (0.4)	35 (6.6)	71 (13.4)

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

<sup>b</sup> Includes students for whom ethnic origin is unknown.

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

Americans accounted for 10.9 percent of these students; Hispanic Americans, 4.6 percent; Asian Americans, 20.5 percent; American Indians, 0.3 percent; other/unknown, 9.9 percent; and foreign students, 13.3 percent.

### Graduate Degree Programs

In fall 2009, the discipline of pharmaceuticals had the highest number of full-time enrollees at both the M.S. and Ph.D. levels (26.5 percent and 38.1 percent, respectively). At the master's level, 25.5 percent of the students enrolled were in pharmacy practice programs, 22.0 percent in social and administrative sciences programs, 14.5 percent in pharmacology programs, 10.0 percent in medicinal chemistry programs, and 1.4 percent in the other discipline (bioinformatics/biomedical writing and health outcomes

and policy research). At the doctoral level, 26.6 percent of the students were enrolled in medicinal chemistry programs, 18.2 percent in pharmacology programs, 8.9 percent in social and administrative science programs, 4.5 percent in the other discipline (biophysics/biological & medical informatics pharmaceutical & biomedical science, translational science, and health outcomes and policy research), and 3.6 percent in pharmacy practice [Table 16].

In fall 2009, more females than males were enrolled full-time in M.S. degree programs (females, 55.5 percent; males, 44.5 percent). Women accounted for 49.5 percent of the students enrolled full-time in Ph.D. programs in 2009, up from 48.5 percent in 2008.

Of the 1,117 students enrolled full-time in M.S. degree programs in fall 2009, 30.0 percent were white



Table 9. Summary of Master of Science and Doctor of Philosophy Degrees Conferred 2008-09 by Gender and Discipline

Discipline	M.S. Degree				Ph.D. Degree			
	M	F	Total	Percent of M.S. Degrees Conferred	M	F	Total	Percent of Ph.D. Degrees Conferred
Medicinal chemistry	24	32	56	7.3	52	59	111	24.2
Pharmacology	70	80	150	19.6	29	40	69	15.1
Social and administrative sciences	49	59	108	14.1	22	21	43	9.4
Pharmacy practice	31	41	72	9.4	11	9	20	4.4
Pharmaceutics	147	119	266	34.7	98	94	192	41.9
Other <sup>a</sup>	50	65	115	15.0	16	7	23	5.0
Total	371	396	767		228	230	458	

<sup>a</sup> Includes Pharmaceutical and Biomedical Regulatory Affairs, Quality Assurance and Regulatory Affairs, Drug Regulatory Affairs, Anatomy, and Biomedical Writing/Bioinformatics M.S. programs and Biophysics/Biomedical & Medical Informatics, Pharmaceutical & Biomedical Science, and Health Outcomes and Policy Research in Ph.D. programs

Americans. Foreign students were the largest group, accounting for 46.9 percent of the enrollees. Black Americans accounted for 4.6 percent of the enrollees; Asian Americans, 7.5 percent; Hispanic Americans, 4.3 percent; and American Indians, 0.6 percent.

Of the 2,929 students enrolled full-time in Ph.D. degree programs in fall 2009, foreign students were the largest group, accounting for 51.1 percent of the enrollees. Nearly thirty-two percent (31.5 percent) were white Americans. Asian Americans accounted for 6.9 percent of the enrollees; black Americans, 5.0 percent; Hispanic Americans, 2.8 percent; and American Indians, 0.3 percent. Over thirty-nine percent (39.1 percent) of full-time and part-time students in Ph.D. programs held a profes-

sional pharmacy degree: 9.8 percent of Ph.D. students held a professional pharmacy degree from a U.S. college or school of pharmacy, and 29.2 percent held a pharmacy degree conferred by a non-U.S. institution [Table 17].

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This report is an excerpt from the Profile of Pharmacy Students—Fall 2009, published by the American Association of Colleges of Pharmacy (2010).

Table 10. Number of Doctor of Philosophy Degrees (Ph.D.) Conferred 1980-2009 by Gender and Race/Ethnicity

Year	White <sup>a</sup>			Black or African American <sup>a</sup>			Hispanic or Latino <sup>a</sup>			Asian, Native Hawaiian, or Other Pacific Islander <sup>a</sup>			American Indian or Alaska Native <sup>a</sup>			Other/Unknown <sup>a, b</sup>			Foreign <sup>c</sup>			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1980	96	16	112	3	0	3	1	0	1	10	2	12	0	0	0	2	1	3	43	15	58	155	34	189
1981	112	21	133	1	0	1	1	0	1	6	2	8	0	0	0	0	0	0	32	5	37	152	28	180
1982	105	21	126	1	0	1	1	0	1	2	1	3	0	0	0	1	0	1	36	14	50	146	36	182
1983	104	28	132	0	0	0	1	0	1	6	3	9	0	0	0	3	1	4	40	22	62	154	54	208
1984	105	30	135	2	0	2	5	2	7	11	2	13	0	0	0	6	0	6	45	19	64	174	53	227
1985	106	34	140	2	0	2	1	1	2	6	4	10	1	0	1	0	0	59	18	77	175	57	232	
1986	112	48	160	2	0	2	1	0	1	4	2	6	0	0	0	0	0	73	18	91	192	68	260	
1987	119	43	162	2	0	2	4	0	4	7	6	13	0	0	0	7	1	8	64	30	94	203	80	283
1988	97	48	145	1	1	2	3	0	3	4	2	6	0	0	0	1	1	2	82	23	105	188	75	263
1989	100	54	154	1	3	4	2	2	4	6	4	10	0	0	0	3	3	6	63	46	109	175	112	287
1990	100	51	151	4	3	7	1	0	1	17	7	24	0	0	0	6	2	8	53	29	82	181	92	273
1991	104	64	168	5	3	8	3	0	3	12	14	26	0	0	0	5	0	5	72	31	103	201	112	313
1992	78	60	138	5	3	8	3	1	4	12	9	21	0	0	0	3	1	4	94	48	142	195	122	317
1993	110	50	160	1	4	5	2	1	3	10	10	20	1	0	1	0	0	0	99	60	159	223	125	348
1994	95	56	151	2	4	6	2	2	4	16	9	25	0	0	0	2	0	2	82	51	133	198	122	320
1995	95	53	148	5	5	10	1	4	5	20	13	33	1	1	2	3	1	4	93	55	148	218	132	350
1996	83	52	135	3	6	9	1	4	5	11	12	23	0	0	0	2	1	3	86	43	129	186	118	304
1997	87	58	145	6	4	10	1	2	3	12	13	25	0	0	0	7	0	7	105	63	168	218	140	358
1998	101	65	166	4	10	14	5	1	6	14	18	32	2	0	2	1	3	4	111	76	187	238	173	411
1999	82	49	131	6	7	13	4	2	6	22	17	39	0	0	0	12	3	15	95	60	155	221	138	359
2000	61	62	123	5	6	11	0	0	0	23	15	38	0	0	0	6	14	20	79	52	131	174	149	323
2001	83	46	129	5	10	15	4	2	6	27	27	54	0	0	0	3	1	4	89	78	167	211	164	375
2002	92	59	151	2	6	8	2	3	5	14	13	27	2	0	2	3	4	7	101	75	176	216	160	376
2003	77	62	139	5	8	13	7	2	9	19	13	32	0	0	0	4	1	5	98	88	186	210	174	384
2004	67	47	114	6	5	11	2	3	5	15	16	31	0	0	0	3	1	4	83	87	170	176	159	335
2005	66	43	109	10	9	19	5	3	8	10	25	35	1	1	2	3	3	6	120	130	250	215	214	429
2006	82	45	127	5	12	17	5	3	8	19	15	34	0	0	0	2	0	2	139	115	254	252	190	442
2007	78	50	128	5	11	16	4	4	8	19	16	35	0	0	0	1	4	5	113	107	220	220	192	412
2008	104	60	164	4	7	11	4	5	9	27	19	46	0	2	2	7	8	15	116	105	221	262	206	468
2009	80	71	151	7	11	18	3	7	10	31	23	54	0	0	0	7	7	14	100	111	211	228	230	458

<sup>a</sup> US citizen or permanent resident<sup>b</sup> Includes students for whom ethnic origin is unknown<sup>c</sup> Nonpermanent resident/citizen of a country other than the United States

Table 11. Percentage of Master of Science (M.S.) Degree Recipients 1980-2009 by Race/Ethnicity

Year	White <sup>a</sup> n (%)	Black or African American <sup>a</sup> n (%)	Hispanic or Latino <sup>a</sup> n (%)	Asian, Native		Other/ Unknown <sup>a, b</sup> n (%)	Foreign <sup>c</sup> n (%)
				Hawaiian, or Other Pacific Islander <sup>a</sup> n (%)	American Indian or Alaska Native <sup>a</sup> n (%)		
1980	299 (64.3)	10 (2.2)	3 (0.6)	27 (5.8)	0 (0.0)	41 (8.8)	85 (18.3)
1981	305 (70.3)	17 (3.9)	2 (0.5)	14 (3.2)	0 (0.0)	1 (0.2)	95 (21.9)
1982	282 (61.6)	5 (1.1)	6 (1.3)	6 (1.3)	1 (0.2)	27 (5.9)	131 (28.6)
1983	282 (66.2)	2 (0.5)	4 (0.9)	10 (2.3)	0 (0.0)	40 (9.4)	88 (20.7)
1984	254 (64.5)	8 (2.0)	4 (1.0)	16 (4.1)	0 (0.0)	21 (5.3)	91 (23.1)
1985	215 (63.6)	10 (3.0)	3 (0.9)	11 (3.3)	0 (0.0)	1 (0.3)	98 (29.0)
1986	282 (68.0)	6 (1.4)	8 (1.9)	7 (1.7)	1 (0.2)	0 (0.0)	111 (26.7)
1987	231 (66.4)	6 (1.7)	4 (1.1)	11 (3.2)	0 (0.0)	14 (4.0)	82 (23.6)
1988	227 (64.3)	12 (3.4)	4 (1.1)	9 (2.5)	2 (0.6)	2 (0.6)	97 (27.5)
1989	234 (59.8)	8 (2.0)	7 (1.8)	16 (4.1)	0 (0.0)	2 (0.5)	124 (31.7)
1990	209 (54.3)	12 (3.1)	11 (2.9)	28 (7.3)	1 (0.3)	8 (2.1)	116 (30.1)
1991	218 (59.9)	13 (3.6)	7 (1.9)	27 (7.4)	0 (0.0)	2 (0.5)	97 (26.6)
1992	140 (49.6)	14 (5.0)	9 (3.2)	14 (5.0)	0 (0.0)	5 (1.8)	100 (35.5)
1993	149 (49.5)	9 (3.0)	20 (6.6)	13 (4.3)	0 (0.0)	5 (1.7)	105 (34.9)
1994	169 (47.6)	8 (2.3)	13 (3.7)	19 (5.4)	0 (0.0)	5 (1.4)	141 (39.7)
1995	206 (52.6)	16 (4.1)	16 (4.1)	32 (8.2)	0 (0.0)	1 (0.3)	121 (30.9)
1996	236 (55.9)	12 (2.8)	16 (3.8)	23 (5.5)	0 (0.0)	8 (1.9)	127 (30.1)
1997	194 (48.5)	18 (4.5)	17 (4.3)	36 (9.0)	0 (0.0)	5 (1.3)	130 (32.5)
1998	213 (50.6)	14 (3.3)	19 (4.5)	38 (9.0)	1 (0.2)	13 (3.1)	123 (29.2)
1999	173 (45.1)	20 (5.2)	8 (2.1)	31 (8.1)	0 (0.0)	19 (4.9)	133 (34.6)
2000	172 (48.6)	13 (3.7)	13 (3.7)	36 (10.2)	1 (0.3)	2 (0.6)	117 (33.1)
2001	214 (46.4)	26 (5.6)	18 (3.9)	46 (10.0)	1 (0.2)	12 (2.6)	144 (31.2)
2002	181 (40.9)	17 (3.8)	16 (3.6)	43 (9.7)	0 (0.0)	15 (3.4)	171 (38.6)
2003	206 (43.6)	35 (7.4)	11 (2.3)	68 (14.4)	0 (0.0)	16 (3.4)	136 (28.8)
2004	280 (43.0)	51 (7.8)	26 (4.0)	89 (13.7)	1 (0.2)	39 (6.0)	165 (25.3)
2005	270 (43.1)	42 (6.7)	19 (3.0)	80 (12.8)	2 (0.3)	69 (11.0)	144 (23.0)
2006	274 (42.5)	52 (8.1)	28 (4.3)	49 (7.6)	2 (0.3)	57 (8.9)	182 (28.3)
2007	278 (46.0)	49 (8.1)	12 (2.0)	84 (13.9)	2 (0.3)	51 (8.4)	128 (21.2)
2008	318 (43.4)	35 (4.8)	33 (4.5)	75 (10.2)	1 (0.1)	64 (8.7)	206 (28.1)
2009	186 (24.3)	30 (3.9)	11 (1.4)	85 (11.1)	0 (0.0)	75 (9.8)	380 (49.5)

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

<sup>b</sup> Includes students for whom ethnic origin is unknown

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

Table 12. Percentage of Doctor of Philosophy Degree (Ph.D.) Recipients 1980-2009 by Race/Ethnicity

Year	Asian, Native						
	White <sup>a</sup> n (%)	Black or African American <sup>a</sup> n (%)	Hispanic or Latino <sup>a</sup> n (%)	Hawaiian or Other Pacific Islander <sup>a</sup> n (%)	American Indian or Alaska Native <sup>a</sup> n (%)	Other/ Unknown <sup>a, b</sup> n (%)	Foreign <sup>c</sup> n (%)
1980	112 (59.3)	3 (1.6)	1 (0.5)	12 (6.3)	0 (0.0)	3 (1.6)	58 (30.7)
1981	133 (73.9)	1 (0.6)	1 (0.6)	8 (4.4)	0 (0.0)	0 (0.0)	37 (20.6)
1982	126 (69.2)	1 (0.5)	1 (0.5)	3 (1.6)	0 (0.0)	1 (0.5)	50 (27.5)
1983	132 (63.5)	0 (0.0)	1 (0.5)	9 (4.3)	0 (0.0)	4 (1.9)	62 (29.8)
1984	135 (59.5)	2 (0.9)	7 (3.1)	13 (5.7)	0 (0.0)	6 (2.6)	64 (28.2)
1985	140 (60.3)	2 (0.9)	2 (0.9)	10 (4.3)	1 (0.4)	0 (0.0)	77 (33.2)
1986	160 (61.5)	2 (0.8)	1 (0.4)	6 (2.3)	0 (0.0)	0 (0.0)	91 (35.0)
1987	162 (57.2)	2 (0.7)	4 (1.4)	13 (4.6)	0 (0.0)	8 (2.8)	94 (33.2)
1988	145 (55.1)	2 (0.8)	3 (1.1)	6 (2.3)	0 (0.0)	2 (0.8)	105 (39.9)
1989	154 (53.7)	4 (1.4)	4 (1.4)	10 (3.5)	0 (0.0)	6 (2.1)	109 (38.0)
1990	151 (55.3)	7 (2.6)	1 (0.4)	24 (8.8)	0 (0.0)	8 (2.9)	82 (30.0)
1991	168 (53.7)	8 (2.6)	3 (1.0)	26 (8.3)	0 (0.0)	5 (1.6)	103 (32.9)
1992	138 (43.5)	8 (2.5)	4 (1.3)	21 (6.6)	0 (0.0)	4 (1.3)	142 (44.8)
1993	160 (46.0)	5 (1.4)	3 (0.9)	20 (5.7)	1 (0.3)	0 (0.0)	159 (45.7)
1994	150 (46.9)	6 (1.9)	4 (1.3)	25 (7.8)	0 (0.0)	2 (0.6)	133 (41.6)
1995	148 (42.3)	10 (2.9)	5 (1.4)	33 (9.4)	2 (0.6)	4 (1.1)	148 (42.3)
1996	135 (44.4)	9 (3.0)	5 (1.6)	23 (7.6)	0 (0.0)	3 (1.0)	129 (42.4)
1997	145 (40.5)	10 (2.8)	3 (0.8)	25 (7.0)	0 (0.0)	7 (2.0)	168 (46.9)
1998	166 (40.4)	14 (3.4)	6 (1.5)	32 (7.8)	2 (0.5)	4 (1.0)	187 (45.5)
1999	131 (36.5)	13 (3.6)	6 (1.7)	39 (10.9)	0 (0.0)	15 (4.2)	155 (43.2)
2000	123 (38.1)	11 (3.4)	0 (0.0)	38 (11.8)	0 (0.0)	20 (6.2)	131 (40.6)
2001	129 (34.4)	15 (4.0)	6 (1.6)	54 (14.4)	0 (0.0)	4 (1.1)	167 (44.5)
2002	151 (40.2)	8 (2.1)	5 (1.3)	27 (7.2)	2 (0.5)	7 (1.9)	176 (46.8)
2003	139 (36.2)	13 (3.4)	9 (2.3)	32 (8.3)	0 (0.0)	5 (1.3)	186 (48.4)
2004	114 (34.0)	11 (3.3)	5 (1.5)	31 (9.3)	0 (0.0)	4 (1.2)	170 (50.7)
2005	109 (25.4)	19 (4.4)	8 (1.9)	35 (8.2)	2 (0.5)	6 (1.4)	250 (58.3)
2006	127 (28.7)	17 (3.8)	8 (1.8)	34 (7.7)	0 (0.0)	2 (0.5)	254 (57.5)
2007	128 (31.1)	16 (3.9)	8 (1.9)	35 (8.5)	0 (0.0)	5 (1.2)	220 (53.4)
2008	164 (35.0)	11 (2.4)	9 (1.9)	46 (9.8)	2 (0.4)	15 (3.2)	221 (47.2)
2009	151 (33.0)	18 (3.9)	10 (2.2)	54 (11.8)	0 (0.0)	14 (3.1)	211 (46.1)

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

<sup>b</sup> Includes students for whom ethnic origin is unknown.

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



Table 13. Summary of Enrollments in First Professional Degree Programs 1980-2009

Year	First Professional Year Classes <sup>a</sup>		All Professional Years <sup>b</sup>		Total Enrollment	
	n	% Change	n	% Change	n	% Change
1980	7377		22093		26617	
1981	6927	-6.1	20468	-7.4	24658	-7.4
1982	6609	-4.6	19350	-5.5	23410	-5.1
1983	6635	0.4	18831	-2.7	23091	-1.4
1984	6986	5.3	18646	-1.0	23312	1.0
1985	7091	1.5	19098	2.4	24820	6.5
1986	7554	6.5	20073	5.1	25643	3.3
1987	7751	2.6	21424	6.7	27292	6.4
1988	7990	3.1	22447	4.8	28891	5.9
1989	8033	0.5	23013	2.5	29560	2.3
1990	8267	2.9	23238	1.0	29797	0.8
1991	8343	0.9	23482	1.1	30314	1.7
1992	8664	3.8	26287	NA	31519	4.0
1993	8970	3.5	27143	3.3	32938	4.5
1994	9157	2.1	27667	1.9	33353	1.3
1995	8740	-4.6	28060	1.4	33415	0.2
1996	9561	9.4	28027	-0.1	33059	-1.1
1997	8571	-10.4	28345	1.1	32529	-1.6
1998	8346	-2.6	28568	0.8	33090	1.7
1999	8123	-2.7	29586	3.6	32537	-1.7
2000	8382	3.2	30301	2.4	34481	6.0
2001	8922	6.4	31769	4.8	35885	4.1
2002	9128	2.3	33437	5.3	38902	8.4
2003	9909	8.6	36454	9.0	41762	10.7
2004	10437	5.3	38544	5.7	43908	— <sup>c</sup>
2005	10506	0.7	41165	6.8	46527	6.0
2006	10992	4.6	43106	4.7	48592	4.4
2007	11533	4.9	45594	5.8	50691	4.3
2008	12379	7.1	47986	5.2	52685	3.9
2009	12705	2.6	49964	4.1	54710	3.8

<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 1992-2009 (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

Table 14. Summary of Enrollments in First Professional Degree Programs by Gender 1980-2009

Year	Male		Female		Total Enrollment	
	N (%)	% Change from Previous Year	N (%)	% Change from Previous Year	N	% Change from Previous Year
1980	13992 (52.6)		12625 (47.4)		26617	
1981	12413 (50.3)	-11.3	12245 (49.7)	-3.0	24658	-7.4
1982	11271 (48.1)	-9.2	12139 (51.9)	-0.9	23410	-5.1
1983	10984 (47.6)	-2.5	12107 (52.4)	-0.3	23091	-1.4
1984	10345 (44.4)	-5.8	12967 (55.6)	7.1	23312	1.0
1985	10685 (43.0)	3.3	14135 (57.0)	9.0	24820	6.5
1986	10628 (41.4)	-0.5	15015 (58.6)	6.2	25643	3.3
1987	10907 (40.0)	2.6	16385 (60.0)	9.1	27292	6.4
1988	11382 (39.4)	4.4	17509 (60.6)	6.9	28891	5.9
1989	11350 (38.4)	-0.3	18210 (61.6)	4.0	29560	2.3
1990	11198 (37.6)	-1.3	18599 (62.4)	2.1	29797	0.8
1991	11219 (37.0)	0.2	19095 (63.0)	2.7	30314	1.7
1992	11543 (36.6)	2.9	19976 (63.4)	4.6	31519	4.0
1993	12117 (36.8)	5.0	20821 (63.2)	4.2	32938	4.5
1994	12243 (36.7)	1.0	21110 (63.3)	1.4	33353	1.3
1995	12221 (36.6)	-0.2	21194 (63.4)	0.4	33415	0.2
1996	11966 (36.2)	-2.1	21093 (63.8)	-0.5	33059	-1.1
1997	11652 (35.8)	-2.6	20877 (64.2)	-1.0	32529	-1.6
1998	11777 (35.6)	1.1	21313 (64.4)	2.1	33090	1.7
1999	11411 (35.1)	-3.1	21126 (64.9)	-0.9	32537	-1.7
2000	11763 (34.1)	3.1	22718 (65.9)	7.5	34481	6.0
2001	12253 (34.1)	4.2	23632 (65.9)	4.0	35885	4.1
2002	12815 (33.0)	4.6	26087 (67.0)	9.1	38902	8.4
2003	13874 (33.2)	11.3	27888 (66.8)	10.3	41762	10.7
2004 <sup>a</sup>	14696 (33.5)	—	29212 (66.5)	—	43908	—
2005	16069 (34.5)	9.3	30458 (65.5)	4.3	46527	6.0
2006 <sup>b</sup>	17397 (35.8)	8.3	31195 (64.2)	2.4	48592	4.4
2007	18735 (37.0)	7.7	31956 (63.0)	2.4	50691	4.3
2008	19896 (37.8)	6.2	32744 (62.2)	2.5	52685	3.9
2009	21158 (38.7)	6.3	33552 (61.3)	2.5	54710	3.8

<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

Table 15. Summary of Enrollments in First Professional Degree Programs by Race/Ethnicity 1980-2009

Year	Black or African American <sup>a</sup>	% Change From Previous Year	Hispanic or Latino <sup>a</sup>	% Change From Previous Year	Asian, 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
1980 <sup>b</sup>	945		934		1035		36	
1981 <sup>b</sup>	932	-1.4	787	-15.7	1040	0.5	38	5.6
1982 <sup>b</sup>	935	0.3	784	-0.4	1072	3.1	36	-5.6
1983 <sup>b</sup>	1019	9.0	787	0.4	922	-14.0	42	16.7
1984 <sup>b</sup>	1098	7.8	763	-3.0	1086	17.8	37	-11.9
1985	1664	NA	927	NA	1410	NA	42	NA
1986	1647	-1.0	1018	9.8	1740	23.4	39	-7.1
1987	1729	5.0	1055	3.6	2000	14.9	45	15.4
1988	1891	9.4	1089	3.2	2362	18.1	78	73.3
1989	1983	4.9	1096	0.6	2706	14.6	81	3.8
1990	2103	6.1	1118	2.0	3346	23.7	85	4.9
1991	2395	13.9	1055	-5.6	3540	5.8	98	15.3
1992	2340	-2.3	1088	3.1	4135	16.8	96	-2.0
1993	2380	1.7	1143	5.1	4731	14.4	128	33.3
1994	2582	8.5	1171	2.4	5408	14.3	128	0.0
1995	2548	-1.3	1150	-1.8	5695	5.3	151	18.0
1996	2529	-0.7	1140	-0.9	6152	8.0	147	-2.6
1997	2632	4.1	1130	-0.9	6451	4.9	150	2.0
1998	2757	4.7	1157	2.4	6741	4.5	160	6.7
1999	2697	-2.2	1086	-6.1	6414	-4.9	156	-2.5
2000	3132	16.1	1255	15.6	7392	15.2	137	-12.2
2001	3407	8.8	1322	5.3	7405	0.2	179	30.7
2002	3826	12.3	1466	10.9	8263	11.6	168	-6.1
2003	4183	9.3	1605	9.5	8991	8.8	191	13.7
2004 <sup>c</sup>	3784	—	1691	—	9103	—	210	—
2005	3703	-2.1	1778	5.1	9690	6.1	234	11.4
2006 <sup>d</sup>	3275	-11.6	1888	6.2	10312	6.4	220	-6.0
2007	3229	-1.4	2044	8.3	10974	6.4	248	12.7
2008	3395	5.1	2186	6.9	11638	6.1	263	6.0
2009	3581	5.5	2278	4.2	12497	7.4	264	0.4

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

<sup>b</sup> Totals for 1981 - 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 by select institutions

<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 2009 Full-Time Enrollments by Gender and Discipline

Discipline	M.S. Degree				Ph.D. Degree			
	M	F	T	Percent of M.S. Program Enrollments	M	F	T	Percent of Ph.D. Program Enrollments
Medicinal Chemistry	41	71	112	10.0	465	313	778	26.6
Pharmacology	67	95	162	14.5	233	301	534	18.2
Social and Administrative Sciences	124	122	246	22.0	116	145	261	8.9
Pharmacy Practice	120	165	285	25.5	47	60	107	3.6
Pharmaceutics	136	160	296	26.5	535	581	1116	38.1
Other <sup>a</sup>	9	7	16	1.4	83	50	133	4.5
Total	497	620	1117		1479	1450	2929	

<sup>a</sup> Includes Bioinformatics/Biomedical Writing and Health Outcomes and Policy Research for M.S. Degree. Includes Biophysics/Biological & Medical Informatics, Pharmaceutical & Biomedical Science, Translational Science, and Health Outcomes and Policy Research for PhD degree

Table 17. Fall 2009 Enrollments in Ph.D. Programs by Type of Enrollment (Full-Time, Part-Time), Discipline, and Source of Previous Degree Earned<sup>a</sup>

	U.S. School		Canadian School		Foreign School		All Schools	
	Pharmacy	Non-pharm	Pharm	Non-pharm	Pharm	Non-pharm	Pharm	Non-pharm
Full-time								
Medicinal Chemistry	24	384	1	1	152	191	177	576
Pharmacology	20	244	0	0	150	97	170	341
Social and Admin. Sciences	50	71	0	0	90	43	140	114
Pharmacy Practice	45	18	0	1	37	6	82	25
Pharmaceutics	40	371	0	15	394	238	434	624
Other	85	22	0	0	5	21	90	43
Total full-time	264	1110	1	17	828	596	1093	1723
Part-time								
Medicinal Chemistry	0	7	0	0	1	3	1	10
Pharmacology	3	7	0	0	4	3	7	10
Social and Admin. Sciences	5	2	0	0	2	0	7	2
Pharmacy Practice	3	5	0	0	0	1	3	6
Pharmaceutics	13	24	0	0	22	13	35	37
Other	0	0	0	0	0	0	0	0
Total part-time	24	45	0	0	29	20	53	65

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