### DOCTORATE RECIPIENTS FROM UNITED STATES UNIVERSITIES: SUMMARY REPORT 2002 SURVEY OF EARNED DOCTORATES

Source: <u>http://www.norc.uchicago.edu/issues/sed-2002.pdf</u> Pages 14-18, and 52 (Table 8)

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# **Doctorates by Race/Ethnicity**

Following the new Federal standards established for the 2000 decennial census of the U.S. population, the SED changed the way in which race and ethnicity were requested starting with the 2001 questionnaire. The new format asked respondents to mark all racial categories that apply to them, rather than a single category as had been requested since 1973 when race and ethnicity questions were first added to the SED questionnaire. Additional changes included separating Pacific Islanders from Asians and combining them with Native Hawaiians in a new racial category, and adding a Cuban response option to the Hispanic ethnicity question. A copy of the 2002 questionnaire is included in appendix D.

A total of 4,730 members of U.S. racial/ethnic minority groups (8) were awarded doctorates, representing 19 percent of the U.S. citizens earning research doctorates in 2002. (See table 8.) This number is higher than in 2001, when 4,624 minority group members earned doctorates; and the 2002 minority percentage is the highest percentage yet recorded in the SED. (See appendix table B-2a.) Blacks earned the most doctorates (1,644) of the five main U.S. minority populations in 2002, followed by Asians (1,364), Hispanics (1,233), American Indians (146), and Hawaiians and other Pacific Islanders (75). (See table 8.) A total of 268 non-Hispanic U.S. citizens reported more than one racial background in the 2002 survey, and are counted here as racial/ethnic minorities, but they and the 75 Hawaiian and other Pacific Islanders are grouped in the "other" category and not shown separately in table 8 or figure 9 because of the lack of trend data.

In 2002, the number of minority doctorate recipients was 22 percent higher than the total in 1997 and 72 percent higher than in 1992. Conversely, there were 11 percent fewer non-Hispanic white doctorate recipients in 2002 compared to 1997, and 10 percent fewer than in 1992. As the numbers in the first panel of table 8 indicate, doctorates awarded to U.S. minority groups generally increased much more in the 1990s than in the 1980s. The twenty-year gains were greater for Asians (200 percent) and Hispanics (130 percent), than for American Indians (90 percent) and blacks (56 percent). (See figures 9 and 10 and table 8.)

(Footnote: 8 As used here, U.S. minority groups include Asians, blacks, Hispanics, American Indians, Native Hawaiians and other Pacific Islanders, and individuals who indicated more than one racial background.)

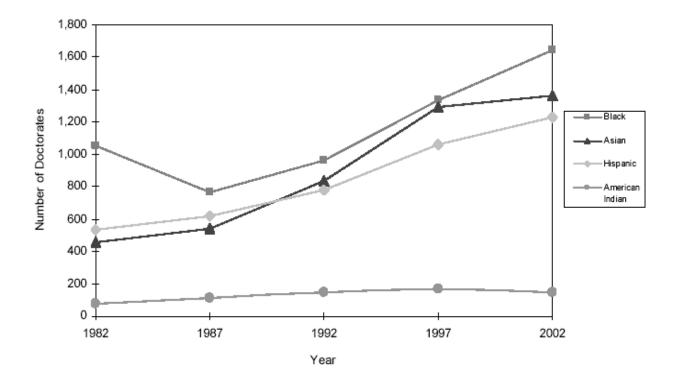
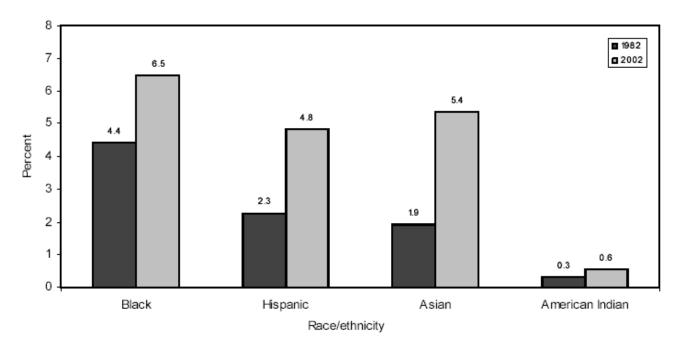


Figure 9: Doctorates awarded to racial/ethnic minority U.S. citizens, by race/ethnicity, for selected years, 1982-2002

Figure 10. Percentage of doctorates earned by racial/ethnic minority U.S. citizens, 1982 and 2002



See Table 8. Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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The primary U.S. minority groups (Asians, blacks, Hispanics, and American Indians) had their largest presence in the broad fields of engineering (24 percent of U.S. citizens earning doctorates), education (23 percent), and the professional/other fields (19 percent) in 2002. The lowest percentage representations were in physical sciences (15 percent) and humanities (15 percent). (See figure 11).

The proportional representation of the different minority groups varied by broad field. Asians were the largest contingent in physical sciences, engineering, and life sciences, representing over half of all minority group members earning doctorates in those fields during the 2002 academic year. Blacks were the largest minority population in social sciences, education, and professional/other fields. Hispanics were the largest minority population in humanities. This pattern of relative representation is observed for each year shown in table 8, back to 1982, with the exception of 1987, when Hispanics slightly outnumbered blacks as the largest minority group in the social sciences. (See table 9 for the numbers of minority doctorate recipients in each of the 25 subfields in 2002.)

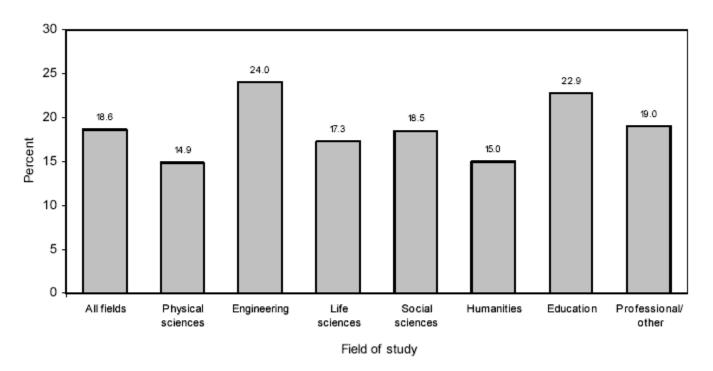


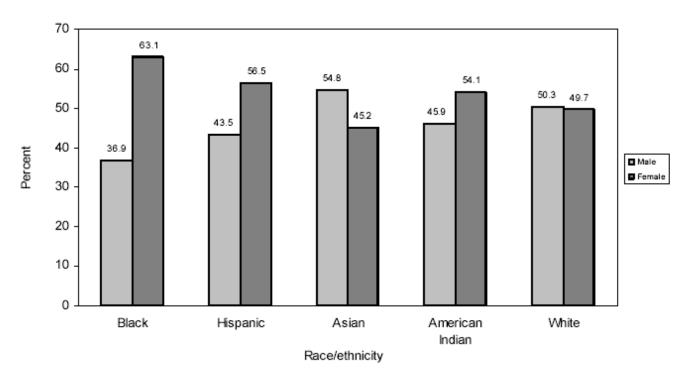
Figure 11. Percentage of doctorates earned by racial/ethnic minority U.S. citizens, by broad field of study, 2002

See Table 8. Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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The pattern of growth for the aggregate U.S. citizen minority populations generally holds for the separate minority groups within the seven broad fields. The general pattern for minority recipients was one of relatively small increases from 1982 to 1992 followed by moderate increases from 1992 to 2002. One exception is that the number of Asian doctorate recipients in engineering and the physical sciences grew rapidly in the late 1980s and early 1990s, but experienced a slight decrease from 1997 to 2002. (See table 8.)

The balance of male and female doctorate recipients varies between racial/ethnic groups. Among U.S. citizens, of doctorates earned by whites, 50 percent were awarded to women; for blacks, various Hispanic groups, and American Indians, women constituted a majority, earning between 54 percent and 63 percent of doctorates received by persons of those races or ethnicities. Among Asian Americans, women were 45 percent of the total. (See figure 12 and appendix table A-4.)



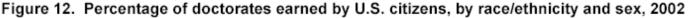


Table 10 lists the universities that awarded the largest number of doctorates to members of the four primary U.S. minority groups between 1998 and 2002, and the number granted by each university. Over that five-year interval, three California institutions – UCLA, Berkeley, and Stanford – and two in Massachusetts – Harvard and MIT – awarded a total of 1,202 doctorates to Asian Americans, or 18 percent of all

See Appendix Tables B-2b and B-2c. Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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doctorates awarded by U.S. universities to Asian Americans. Nova Southeastern University and Howard University awarded, by far, the most doctorates to blacks (374 and 247, respectively), 8 percent of all the doctorates granted to blacks in this period. In general, the leading institutions awarding doctorates to Hispanics are located in the Southwest, including California, and in Puerto Rico. Oklahoma State University awarded the largest number of doctorates to American Indians.

The concentration of U.S. minority doctorate recipients in certain institutions is noticeably greater than for the doctoral population as a whole. For example, in 2002 the ten universities granting the largest numbers of doctorates conferred 16 percent of all doctorates. However, over the 1998-2002 period, the ten universities that awarded the most doctorates to Asians (table 10) granted 28 percent of all Asian doctorates between 1998 and 2002; for blacks the corresponding figure was 19 percent; for Hispanics it was 24 percent, and for American Indians it was 19 percent. (See table 10.)

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Included on the following page is Table 8 from page 52 of the report.

TABLE 8. Number of U.S. citizen doctorate recipients, by race/ethnicity within broad field for selected years, 1982–2002

Field of study by race/ethnicity	1982	1987	1992	1997	2002
All fields	24,435	22,984	26,009	28,160	25,936
Known race/ethnicity	23,835 454	22,514 541	25,661 839	27,074 1,296	25,450 1,364
Asian <sup>b</sup> Black	1.053	768	966	1,335	1,644
Hispanic	537	617	778	1,063	1.233
American Indian •	77	115	149	167	146
White	21,714	20,464	22,903	23,181	20,720
Other d	0	9	26	32	343
Physical sciences a	3,121	3,093	3,538	3,628	2,997
Known race/ethnicity	3,029	3,000	3,475	3,485	2,941
Asian <sup>b</sup> Black	81 30	104 29	178 34	242 59	200 94
Hispanic	34	64	88	106	93
American Indian	5	10	17	14	11
White	2,879	2,793	3,155	3,060	2,504
Other d	0	0	3	4	39
Engineering	1,172	1,558	2,109	2,739	1,890
Known race/ethnicity	1,125	1,509	2,065	2,625	1,832
Asian <sup>b</sup>	72	135	213	290	248
Black	10 23	12 24	32 57	83 82	77 86
Hispanic American Indian °	23	24	11	17	7
White	1.017	1,331	1,749	2,151	1.392
Other d	0	0	3	2	22
Life sciences	4.619	4.242	4,708	5,161	5.328
Known race/ethnicity	4,484	4,154	4,643	5,018	5,244
Asian <sup>b</sup>	112	145	179	313	439
Black	69	78	88	168	187
Hispanic American Indian °	62 12	77	114 19	175 18	203 17
White	4.229	3.837	4.241	4.339	4.336
Other d	4,220	1	2	-,000	62
Social sciences	4,813	4.402	4.672	5,220	4.901
Known race/ethnicity	4.701	4.322	4,609	4,992	4.811
Asian <sup>b</sup>	68	75	97	184	194
Black	194	136	183	255	315
Hispanic American Indian °	115 20	146 22	175 26	232 30	281 32
White	4,304	3,942	4,120	4.282	3.923
Other d	1,001	1	-,120	9	66
Humanities	3.026	2.733	3,468	4.207	4.139
Known race/ethnicity	2,944	2,676	3,425	4,045	4.057
Asian <sup>b</sup>	29	25	52	116	137
Black	96	73	95	137	165
Hispanic	107	96	107	179	214
American Indian <sup>©</sup> White	6 2,706	11 2,470	19 3,149	24 3,584	22 3,449
Other d	2,700	2,470	3,149	5,504	70
Education	6,293	5,493	5.852	5,587	5.265
Known race/ethnicity	6,183	5,495	5,806	5,346	5,205
Asian <sup>b</sup>	69	41	80	100	98
Black	581	381	467	527	664
Hispanic	177	185	200	247	309
American Indian °	29	41	50	51	46
White Other d	5,327	4,755	5,005	4,414 7	3,990 68
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Professional/other fields Known race/ethnicity	1,391 1,369	1,463 1,445	1,662 1,638	1,618 1,563	1,416 1,390
Asian <sup>b</sup>	23	1,445	40	51	48
Black	73	59	67	106	142
Hispanic	19	25	37	42	47
American Indian	2	8	7	13	11
White Other d	1,252	1,336 1	1,484 3	1,346 0	1,126 16
Other d  Includes mathematics and compute		1	3	U	10

Includes mathematics and computer sciences.

<sup>b</sup> Includes Native Hawaiians and other Pacific Islanders through 2000, but excludes them in 2002 per revised OMB guidelines.

Includes Alaskan Natives.

Includes Native Hawaiians and other Pacific Islanders and respondents choosing multiple races (excluding those selecting an Hispanic ethnicity).

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.