

# Doctorate Recipients from United States Universities:

## Summary Report 2003

### Survey of Earned Doctorates

SPONSORED BY THE NATIONAL SCIENCE FOUNDATION, THE NATIONAL INSTITUTES OF HEALTH, THE U.S. DEPARTMENT OF EDUCATION, THE NATIONAL ENDOWMENT FOR THE HUMANITIES, THE U.S. DEPARTMENT OF AGRICULTURE, AND THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

## HIGHLIGHTS

This report presents data on recipients of research doctorates awarded by U.S. universities from July 1, 2002, through June 30, 2003. This information is taken from the 2003 Survey of Earned Doctorates (SED), an annual census of new doctorate recipients.

- The 423 universities in the United States that conferred research doctorates awarded 40,710 doctorates during the 2002-2003 academic year (the eligibility period for the 2003 SED), an increase of 1.9 percent from the 39,964 doctorates awarded in 2002, and a 4.5 percent decline from the all-time high of 42,645 in 1998.
- The number of doctorates awarded by broad field in 2003 was greatest in life sciences, which conferred 8,369 Ph.D.s. The numbers in the other broad areas were 6,777 in social sciences; 6,627 in education; 5,963 in the physical sciences and mathematics (combined); 5,412 in the humanities; 5,265 in engineering; and 2,297 in business and other professional fields.
- Women received 18,402 doctorates, or 45 percent of all doctorates granted in 2003. This is the same as last year's percentage for women. Women earned 48 percent of the doctorates granted in life sciences, 55 percent in social sciences, 51 percent in humanities, 66 percent in education, and 45 percent in business/other professional fields. In the physical sciences and engineering, they constituted 27 percent and 17 percent, respectively.
- In 2003, 51 percent of all doctorates awarded to U.S. citizens went to women, the same percentage as 2002, marking the second consecutive year U.S. women were awarded more doctorates than their male counterparts.
- Nineteen percent of all doctorates awarded to U.S. citizens in 2003 were earned by U.S. racial/ethnic minority groups. This is the largest percentage ever, and continues a steady upward trend. Among the 25,705 doctorates earned in 2003 by U.S. citizens who identified their race/ethnicity (97 percent of all U.S. citizen doctorates), 1,708 doctorates were earned by African-Americans, 1,350 were earned by Asians, 1,270 were earned by Hispanics, 133 were earned by American Indians, 67 were earned by Hawaiian or other Pacific Islanders, and 359 were earned by non-Hispanic individuals who identified more than one racial background. The broad fields with the largest percentages of minorities were education, in which blacks were the predominant minority group, and engineering, in which Asians were predominant.
- U.S. citizens received 68 percent of all doctorates earned in 2003 by individuals who identified their citizenship status (95 percent of all doctorate recipients identified their citizenship). The People's Republic of China was the country of origin for the largest number of non-U.S. doctorates in 2003, with 2,784, followed by Korea with 1,308, India with 910, Taiwan with 727, and Canada with 539. The percentage of doctorates earned by U.S. citizens ranged from lows of 37 percent in engineering and 55 percent in the physical sciences, to highs of 80 percent in the humanities and 88 percent in education.
- Median time to degree since receipt of the baccalaureate was 10.1 years in 2003, 10.2 years in 2002, 10.0 years in 2001, and 10.3 in 2000. Median time to degree since first enrollment in any graduate program was 7.5 years in 2003, virtually unchanged since 1997.
- Most of the 2003 doctorate recipients (66 percent) received their primary financial support for graduate education from such program- or institution-based sources as university fellowships or teaching and research assistantships. Exactly half of the 2003 doctorate recipients reported no educational indebtedness at completion of the doctorate; 17 percent reported cumulative education debt levels of \$35,001 or more.
- Just over 70 percent of the new doctorate recipients had definite postgraduation commitments for employment or continued study when they completed the SED survey. Of those, 67 percent planned to work and 33 percent planned to continue their studies as postdoctorates. For the graduates with definite commitments to work in the U.S., 55 percent noted higher education as their intended work sector, while 21 percent indicated industry or self-employment, and 7 percent had definite plans for government work.

# Doctorate Recipients from United States Universities: Summary Report 2003

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## NOTICE

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NSF publications from the Survey of Earned Doctorates and the Doctorate Records File are available free on request (see inside back cover). Standardized tables on baccalaureate origins of Ph.D.s by major field of doctorate and trend tables on citizenship, race/ethnicity, and sex of Ph.D.s by fine field of doctorate are available for a fee. Customized tables can also be prepared at cost. For more information, please contact:

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This report is available on the NORC Web site: <http://www.norc.uchicago.edu/issues/docdata.htm>. Reports on science and engineering doctorates can be found on the National Science Foundation's Web site: <http://www.nsf.gov/sbe/srs/sengdr/start.htm>.

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# DOCTORATE RECIPIENTS FROM UNITED STATES UNIVERSITIES: SUMMARY REPORT 2003

## Introduction

*Doctorate Recipients from United States Universities: Summary Report 2003* is the thirty-seventh in a series of reports on research doctorates awarded by universities in the United States.<sup>1</sup> The data presented in this report are from the annual Survey of Earned Doctorates (SED), a census of the 40,710 research doctorate recipients who earned their degrees between July 1, 2002, and June 30, 2003. Conducted since 1958, this survey is sponsored by six Federal agencies: the National Science Foundation, the National Institutes of Health, the U.S. Department of Education, the National Endowment for the Humanities, the U.S. Department of Agriculture, and the National Aeronautics and Space Administration. The National Opinion Research Center at the University of Chicago (NORC) is the current data collection contractor. All survey responses become part of the Doctorate Records File (DRF), a cumulative database on research doctorate recipients from 1920 to 2003. For the 2003 survey, 91 percent of the 40,710 new doctorate recipients completed the SED questionnaire; basic information on nonrespondents was obtained from their degree-granting institutions and public records.<sup>2</sup> The cumulative DRF now contains a total of 1,517,626 records on individuals completing doctorates over the last 84 years at U.S. institutions.

## Organization

*Summary Report 2003* begins by reviewing overall trends in research doctorates awarded by U.S. universities. Trends in the numbers and percentages of research doctorates are reported by the broad fields in which research doctorate recipients earn their degrees, as well as by sex, race/ethnicity, and citizenship. Trends in the average amount of time taken to complete the doctorate degree are also reported. Cross-sectional data for the 2003 cohort are presented on the

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<sup>1</sup> The Survey of Earned Doctorates collects information on *research* doctorate recipients only. This survey differs from the U.S. Department of Education's Integrated Postsecondary Education Data Survey (IPEDS), which collects the number of doctoral degrees awarded per institution by field of study. For an evaluation of the differences, see National Science Foundation, 1993, *Science and Engineering Doctorates 1960-1991*, NSF 93-301, pp. 2-6, Washington, DC.

<sup>2</sup> See appendix C for information on response rates for the SED.

sources of financial support during graduate school, and the postgraduation status and plans of doctorate recipients.

The report concludes with a special section focusing on the undergraduate origins of doctorate recipients. The annual SED *Summary Report* has occasionally featured special sections focusing on topics of particular interest, including:

- Non-U.S. Citizen Doctorate Recipients (1989 and 1997)
- U.S. Citizen Minority Doctorates (1990)
- U.S. Citizen Female Doctorates (1991)
- Contribution of India, China, Taiwan, and Korea to the Growth of Non-U.S. Ph.D.s (1995)
- Indebtedness of Doctorate Recipients (1998)
- Interstate Migration Patterns of Doctorate Recipients (1999)
- First-Generation College Graduates Earning Research Doctorates (2002).

Throughout the report, figures highlighting selected trend and cross-sectional data complement the brief narratives of key survey findings. A set of tables following the main text contains the numbers and percentages from which the figures and the numbers cited in the text are drawn. References to these tables are embedded in the text, and a reference at the bottom of each figure indicates the corresponding table number. Basic tables of statistics for the 2003 research doctorate recipients are shown in appendix A, and trend tabulations for the previous ten-year period (1993 to 2003) are presented in appendix B. These basic tables have maintained essentially the same structure for the past several annual volumes of the *Summary Report*, and thus provide a basis for additional trend analyses that researchers can pursue. Appendix C supplies technical notes, including response rates and other information related to tables and figures in the report. Appendix D contains the SED questionnaire for the 2003 academic year. Field of study classifications and research degree titles included in the SED are listed in Appendix E.

## **Related Publications**

- The NSF publishes an annual volume of tabulations using the SED data, *Science and Engineering Doctorate Awards* (<http://www.nsf.gov/sbe/srs/sengdr/start.htm>).
- Copies of the annual *Summary Report* from previous years are available on the NORC Website (<http://www.norc.uchicago.edu/issues/docdata.htm>).

- The methodology of the SED 2003 survey is described in detail in the annual *Survey of Earned Doctorates Methodology Report*, which is available upon request from:

NORC at the University of Chicago  
Doctorate Data Project  
1155 E. 60<sup>th</sup> Street  
Chicago, IL 60637

## Trends in Doctorate Recipients

The individual research doctorate recipients<sup>3</sup> from U.S. universities are the primary respondents to the Survey of Earned Doctorates. Each year, personnel in graduate schools or other administrative offices of the degree-granting universities distribute the SED questionnaires to these individuals and transmit the rosters and completed questionnaires to the SED data collection contractor (NORC at the University of Chicago has been the contractor since 1997). The lists of new doctorate recipients are carefully checked and edited by the data collection contractor working closely with the universities over the course of the SED eligibility year. Every effort is made to locate all new graduates who did not return a questionnaire to their graduate school and to ask them to complete the form. The graduate schools provide basic information on individual nonrespondents at the end of the data collection cycle. A comprehensive and accurate picture of the universe of new doctorates each year results from this process, and the SED data provide a solid basis for charting trends in the numbers and characteristics of this population.

### Overall Trends and Rates of Change

During the twelve-month period ending June 30, 2003, U.S. universities awarded 40,710 research doctorate degrees, compared with 39,964 in 2002 and 40,808 in 2001. (See table 1.) This was a percentage increase from 2002 to 2003 of 1.9 percent, but a decline of 4.5 percent from the all-time high of 42,645 in 1998.

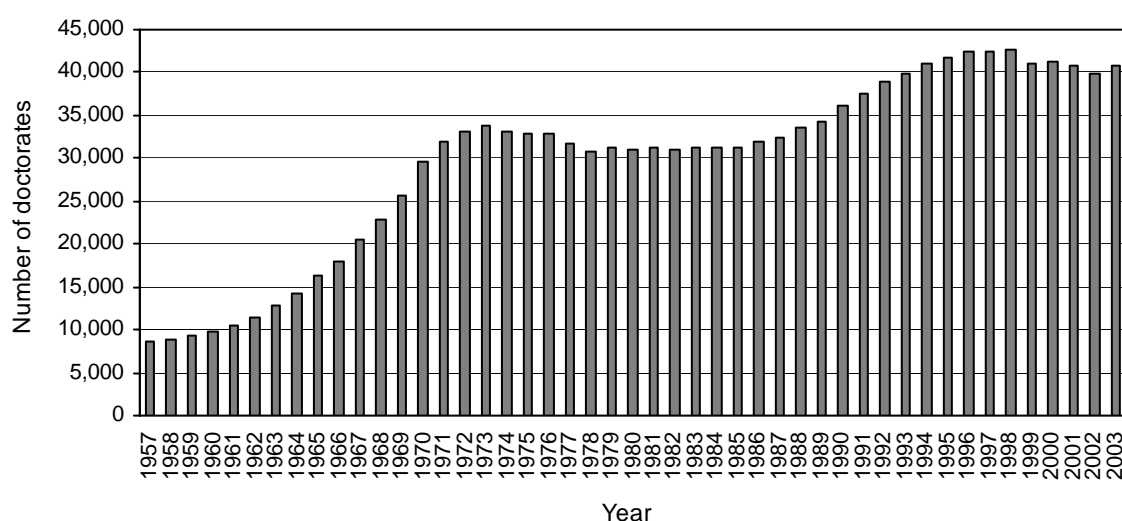
The long-term trend in the number of new research doctorates has been one of considerable expansion. Over the last 40 years, the number of doctorates granted by U.S. universities has on average increased by approximately 3.5 percent per year. The expansion has been characterized by two periods of rapid growth followed by stability and a few slight declines. Between 1961 – the year when the number of annual doctorates awarded surpassed

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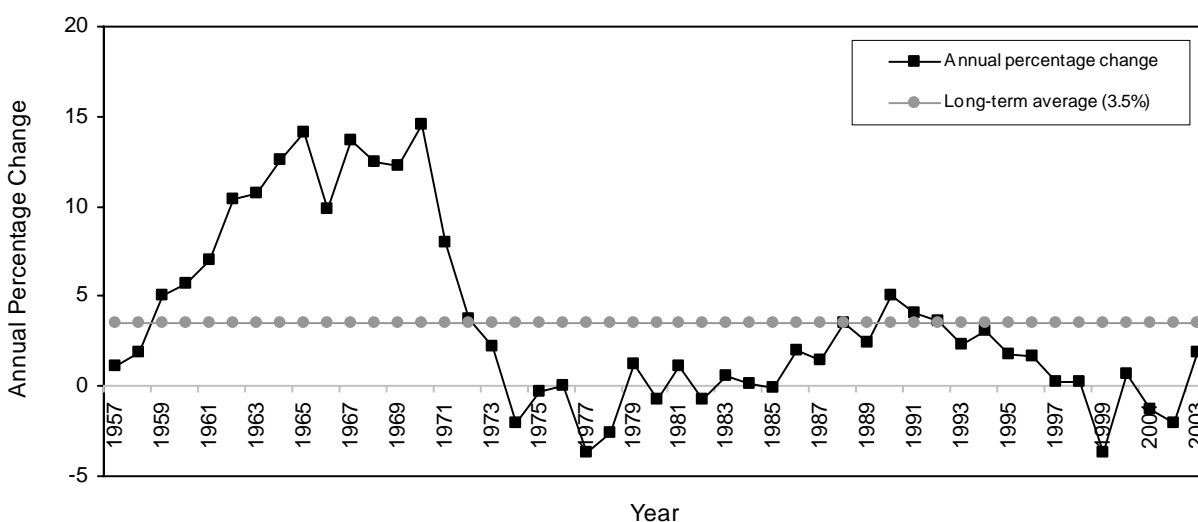
<sup>3</sup> Doctorates are reported by academic year (from July 1 of one year through June 30 of the following year) and include *research doctorates* in all fields. Doctoral degrees such as the Ph.D., D.Sc., and research Ed.D. are covered by this survey; professional degrees (e.g., M.D., D.D.S., J.D., Psy.D., and D.Min.) are not. A full list of included degrees can be found in appendix E. For convenience throughout this report, the terms “Ph.D.” or “doctorate” are used to represent any of the research doctoral degrees covered by the survey. This is the first year that individuals earning second research doctorates are included in the SED. In 2003, a total of 92 individuals earned a second research doctorate.

10,000 for the first time – and 1971, the average annual growth rate was nearly 12 percent, such that the number of doctorates awarded each year almost tripled (31,867). The number of doctorate degrees annually awarded during the decade of the 1970s and through the early 1980s remained moderately stable at about 31,000 each year. In 1986, a second period of growth began that persisted until 1998, when 42,645 research doctorates were awarded. Since 1998, the number of doctorates awarded each year has generally declined, reaching a low point for the last decade in 2002 but showing a slight increase in 2003. (See figures 1 and 2.)

**Figure 1. Doctorates awarded by U.S. colleges and universities, 1957-2003**



**Figure 2. Annual growth or decline in doctorates awarded by U.S. colleges and universities, 1957-2003**



See Table 1.

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

## **Doctorate-granting Institutions, Doctorate Recipients per Institution, and Geographical Distribution**

The SED survey staff monitor closely the universe of research doctorate-granting institutions, including an annual review of all accredited institutions recognized by the U.S. Department of Education in its Integrated Postsecondary Education Data System (IPEDS). The data collection contractor for the SED contacts newly-identified institutions granting one or more of the research doctorates listed in appendix E and includes the institutions in the SED universe as soon as they award a recognized degree. Appendix table A-7 contains the full list of institutions granting research doctorates in the 2003 academic year.

During the 2003 academic year, there were 423 universities in the United States and Puerto Rico that awarded at least one research doctorate, surpassing the all-time high recorded in 2001 (417). (See table 2.) In 2003, the mean number of doctorates awarded per institution was 96, while the median was 36. (See table 2 for the mean and median numbers of doctorates awarded per institution from 1963 to 2003.) As the substantial difference between the mean and the median indicates, a relatively small number of institutions award a disproportionately large number of doctorates. Just 49 institutions granted 50 percent of all doctorates in 2003. Eighteen institutions accounted for 25 percent of all doctorates granted; 31 institutions for the next 25 percent; 58 universities for the third quartile; and the remaining 316 institutions accounted for the final 25 percent of doctorates.<sup>4</sup>

The trend data in table 2 show that the median number of degrees awarded per institution grew rapidly during the 1960s, from 27 in 1963 to 55 in 1970. Following the end of the Vietnam War in 1972, the median number quickly dropped to 42 and has vacillated between 35 and 45 since.

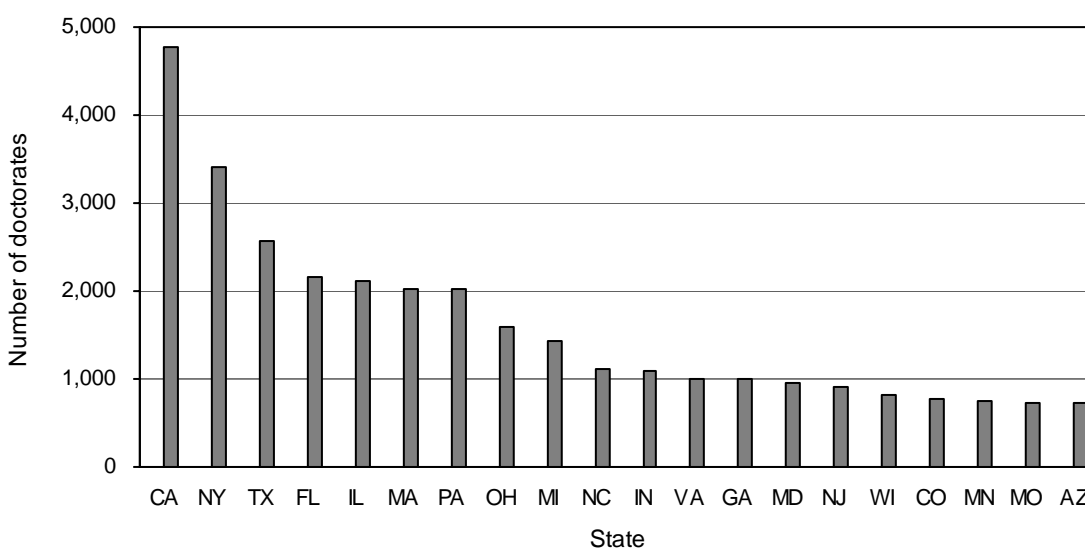
In the 2003 academic year, the University of California-Berkeley granted the largest number of doctorates, 767, or two percent of all doctorates awarded in 2003, followed by Nova Southeastern University (675), the University of Texas-Austin (674), the University of Wisconsin - Madison (653), and the University of Illinois at Urbana-Champaign (618). In 2002 and 2003, the top 10 institutions granted approximately 15 percent of all doctorates. (See table 3.)

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<sup>4</sup> Calculations derived from appendix table A-7. See appendix table A-8 for a list of the 50 largest institutions.

The state-by-state totals in figure 3 and table 4 show that California universities led the nation by awarding 4,763 doctorates, or 12 percent of all doctorates in 2003. New York institutions granted the next highest number (3,413), followed by institutions in Texas (2,572), Florida (2,157), Illinois (2,113), Massachusetts (2,029), Pennsylvania (2,013), Ohio (1,585), and Michigan (1,422). These nine states accounted for 54 percent of all doctorates awarded in 2003. (See figure 3 and table 4.)

**Figure 3. Top 20 doctorate-granting states, 2003**



See Table 4.

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

## Doctorates by Field of Study

There were 282 fields of specialization into which the SED classified research doctorate degrees in 2003 (these are listed on page 7 of the questionnaire included in appendix D). Since fields of specialization are dynamic entities that reflect the evolving programs of researchers and their constituencies, the SED list is assessed each year in order to identify emerging fields and periodically modified to accommodate changes in the world of doctoral education. The SED is able to collect information on the specialization fields of virtually all the new doctorates each year; coverage in 2003 was attained for all of the 40,710 doctorate recipients.

Consistent with past practice in presenting the SED data, the fields of specialization are grouped into seven broad fields: physical sciences,<sup>5</sup> engineering, life sciences,<sup>6</sup> social sciences (including psychology), humanities, education, and a heterogeneous group of professional and other fields (including business, communications, social work, and theological programs). Appendix tables A-1, A-2, and B-1 contain the numbers of graduates in all fields.

The institutions granting the largest numbers of doctorates in each of the seven broad fields in 2003 are listed in table 3. The University of California-Berkeley awarded the most doctorates in the physical sciences (168). Stanford University granted the most engineering doctorates (193), while the University of Wisconsin-Madison led all universities in the life sciences (194). In the social sciences, the University of California – Los Angeles led with 120 degrees, and in the humanities, New York University led with 132. Nova Southeastern University had the highest total in education (482) as well as in the diverse “professional/other” category (97).

The numbers of doctorates awarded in the seven broad fields were also concentrated in a relatively small number of institutions. While the top ten degree-granting universities awarded 15 percent of all doctorates in 2003, the concentration was higher in six of the seven broad fields: 19 percent in the physical sciences, 28 percent in engineering, 19 percent in the life sciences, 21 percent in the humanities, 21 percent in education, and 19 percent in the professional/other category. Only in the social sciences was the concentration lower than the overall average (14 percent). (Derived from table 3.)

The overall increase of 1.9 percent in doctorates awarded between the 2002 and 2003 academic years was a result of increases in all but one of the broad fields. The physical sciences, engineering, social sciences, and education showed increases of 4.3, 3.8, 2.4, and 2.2 percent, respectively. The humanities and life sciences showed smaller increases (0.7 and 0.2 percent respectively). Only the professional/other fields showed a decrease (2.0 percent). (See appendix table B-1.)

Since 1989, the life sciences has been the largest broad field, with 8,369 doctorates awarded in 2003. Compared to 1998, the number of doctorates awarded in the physical sciences, engineering, and the social sciences showed the largest decreases: 11.6 percent, 11.1 percent, and

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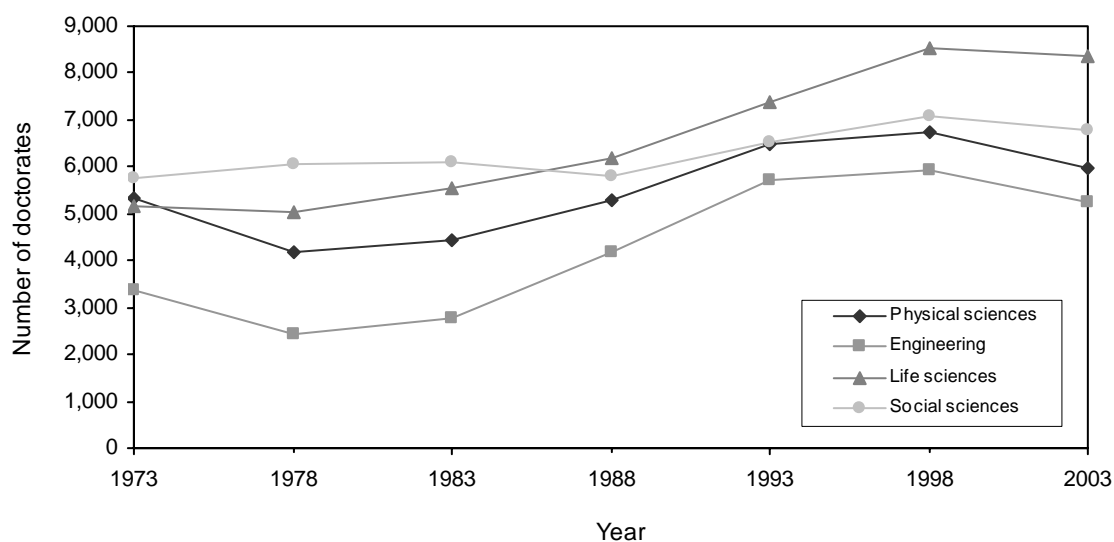
<sup>5</sup> The physical sciences also include mathematics and computer sciences in this report.

<sup>6</sup> The life sciences encompass biological, agricultural, and health sciences in this report.

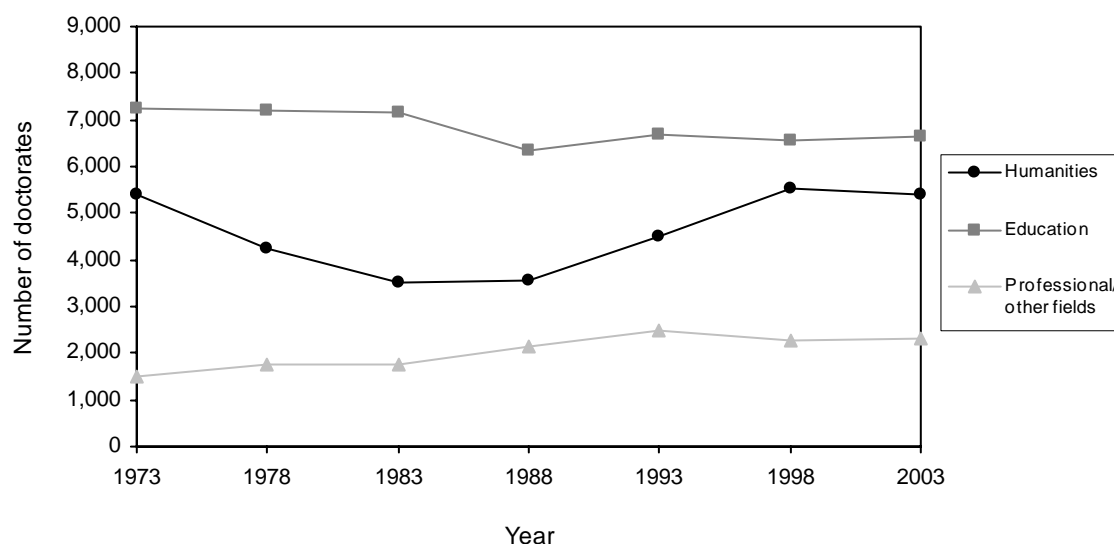


4.2 percent lower respectively in 2003 than in 1998. (See table 5.) Slightly fewer doctorates were awarded in the life sciences (-2.0 percent) and humanities (-1.8 percent), while the total number completing doctorates in education and professional/other fields was only slightly higher, with 0.9 percent and 0.7 percent more degrees awarded respectively in 2003 than five years earlier. (See table 5 and figures 4 and 5.)

**Figure 4. Science and engineering doctorates awarded by broad field of study for selected years, 1973-2003**



**Figure 5. Humanities, education, and professional/other fields doctorates awarded for selected years, 1973-2003**



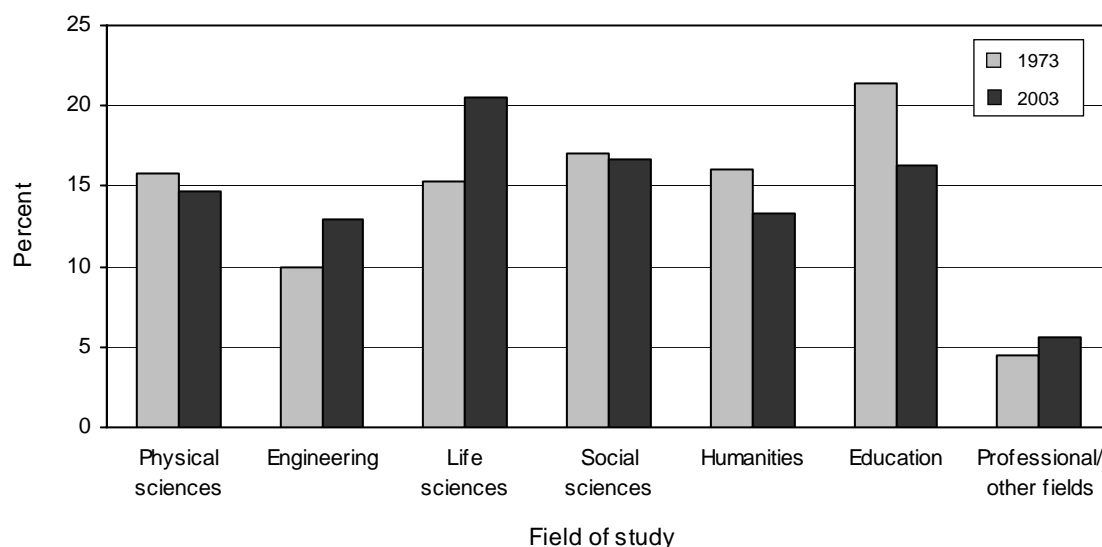
See Table 5.

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

Physical sciences, life sciences, social sciences, and engineering – the four broad fields that together constitute “science and engineering” (S&E) – represented 65 percent of all doctorates awarded in 2003. S&E doctorates accounted for close to the same percentage of all doctorates (66 percent) in 1993, but only 60 percent of the total in 1983 and 58 percent in 1973. (See table 5.)

The 30 year comparisons for all seven broad fields are shown in figure 6. The relative shares of graduates in engineering, life sciences, and the professional/other fields were greater in 2003 than in 1973, while the relative shares in the humanities, education and the physical sciences were smaller in 2003. The relative shares of graduates in social sciences in 1973 and 2003 were about the same. (See figure 6.)

**Figure 6. Percentage distribution of doctorate recipients by broad field of study, 1973 and 2003**



See Table 5.

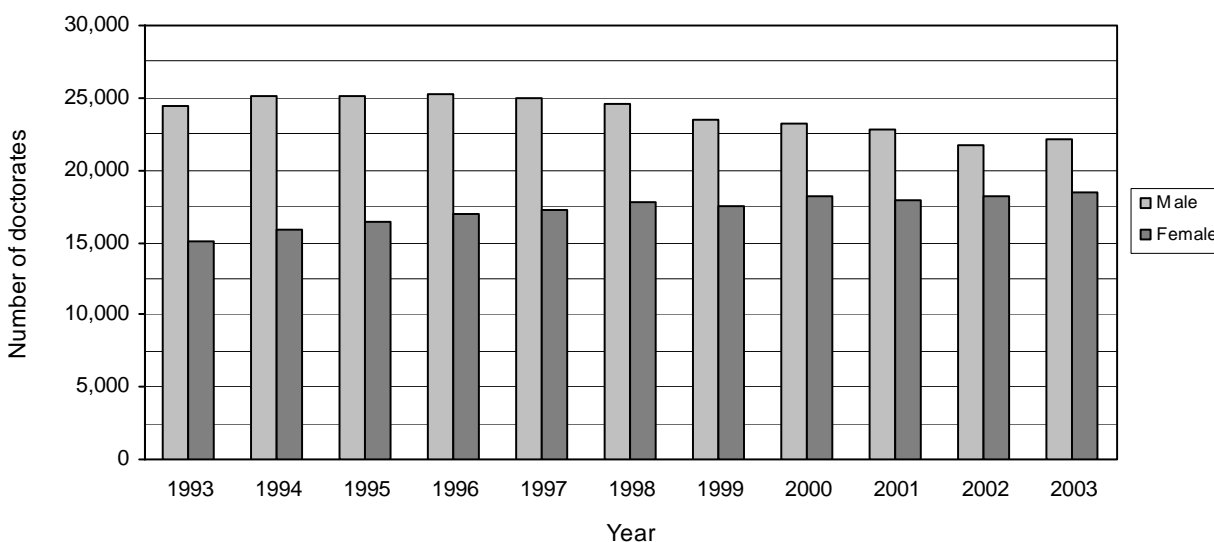
Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Fourteen of the 25 specialization subfields included in table 5 experienced increases in the number of doctorates awarded between 2002 and 2003 (see appendix table B-1 for the 2002 totals). Sixteen had smaller numbers when compared to 1998 values while the remaining nine subfields had larger absolute numbers of doctorates in 2003 than in 1998. Compared to 1998, only five of the 15 S&E subfields (health sciences, anthropology, sociology, political science/international relations and “other social sciences”) showed gains in 2003. (See table 5.)

## Doctorates by Sex

The 1.9 percent increase overall in doctorates awarded between 2002 and 2003 reflects a 1.9 percent increase for males and a 1.5 percent increase for females. The number of doctorates awarded to men rose by 417 and increased for women by 279 in 2003 compared to 2002. The net proportional effect is that for 2003, females received 45.3 percent of all doctorates, which is virtually unchanged from 2002 (table 6).<sup>7</sup> This number signifies the eighth consecutive year in which the representation of female doctorate recipients has surpassed 40 percent. Five years ago (1998) females comprised 42 percent of all doctorate recipients; 10 years ago (1993) that percentage was 38 and 25 years ago (1978) it was 27 percent. (See figure 7 and table 7.)

**Figure 7. Doctorate recipients by sex, 1993-2003**



See Appendix Tables B-2b and B-2c.

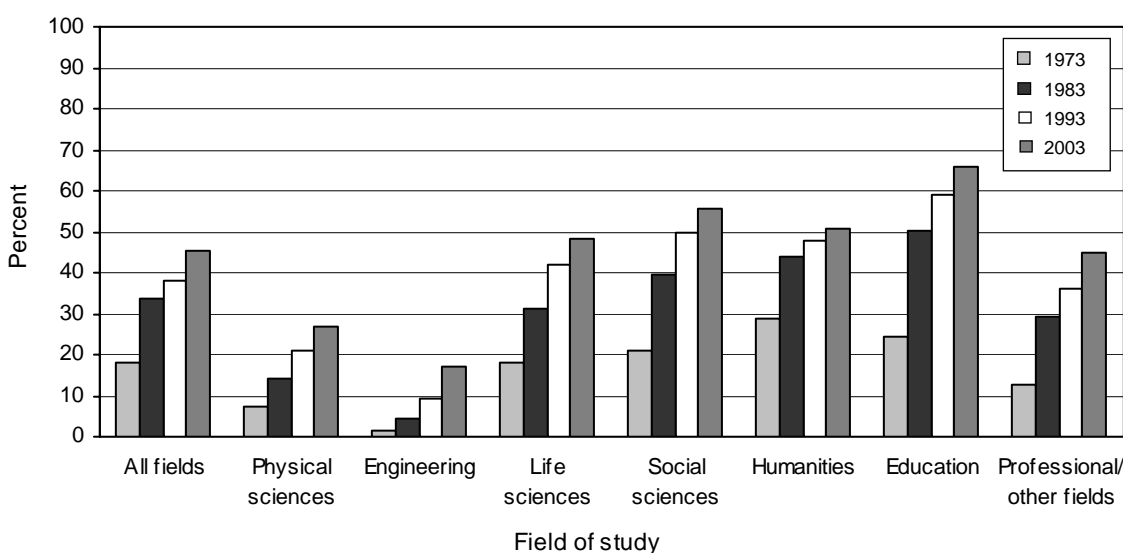
Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

The proportion of doctorates earned by women has also grown steadily within all of the broad fields of study. Women constituted 66 percent of all education doctorates for 2003, the majority in the social sciences (55 percent), and half of those in the humanities (51 percent). In contrast, the representation of females among doctorate recipients in the physical sciences and engineering for 2003 was 27 percent and 17 percent, respectively (figure 8). However, even

<sup>7</sup> For 2003, sex category could not be determined for 120 doctorate recipients; these 120 are not part of these and other gender percentage calculations.

these percentages represent significant increases over the last 25 years. In 1978, when only 27 percent of all doctorate recipients were women, just 11 percent and 2 percent of the doctorates in the physical sciences and engineering, respectively, were awarded to women. Similar long-term trends are discernible in other broad fields as well: in the life sciences, from 23 percent in 1978 to 48 percent in 2003; from 31 percent to 55 percent in the social sciences over that same period; and from 38 percent in the humanities in 1978 to the current 51 percent. (See figure 8 and table 7.)

**Figure 8. Percent of doctorate recipients who are female, by broad field of study, for selected years, 1973-2003**



See Table 7.

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

In 2003, females constituted 39 percent of S&E doctorate recipients and 57 percent of those in non-S&E fields in U.S. universities. With regard to finer field distinctions, of the 25 selected subfields listed in table 6, women were the majority of doctorate recipients in eleven subfields and constituted at least 40 percent of the doctorate population in four additional areas. In four of the 25 subfields, the percentage increase in female doctorate recipients between 1993 and 2003 was over 40 percent (physics and astronomy, earth, atmospheric and marine sciences, agricultural sciences, and political science/international relations). (See table 6.)

## Doctorates by Race/Ethnicity

A total of 4,887 members of U.S. racial/ethnic minority groups<sup>8</sup> were awarded doctorates, representing 19 percent of the U.S. citizens earning research doctorates in 2003. (See table 8.) This number is higher than in 2002, when 4,753 minority group members earned doctorates; and the 2003 minority percentage is the highest percentage yet recorded in the SED. (See appendix table B-2a.) Blacks earned the most doctorates (1,708) of the five main U.S. minority populations in 2003, followed by Asians (1,350), Hispanics (1,270), American Indians (133), and Hawaiians and other Pacific Islanders (67). (See table 8.) A total of 359 non-Hispanic U.S. citizens reported more than one racial background in the 2003 survey, and are counted here as racial/ethnic minorities, but they and the 67 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.<sup>9</sup>

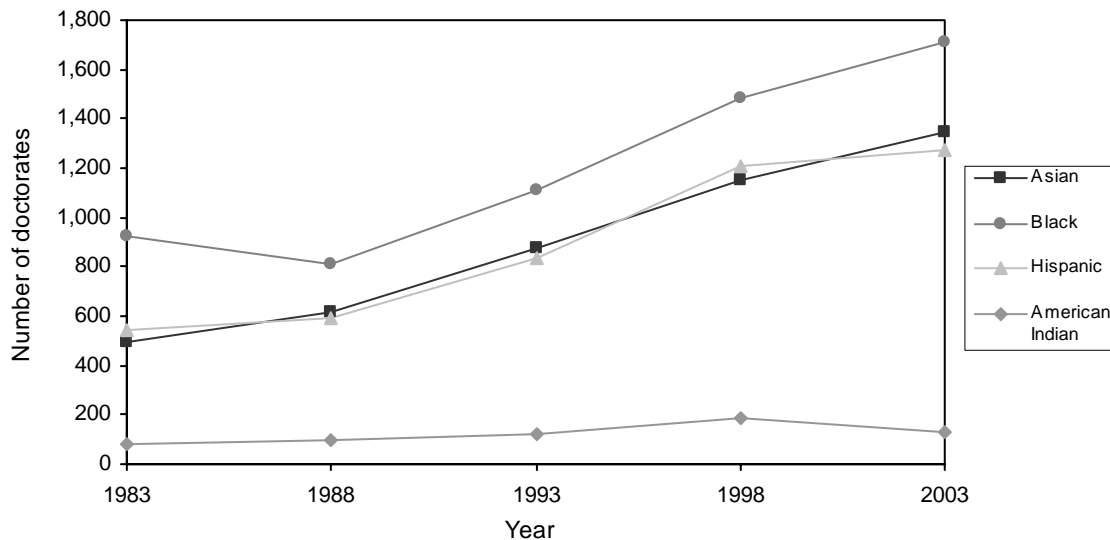
In 2003, the number of minority doctorate recipients was 20 percent higher than the total in 1998 and 64 percent higher than in 1993. Conversely, there were 11 percent fewer non-Hispanic white doctorate recipients in 2003 compared to 1998, and 10 percent fewer than in 1993. As the numbers in the first 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 (174 percent) and Hispanics (134 percent), than for American Indians (64 percent) and blacks (85 percent). (See figures 9 and 10 and table 8.)

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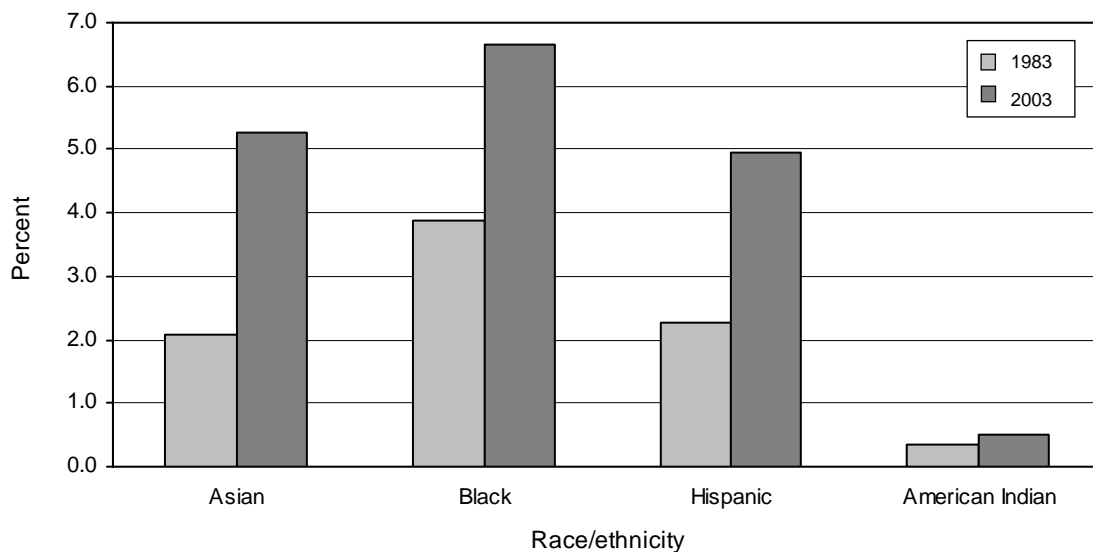
<sup>8</sup> As used here, U.S. minority groups include Asians, blacks, Hispanics, American Indians, Native Hawaiians and other Pacific Islanders, and individuals who indicated more than one racial background. Only U.S. citizens are included in the U.S. minority groups.

<sup>9</sup> 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 2002 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 2003 questionnaire is included in appendix D.

**Figure 9: Doctorates awarded to racial/ethnic minority U.S. citizens, by race/ethnicity, for selected years, 1983-2003**



**Figure 10. Percentage of doctorates earned by racial/ethnic minority U.S. citizens, 1983 and 2003**



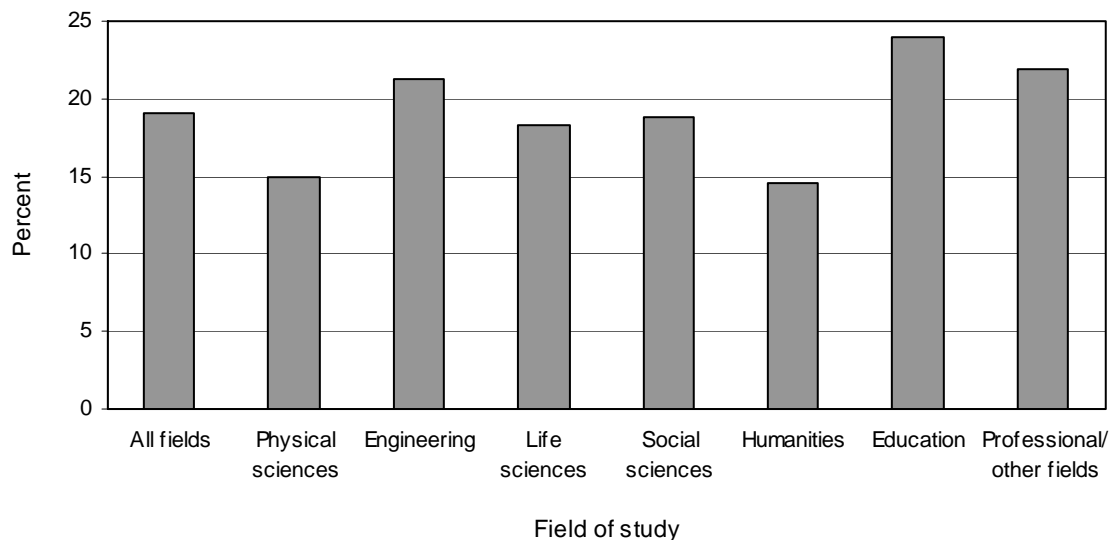
See Table 8.

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

The primary U.S. minority groups (Asians, blacks, Hispanics, and American Indians) had their largest presence in the broad fields of education (24 percent of U.S. citizens earning doctorates), professional/other fields (22 percent), and engineering (21 percent) in 2003. 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; they represented over half of all minority group members earning doctorates in engineering during the 2003 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 1983, with the exception of 1998, 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 2003.)

**Figure 11. Percentage of doctorates earned by racial/ethnic minority U.S. citizens, by broad field of study, 2003**



See Table 8.

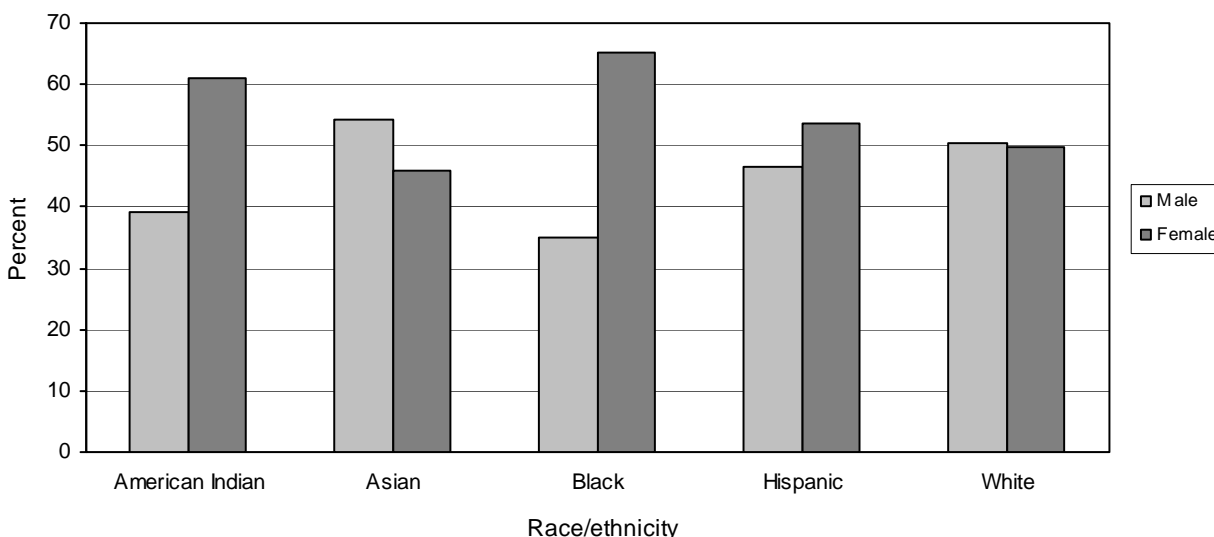
Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

The pattern of growth for the aggregate U.S. citizen minority populations also held for most of the separate minority groups within most of the seven broad fields of study from 1983 to 2003. The general pattern for minority recipients had been one of relatively small increases from 1983 to 1993 followed by moderate increases from 1993 to 1998. In 2003, there were some notable exceptions to the trend of increases. One exception is that the number of American

Indian doctorate recipients fell in every broad field category in 2003.<sup>10</sup> Also, the number of Hispanic doctorate recipients dropped in the physical sciences, engineering, and the social sciences from 1998 to 2003. (See table 8).

The balance of male and female doctorate recipients varies between racial/ethnic groups. Among U.S. citizens, 50 percent of doctorates earned by whites were awarded to women; for blacks, various Hispanic groups, and American Indians, women constituted a majority, earning between 53 percent and 65 percent of doctorates received by persons of those races or ethnicities. Among Asians, women were 46 percent of the total. (See figure 12 and appendix table A-4.)

**Figure 12. Sex distribution of doctorates earned by U.S. citizens by race/ethnicity, 2003**



See Appendix Tables B-2b and B-2c.

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

Table 10 lists the universities that awarded the largest number of doctorates to members of the four primary U.S. minority groups between 1999 and 2003, and the number granted by each university. Over that five-year interval, four California institutions – UCLA, Berkeley, Stanford, and USC – and two in Massachusetts – Harvard and MIT – awarded a total of 1,408 doctorates to Asians, or 21 percent of all doctorates awarded by U.S. universities to Asians. Nova Southeastern University and Howard University awarded, by far, the most doctorates to

<sup>10</sup> The apparent drop in the number of American Indian doctorate recipients between 1998 and 2003 may be due in part to the change in the questionnaire item (beginning in 2001) to allow respondents to indicate more than one race. Of the 359 non-Hispanic U.S. citizen respondents selecting more than one race, 149 selected American Indian as one of their races.



blacks (423 and 255, 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 (27) 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 2003 the ten universities granting the largest numbers of doctorates conferred 15 percent of all doctorates. However, over the 1999-2003 period, the ten universities that awarded the most doctorates to Asians (table 10) granted 28 percent of all Asian doctorates; for blacks the corresponding figure was 20 percent; for Hispanics it was 23 percent, and for American Indians it was 20 percent. (See table 10.)

### **Doctorates by Citizenship**

Each year, the SED gathers information concerning the U.S. citizenship status and country of citizenship of the new doctorate recipients.<sup>11</sup> Of the 2003 doctorate recipients with known citizenship status (95 percent of the total), 68 percent were U.S. citizens, 4 percent were non-U.S. citizens with permanent resident visas for the United States (i.e., “green cards”), and 27 percent were non-U.S. citizens in the U.S. on temporary visas. (See table 11.)

The trend for non-U.S. citizens earning doctorates from U.S. institutions is generally one of increasing numbers. This is particularly true for individuals in the U.S. on temporary visas. The five-year snapshots shown in table 11 indicate that the percentage of new doctorates awarded to individuals on temporary visas rose from 10 percent of all doctorate recipients who reported citizenship in 1973 to 27 percent in 2003. The growing numbers of doctorates awarded to foreign students on temporary visas has accounted for virtually all of the overall growth in the numbers of doctorate recipients since 1973.

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<sup>11</sup> The percentage of cases with missing data on citizenship status (U.S. versus non-U.S.) and country of citizenship has fluctuated more year to year than other SED variables (see appendix table C-3), and the over-time comparisons are thus subject to some uncertainty.

The number of doctorate recipients with permanent visas has shown more fluctuation over time. The 2003 total of 1,631 represents a slight drop of 1 percent from 2002, and has dropped back near the 1988 (1,622) numbers. The numbers of doctorate recipients with permanent visas were at historical highs from 1993-1999 (reaching a peak of 4,317 in 1995)<sup>12</sup>, and ranged between 1,200 and 2,100 from the late 1960s until the early 1990s. (See table 11.)

U.S. citizens earned 80 percent or more of the doctorates awarded in the humanities and education (80 percent and 88 percent, respectively) in 2003. (See table 11.) In absolute numbers, U.S. citizens earned more doctorates in education than in any of the other broad fields; permanent residents had their highest total in the life sciences, and engineering was the most popular field for those in the United States on temporary visas, followed by the physical sciences.

The trend towards the equal male and female representation in the doctoral cohorts is particularly striking for U.S. citizens. In 2003, 51 percent of all doctorates awarded to U.S. citizens went to women. This marks the second consecutive year in which the majority of U.S. citizens receiving a doctorate were women. (See appendix table B-2.)

Among permanent residents earning doctorates in 2003, 50 percent were female, and among those doctorate recipients holding temporary visas, 31 percent were female (appendix table A-4). Both of those percentages are, like the figure for U.S. women, near all-time highs. (See appendix table B-2; further historical data available from the author.)

Women holding temporary visas were more concentrated in the S&E fields of study than female U.S. citizens. While women with temporary visas represented 18 percent of all female doctorates in 2003, they earned 23 percent of the doctorates granted to females in the life sciences, 33 percent of the doctorates earned by females in the physical sciences, and 49 percent of the female-earned doctorates in engineering. (See appendix table A-3c.)

In 2003, 2,784 doctorate recipients were citizens of the People's Republic of China (PRC)<sup>13</sup>, comprising 7 percent of the total number of degrees awarded to individuals who reported citizenship. (See table 12 for a listing of the top 30 countries of origin of non-U.S.

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<sup>12</sup> The large increase in doctorate recipients with permanent visas in the 1990s was primarily a consequence of the Chinese Student Protection Act of 1992. This bill made thousands of students from the People's Republic of China who were enrolled in U.S. universities in 1989 at the time of the Tiananmen Square incident eligible to apply for permanent residency in 1993. The numbers of Chinese students with permanent visas dropped in 1996 and 1997 as the number of students eligible for permanent residency under the act declined.

<sup>13</sup> Includes Hong Kong.

citizen doctorate recipients.) The top 15 countries in terms of the number of doctorates awarded to its citizens in 2003 were the same as in 2002, though some changes in rankings occurred within the top 15. The leading five countries (PRC, Korea, India, Taiwan, and Canada) accounted for 16 percent of all doctorates awarded by U.S. universities to individuals of known citizenship in 2003. Only 7 percent of the total citizenship-known 2003 doctoral cohort were citizens of the next 10 nations listed in table 12, and just 4 percent were citizens of the next 15 nations. Doctoral students who are citizens of one of the 30 nations shown in the table thus accounted for 27 percent of the doctorates awarded in 2003 with country of citizenship reported.

The twenty institutions awarding the largest numbers of doctorates to non-U.S. citizens in 2003 are listed in table 13. For the third consecutive year, the University of Illinois at Urbana-Champaign awarded the largest numbers of doctorates to non-U.S. citizens.

### **Doctorates by Parental Education Background**

Since 1963, the SED has asked new doctorate recipients to report their fathers' and mothers' levels of educational attainment. In keeping with past editions of the *Summary Report*, the responses are grouped into three categories: high school diploma or less; some college, including earning the baccalaureate; and advanced degree, including the master's, doctorate, or a professional degree.<sup>14</sup>

The 2003 data shown in table 14 indicate that 29 percent of recipients' fathers had only earned a high school diploma or less; the corresponding figure for their mothers was 38 percent. Slightly over one-third (37 percent) of doctorate recipients had a father who had attended college (but may not have earned a baccalaureate degree); 40 percent of the mothers of doctorate recipients in 2003 had some college background, including receiving the bachelor's degree. Finally, the father held an advanced degree for 35 percent of the doctorate recipients, compared with the 22 percent whose mothers had an advanced degree.

Parental education backgrounds of male and female 2003 doctorate recipients differed little with respect to both fathers' and mothers' educations. Female doctorate recipients were slightly more likely than their male counterparts to have a father and a mother who attended college or who earned an advanced degree.

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<sup>14</sup> The *Summary Report 2002* included a special section on first-generation college graduates earning research doctorates which relied on the respondents' reports of their parents' educations.

There is considerable variation in parental education attainment by race/ethnicity, citizenship status, and broad field of study. Among U.S. citizens, Asian doctorate recipients were more likely than members of the other racial/ethnic categories to come from families in which one or both parents had advanced degrees; black, Hispanic, and American Indian recipients' parents were less likely to have gone beyond high school than whites and Asians. Doctorate recipients who were U.S. citizens were more likely than those with either permanent residency status or holding temporary visas to have parents with advanced degrees (and less likely than these two groups to have parents whose formal education did not extend beyond the high school level).

The distributions of parental education by the broad fields in table 14 reflect, in part, the different racial/ethnic and citizenship compositions of the fields. Doctorate recipients in the humanities displayed the highest percentages of both fathers (45 percent) and mothers (28 percent) with advanced degrees. The lowest percentages of advanced degrees by fathers or mothers were within the education doctorate recipients, 22 percent and 14 percent, respectively. These two broad fields are also the least and most represented, correspondingly, with regard to the fraction of parents whose formal education ended at high school or before.

## **Time to Degree**

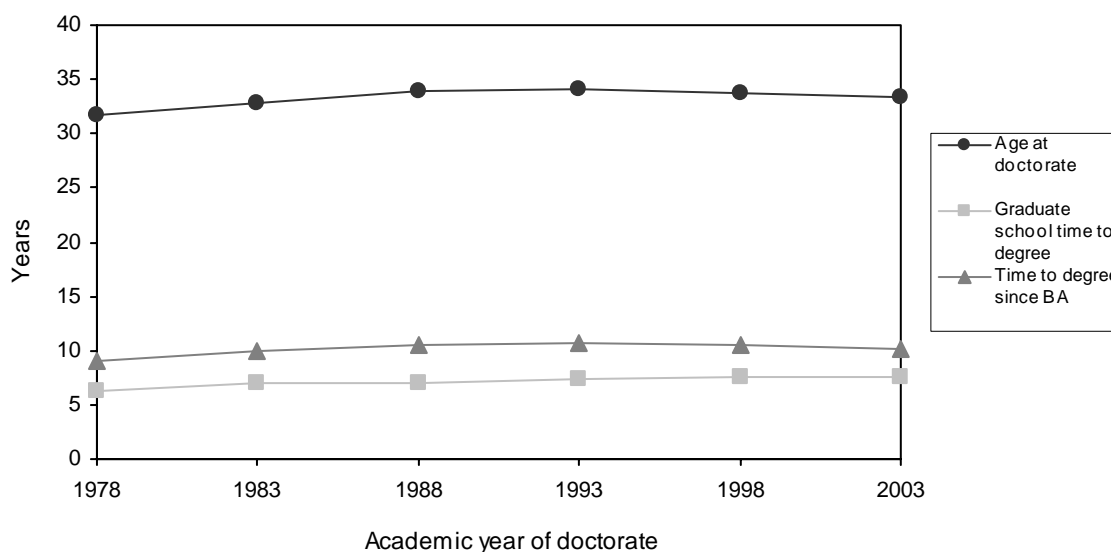
The amount of time needed to complete a doctorate is a key concern for those pursuing the degree, as well as for the faculties and administrations of the degree-granting institutions and national public agencies and private organizations that support doctoral study. Time to degree completion is likely to be affected by a number of factors, including individual preferences, economic constraints, labor markets for new doctorate recipients, cultures of the academic disciplines, and institution-specific program characteristics.

The SED measures time to degree in three different ways: (1) the total time elapsed from completion of the baccalaureate to completion of the doctorate, (2) the total time elapsed while in graduate school to completion of the doctorate, and (3) the age of the doctorate recipients at the time the doctorate is awarded. In this section, the 2003 data and the historical trends for each of these measures are reviewed for the whole population of doctorate recipients and, separately, by broad field and the background variables of sex, race/ethnicity, and citizenship.

For the 2003 doctorate recipients, the median total time span from baccalaureate to doctorate was 10.1 years (table 15). The total time span was shortest in the physical sciences (7.9 years) and longest in education (18.2 years). The broad field of education includes large numbers of individuals who have worked full-time before starting their graduate degree programs, and who even continue to work full-time while earning their doctorates.

The historical data in table 15 show that the 2003 median total time to degree was about three months shorter than in 1998. The long-term trend, however, had been one of increases in length from 1978 to 1993. (See figure 13 and table 15.) From 1998 to 2003, the broad fields of engineering, physical sciences, life sciences, humanities, and education followed an overall pattern toward shorter times; but median time to degree for the social sciences increased slightly from 1998 to 2003, while the professional/other fields remained the same.

**Figure 13. Median number of years to doctorate from baccalaureate award, and from graduate school entry, and age at doctorate, for selected years, 1978-2003**



See Table 15.

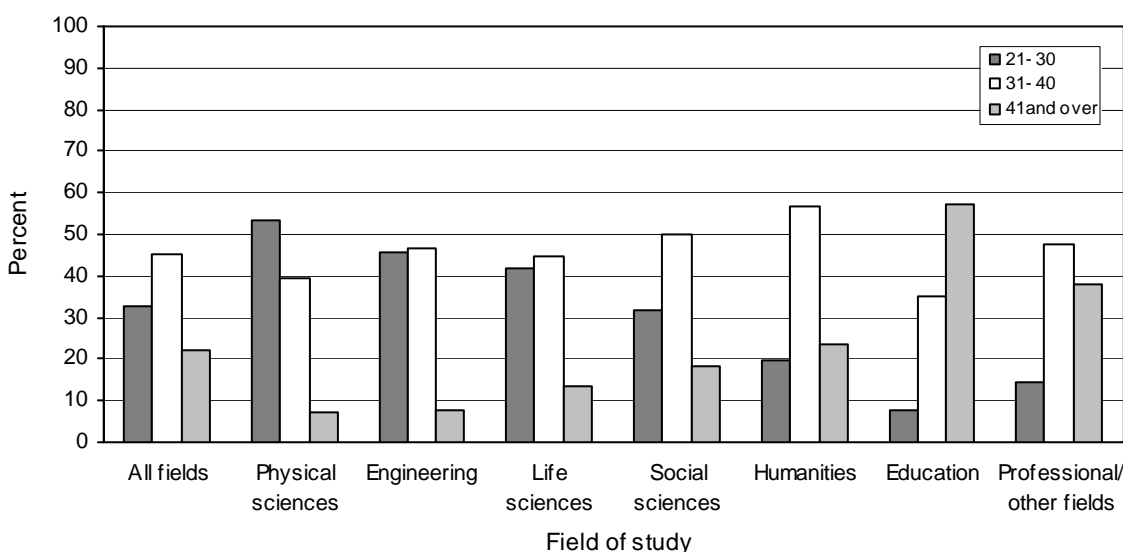
Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

The median duration between starting and completing graduate school was 7.5 years for the 2003 doctorates (table 15), identical to the number for 2002. Graduate-school time to degree was shortest in the physical sciences (6.8 years) and engineering (6.9 years), and longest in the humanities (9.0 years) (table 15). The trend for time spent in graduate school is one of small but continual increases over the 25-year span from 1978 to 2003 in most of the seven broad fields, with some flattening or even decreasing in the past five years. (See figure 13 and table 15.)

The median time to degree indices vary somewhat by sex, citizenship, and race/ethnicity; however, these differences are generally reflections of the broad field differences reviewed above (table 16). Across the whole population of new doctorate recipients, females had longer total and graduate-school times to degree than did males, but the sex differences are much smaller, or even reversed, when males and females are compared within specific broad fields (table 16). Similar patterns hold for comparisons of U.S. and non-U.S. citizens, and of the U.S. racial/ethnic groups, that is, the overall time-to-degree differences between the groups diminish or even disappear when comparisons are made within broad fields of study. (See table 16.)

A third measure of time to degree gathered in the SED is age at doctorate. The median ages of the 2003 doctorate recipients are tabulated in appendix tables A-3 by major field of degree and A-4 by citizenship and race/ethnicity. On the whole, the median age at receipt of the doctorate in 2003 was 33.3 years. Again, age at degree varies with field of study. Doctorate recipients in the S&E fields typically earn their degrees while in their early 30s; the median for all 2003 doctorate recipients in the S&E fields was 31.8 years old. In comparison, age at doctorate was 34.6 years in the humanities, 43.5 years in education, and 37.5 years in the professional/other fields category. (See appendix table A-3a and table 17.) The modal age spans evident in figure 14 and table 17 reflect this ordering.

**Figure 14. Age distribution at doctorate by broad field of study, 2003**



See Table 17.

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

## **Financial Resources in Support of Doctorate Recipients, Including Indebtedness**

### **Sources of Financial Support**

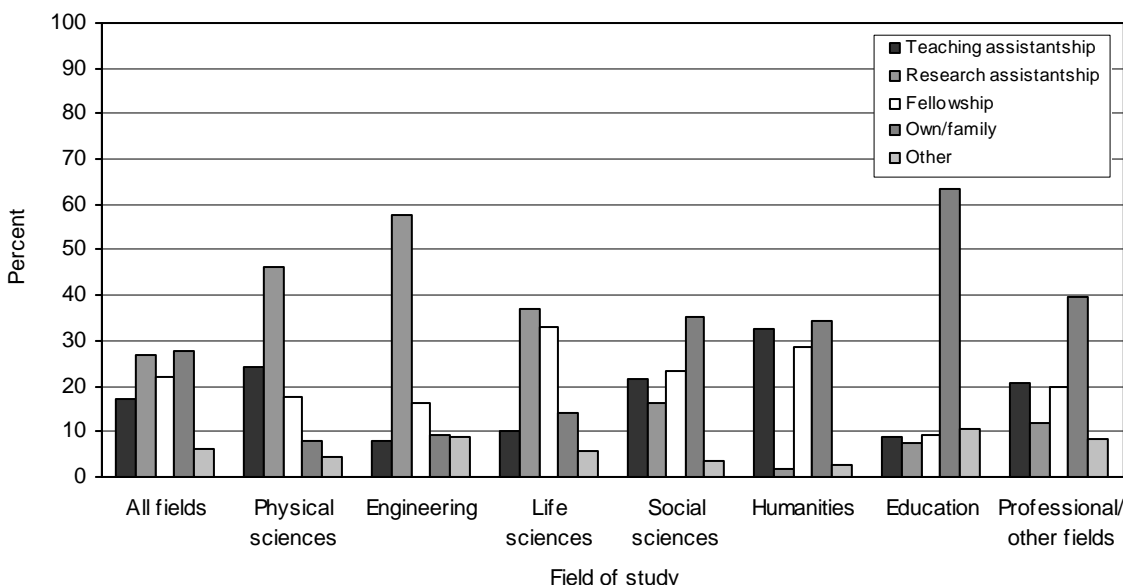
The SED asks two questions that, taken together, provide information on the financial sources of support utilized by the new doctorate recipients (for the exact formats and wordings, see the copy of the questionnaire in Appendix D). The first question asks respondents to complete a checklist of 13 different potential sources of support, such as fellowships and scholarships, dissertation grants, teaching and research assistantships, and various personal arrangements. The second question asks respondents which of the checked sources was the primary source of support and which was the second most important. Respondents are grouped in terms of their primary sources of support for purposes here. The 13 sources are combined into the seven categories that form the rows in table 18.

Almost two-thirds of the 2003 doctorate recipients received the majority of their support for doctoral study from program- or institution-based sources, such as teaching assistantships, research assistantships/traineeships, and fellowships/dissertation grants (66 percent).<sup>15</sup> Less than one-third (28 percent) of all 2003 doctorate recipients reported that their own resources (which include funds from savings, loans, one's spouse and family, and non-academic employment) were the primary sources they utilized to finance their doctoral studies. Foreign governments, employer contributions, and "other" sources accounted for the remaining 6 percent of the cases. (See figure 15 and table 18.)

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<sup>15</sup> The Federal government and other governments tend to be the original sources of these funds.

**Figure 15. Primary sources of financial support for doctorate recipients by broad field of study, 2003**



See Table 18.

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

Sources of support differ substantially by field of study. For example, within the physical sciences, a notably higher than average percentage of new doctorate recipients reported teaching/research assistantships or fellowships as primary sources of support (88 percent). Within engineering, 82 percent of the research doctorate recipients in 2003 listed teaching/research assistantships or fellowships as their principal form of support, as did 80 percent of respondents in the life sciences. On the other hand, only 52 percent of doctorate recipients in the professional/other fields and 26 percent of those in the broad field of education reported these categories as the primary sources of financial support for their doctoral program.

Overall, women were more likely to indicate that personal resources were their primary source of support than were men (35 percent versus 22 percent). The gender differences in sources of support are in large part a reflection of gender differences in broad fields of specialization, and the field differences in sources of support. Within the broad fields of life sciences, social sciences, and education, female doctorates were more likely to depend on their own resources than male doctorates (table 18).

Non-U.S. citizens tend to be more concentrated in fields where the majority of doctoral students receive institution- and/or program-based support. Mirroring this concentration, foreign



citizens on permanent or temporary visas reported lower percentages of reliance on their own resources (22 percent and 9 percent, respectively) than did U.S. citizen respondents (36 percent). The source-of-support differences between U.S. and non-U.S. citizens were smaller within the broad fields of study than overall; however, U.S. citizens were still more likely to rely on their own resources than non-U.S. citizens, especially temporary residents, in all the broad fields (table 18).

Differences in the various modes of financial support are found among the main racial/ethnic groups. American Indian and black doctorate recipients indicated the greatest reliance on their own resources to finance their doctoral program (46 percent for both), followed in decreasing order by whites (35 percent), Hispanics (33 percent), and Asians (20 percent). (See table 18.) Racial/ethnic differences in reliance on own resources also diminish within most of the broad fields of study. However, some substantial racial/ethnic differences within fields are found in terms of use of the different types of program- and institution-based support. In the physical sciences and engineering, Asians and whites were both more likely than blacks and Hispanics to rely on research assistantships and less likely to have fellowships or dissertation grants as their primary source of support. (See table 18.)

## **Levels of Education-Related Indebtedness**

The SED also asked new doctorate recipients to indicate the amount of money they owe that is directly tied to their undergraduate and graduate educations.<sup>16</sup> This is defined as debt related to tuition and fees, living expenses and supplies, and transportation to and from school. Exactly half of the respondents in 2003 reported having no graduate or undergraduate education-related debt, while another 18 percent reported cumulative debt of \$15,000 or less (table 19). However, 17 percent of all new doctorate recipients reported debt over \$35,000, creating a distinct bulge at the high end of the debt distribution.

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<sup>16</sup> The response categories, in \$5,000 increments, range from “none” to “\$35,001 or more.” In order to combine the undergraduate and graduate debt data into a single cumulative measure, the responses to each item were recoded to the midpoints of the various debt ranges, and the sum of the undergraduate and graduate levels of debt was re-categorized into the discrete ranges, with the cap of “\$35,001 or more” retained for the composite. See the special section on indebtedness in the *Summary Report 1998* for more detail on debt levels and financial support for doctoral education. The report is available on the NORC Website (<http://www.norc.uchicago.edu/issues/docdata.htm>.)

Examining the debt distributions within each of the seven broad fields, the graduates most likely to complete their doctorate with no education-related debt were graduates in engineering, the physical sciences, professional/other studies, education, and the life sciences in that order (table 19). Graduates of the broad fields of social science and humanities were more likely to have debt. Debt levels of \$35,000 or more were most common among graduates in social science fields (28 percent), the humanities (21 percent), and professional/other fields (20 percent).

Data separating graduate from undergraduate debt are shown in the lower two panels of table 19. These data show, first, that more debt is incurred during graduate school, and second, that the cumulative debt differences among the broad fields of doctoral study largely arise during graduate education. Overall, 74 percent of the 2003 doctoral cohort reported no undergraduate debt and only 2 percent reported undergraduate debt greater than \$35,000. In contrast, 63 percent reported no graduate school debts and 15 percent reported graduate debt greater than \$35,000. The jump in levels of indebtedness between undergraduate and graduate school was particularly large for doctorate recipients in the social sciences, humanities, education, and professional/other broad fields. (See table 19.)

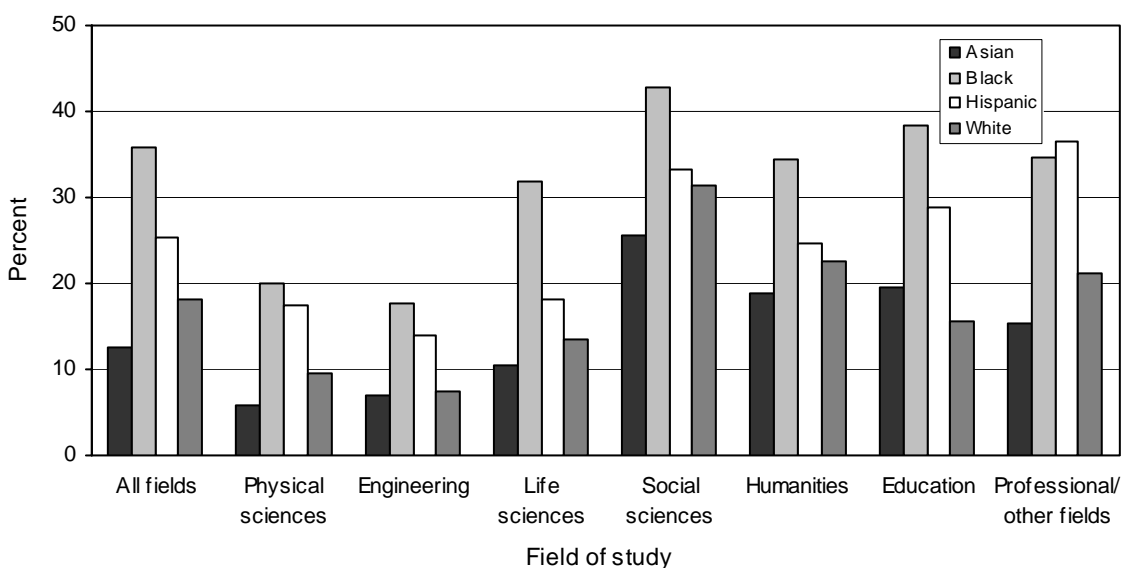
The pattern of debt levels for the study's main demographic groups is shown in table 20. Debt differences between the sexes are not large, with new male doctorates about four percent more likely to have no debt than their female counterparts (52 percent versus 48 percent). U.S. citizen doctorate recipients were less likely to have no higher-education-related debt than graduates with permanent or temporary visas (41 percent, versus 67 percent, and 69 percent, respectively), and more likely to have debts totaling over \$35,000 (21 percent, versus 11 percent for permanent and 10 percent for temporary visa holders). (See table 20.)

Particularly noteworthy in the cumulative debt tabulations (first panel of table 20) is the much higher incidence of blacks, Hispanics, and American Indians sustaining high levels of education-related debt. Over one-third (37 percent) of black doctorate recipients, 32 percent of American Indians, and 26 percent of Hispanics owed over \$35,000; these figures compare to 14 percent of Asians and 19 percent of whites with that level of debt. On the other side of the scale, the racial/ethnic groups with a greater likelihood of having no education-related debt at completion of the doctorate were Asians (56 percent) and whites (44 percent). The lower panels

of the table show that most of the racial/ethnic group indebtedness differences were tied to graduate school rather than the undergraduate years.

The racial/ethnic group graduate debt differences are likely to be at least in part a function of the racial/ethnic differences in fields of doctorate study, which, as seen in table 19, were also correlated with indebtedness. A preliminary assessment of this possibility is provided in table 21 and figure 16, which shows the percentages of each racial/ethnic group with graduate debt greater than \$30,000 separately for each broad field of doctoral study. Comparing black doctorate recipients with their white and Asian counterparts, it is clear that blacks in all seven broad fields were much more likely to complete graduate school with high levels of debt. Hispanic doctorate recipients were also more likely than whites and Asians to incur high levels of graduate school debt, but the differences are smaller than for blacks in most broad fields and are close to zero in social sciences and humanities. (See figure 16 and table 21.)

**Figure 16. Percentage of doctorate recipients with levels of graduate school debt greater than \$30,000, by broad field of study and race-ethnicity (U.S. citizens and permanent residents only), 2003**



See Table 21.

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

## Postgraduation Plans, Employment, and Location

The SED questionnaire includes a number of questions about the graduates' immediate plans for work or further study.<sup>17</sup> The responses provide a useful overview of the number of doctorate recipients planning to enter academic positions, government and industry, and postdoctoral programs of research and further study. Also, information is collected on the main types of work activities – research, teaching, administration, and professional services to individuals – that the graduates anticipate in their new positions.

There are five aspects of postgraduation plans examined in this report. The first is whether the new doctorate recipient has a definite commitment for employment or a postdoctoral position. These data are analyzed by broad field of study, sex, citizenship, and race/ethnicity (tables 22 and 23). The second aspect is the distribution of graduates with definite commitments for career employment versus postdoctorate research and study programs. This distribution is also examined separately by broad field of study, sex, citizenship, and race/ethnicity as well as by visa status (tables 24 and 25). The third aspect looked at is the distribution of graduates across U.S.-based employment sectors, broken down by broad field of study (table 26), sex, race/ethnicity, and citizenship status (table 27). The final aspects discussed are financial support for postdoctoral study (table 28) and anticipated location of postgraduate commitment (international versus U.S.) for non-U.S. citizens (tables 29 and 30).

### Definite versus Indefinite Plans

Over seven in ten (71 percent) of all doctorate recipients in 2003 reported having definite commitments for employment or postdoctoral study or research. As defined here, a definite commitment is indicated either by a respondent reporting that (a) he or she was returning to, or continuing in, predoctoral employment; or (b) he or she had signed a contract or made a definite commitment for other work or study. An indefinite plan is defined as a respondent who (c) was negotiating with one or more specific organizations, or (d) was seeking a position but had no

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<sup>17</sup> The items in the postgraduation plans section of the questionnaire are not classified as “critical items” which become the focus of missing data follow-ups. Thus, the response rates to the postgraduation plan items mirror the returns of the actual questionnaire (91 percent in 2003), minus a low, often negligible, rate of item nonresponse. For the 2003 SED cycle, the overall response rate for the first item, asking whether the respondent has definite plans for either career employment or study, was 90 percent.

specific prospects yet, or (e) some other situation, usually described as “not yet seeking a position.” Of the 29 percent with indefinite plans, over a quarter (28 percent) indicated they were in category (c) and 72 percent were either still seeking a position or not seeking one. (See survey question B1 in the 2003 questionnaire included in appendix D for the item wording.)

The 71 percent with definite plans is slightly less than in 2002, when 73 percent reported having definite commitments. The percentages with definite commitments in 2003 vary little by broad field with the noteworthy exception of the humanities and engineering, where about 65 percent have a definite commitment. (See table 22.)

The percentages of graduates from various demographic groups with definite commitments are shown in table 23. About 2 percent fewer women than men (70 percent compared to 72 percent) reported having definite plans. U.S. citizens were more likely to have definite commitments (73 percent) than individuals with permanent (64 percent) or temporary visas (68 percent). Among U.S. citizens and permanent residents, whites were more likely than Hispanics, blacks, Asians, and American Indians to have definite plans.

## **Career Employment versus Postdoctorates**

Among the doctoral recipients reporting definite plans, the majority (67 percent) indicated that they plan to enter career employment as opposed to pursuing further study within a postdoctoral research or teaching program (table 24). Nonetheless, the 33 percent planning on a postdoc represents the highest level ever recorded in the SED, edging up slightly from 31 in 2002.<sup>18</sup> Plans for postdoctoral study were more common among graduates in the life sciences (63 percent) and the physical sciences (53 percent) than in the other broad fields. Compared to 1983, the percentages of new doctorate recipients entering postdoctorate study programs have increased in all of the broad fields.

Differences among demographic subgroups are shown in table 25. Men were more likely than women to have definite plans for postdoctorate study (35 versus 30 percent). The percentage of men pursuing postdoctoral study increased to a new all-time high in 2003. The percentage of women with definite plans for postdoctoral study in 2003 also reached an all-time high. (See table 25 and, in the *Summary Report 2002*, table 24).

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<sup>18</sup> The annual numbers back to 1978 were assembled from table 24 and the analogous table from each of the previous four volumes of the *Summary Report*.

Students with temporary visas were more likely than permanent residents and U.S. citizens to pursue postdoctorate studies (the student visa allows the student to remain in the U.S. for two years of additional training after completing the doctorate). Among U.S. citizens and permanent residents, Asian doctorate recipients were more likely than other racial/ethnic subgroups to plan postdoctorates, followed by white and Hispanic recipients. Black and American Indian doctorate recipients were least likely to plan postdoctorates. (See table 25.) These differences among citizenship and racial/ethnic subgroups reflect the greater number of postdoctorates in the physical and life sciences, and the greater concentrations of non-U.S. citizens and U.S. citizen Asian students in those fields. (See appendix table A-4.)

### **Employment Sectors in the United States**

The most common employment sector of the 2003 doctorate recipients with definite commitments within the United States was higher education, identified by over half (55 percent) of the 2003 respondent subpopulation. (See the total column in table 26.) The next largest group had commitments to industry or some form of self-employment (21 percent) while 7 percent planned to work for U.S. Federal, state, or local government. Seventeen percent of the 2003 doctorate recipients indicated a type of employment that did not correspond to these main sectors, and are grouped into the “other” category in tables 26 and 27. These were a mix of employment in public and private elementary and secondary educational institutions, non-profit organizations not affiliated with universities, foreign governments, and non-governmental organizations. The historical trend indicated in the five-year intervals back to 1983 shows reductions in government employment, coupled with small increases in the higher education sector. The late 1990s (the 1998 time point in table 26) was the main exception to the growth in higher education, reflecting a surge in industry- and self-employment during the boom economy of those years.

The relative shares of doctorate recipients in the main employment sectors varied by broad field of doctorate (table 26). The proportion employed in academe in 2003 was highest among humanities doctorate recipients (83 percent) and lowest among the engineering doctorate recipients (22 percent). The proportion employed in industry or self-employed in 2003 ranged from highs of 63 percent of the engineering doctorate recipients and 45 percent of physical science graduates, to lows of 5 percent of the humanities and education doctorate recipients.

Humanities doctorate recipients were particularly unlikely to have work commitments in government (2 percent). The percentage of doctorate recipients classified as having “other” work commitments was by far the greatest among education graduates (43 percent), reflecting the high rates at which these individuals are employed in elementary and secondary educational institutions.

The distribution of graduates across the U.S. employment sectors is broken down by sex, citizenship status, and race/ethnicity in table 27. Among 2003 female doctorate recipients, 13 percent had commitments to industry or some form of self-employment, compared to 28 percent of their male counterparts. Women were more likely than men to have commitments to academe (59 percent versus 51 percent).

Non-U.S. citizens on temporary visas with definite plans to remain in the United States after graduation were slightly less likely than U.S. citizens to have work commitments in academe (51 percent versus 55 percent). Temporary visa holders were much more likely than U.S. citizens to have employment in industry or self-employment (43 versus 16 percent). Permanent residents were most likely to have definite plans for employment in academe (52 percent), and, like those on temporary visas, were more likely than U.S. citizens to take employment in industry or self-employment (36 percent versus 16 percent). (See table 27.)

With regard to U.S. racial/ethnic groups, Asians were less likely than others to go into academe (43 percent) and were more likely than all others to go into industry or self-employment (38 percent). African Americans were less likely than most other groups to have work commitments in industry or self-employment (11 percent), and more likely than others to have commitments subsumed in the “other” category (27 percent). This latter pattern reflects the high representation of African Americans in the broad field of education and the high rate of employment of those doctorate recipients by elementary and secondary education institutions. (See table 27.)

### **Sources of Financial Support for Postdoctoral Appointments**

The SED asked respondents with definite plans for further training or study (i.e., “postdocs”) in the year after graduation to indicate the main source of support for their postdoctoral appointment. In 2003, 41 percent of all postdocs named a college or university as

their main source of funding, followed by 34 percent indicating the U.S. government.<sup>19</sup> Private foundations supported another 6 percent, and other types of nonprofit organizations supported 3 percent. (See table 28.) Over 9 percent indicated some other kind of support than those listed in the questionnaire; inspection of the descriptions written by these respondents reveals that many were planning on support from a foreign government.

Gender differences in sources of postdoctoral support were very small. (See table 28.) A number of differences in sources of support are apparent among U.S. citizens, permanent-visa holders, and temporary-visa holders. As might be expected, U.S. citizens were the most likely to have the U.S. government as their main source of postdoctoral support. But substantial numbers of non-U.S. citizens also received U.S. government support, though the percentages were generally lower in 2003 than in the other years shown in table 28. Non-U.S. citizens with postdoc appointments were more likely than U.S. citizens to have university or college funding as their main source of support.

The racial/ethnic breakdowns in table 28 show that blacks were less likely than other groups to have U.S. government funding in 2003, and that Hispanics were more likely than the other groups to have university or college support. The percentages of each racial/ethnic group reporting private foundation or other nonprofit organization funding differ little, with the notable exception that none of the 11 American Indian postdoctorates in 2003 had either as their main source of support. (See table 28.)

### **Postdoctoral Location of Non-U.S. Citizens**

Among non-U.S. citizens with definite plans for work or study, 93 percent of all new doctorate recipients holding permanent visas and 65 percent of temporary visa holders indicated that they would remain in the United States following graduation (table 29). In 2003, chemistry, computer science, and physics and astronomy were the fields with the highest concentrations of new doctorate recipients with temporary visas staying in the United States (87 percent, 83 percent, and 81 percent, respectively). The lowest concentrations were located in the fields of education (32 percent), humanities (56 percent) and social sciences (53 percent). (See table 29.)

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<sup>19</sup> Some college or university support may come from federal funds, and this may not be clear to the SED respondents.



The number of non-U.S. citizens earning research doctorates in the United States has increased over the past twenty years, as has the tendency for those students to remain in the United States following graduation. Table 30 shows the trend of increasing numbers and percentages of new doctorate recipients with temporary visas planning to stay in the United States after receiving their doctorate. In 1983, less than half (44 percent) of those with temporary visas had firm commitments to positions in the United States. A decade later, 56 percent of them had firm commitments to stay in the United States; in 2003, the number had increased to 69 percent.

## **Special Section: Baccalaureate-Institution Origins of Recent (1999-2003) Research Doctorate Recipients**

Since its inception in 1958, a main purpose of the SED has been to collect detailed information on the educational histories of the new doctorate recipients. The baccalaureate-granting institutions of the doctorate recipients has been a topic of particular interest, the subject of a widely-circulated special report by NSF in 1996<sup>20</sup> and has generated a large volume of special table requests from college and university administrators and researchers since then. This special section provides an update to the 1996 report and extends the population covered to the doctorate recipients in fields outside of science and engineering. While space constraints limit the numbers of baccalaureate-granting institutions that can be listed in these tables, the NSF's online data retrieval service, WebCASPAR, provides answers to many queries about the numbers and types of doctorates earned by graduates of specific baccalaureate institutions; see <http://webcaspar.nsf.gov/> for instructions on how to use the system. Further information can be obtained from NORC at the contact addresses listed on page ii of this report.

### **U.S. and Foreign College Graduates in the U.S. Doctoral Population**

Over the five-year period from 1999-2003, U.S. institutions granted a total of 203,929 research doctorates. The SED archive contains information on the baccalaureate-granting institutions of 186,868, or 92 percent of the total. As shown in table 31, about 73 percent of these graduates earned their undergraduate degrees at U.S. institutions, while 27 percent earned them elsewhere and then came to the U.S. to earn the doctorate.

Doctorate recipients in the S&E fields are more likely than those in the non-S&E fields to have earned the baccalaureate outside of the U.S. (33 percent of S&E versus 16 percent of non-S&E). Within the broad subdivisions of S&E, doctorate recipients in the social sciences were most likely to earn their baccalaureate in the U.S. (83 percent) while those in engineering were least likely to have a U.S. undergraduate degree (46 percent). Of the non-S&E broad fields, U.S. undergraduate degrees were least common in the professional/other fields (71 percent) and most common in education (90 percent). (See table 31.)

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<sup>20</sup> Susan T. Hill, *Undergraduate Origins of Recent (1991-1995) Science and Engineering Doctorate Recipients*. Detailed Statistical Tables, NSF 96-334 (National Science Foundation, Arlington, VA, 1996).

## **Top U.S. and Foreign Baccalaureate-Granting Institutions of U.S. Doctorates**

The 25 U.S. colleges and universities that granted baccalaureates to the largest numbers of doctorate recipients over the five-year period from 1999 to 2003 are listed in table 32. The University of California-Berkeley is by far the largest source of research doctorates, with 2,175 of the doctorate recipients earning their baccalaureates there. Overall, the top 25 baccalaureate-origin institutions accounted for over 20 percent of the doctorate recipients with U.S. undergraduate degrees. This indicates a high level of concentration, since a total of about 1,600 U.S. colleges and universities are represented in the curricula vitae of the doctorate recipients in this time frame.

While Berkeley is the largest overall origin of doctorate recipients, it is also the largest origin of both S&E and non-S&E doctorate recipients. For the broad subdivisions of S&E, Berkeley was the most common undergraduate alma mater in life sciences and social sciences. The Massachusetts Institute of Technology (MIT) conferred the most U.S. baccalaureates among doctorate recipients in the physical sciences and engineering. In the non-S&E domain, humanities doctorate recipients were most likely to have earned baccalaureates from Berkeley, Yale, and Harvard, while education doctorate recipients were most likely to have earned them from the University of Texas at Austin and Pennsylvania State University. (See table 32.)

The largest foreign baccalaureate institution contributor of U.S. research doctorates over the five-year period was Seoul National University, with 1,657 undergraduates earning U.S. doctorates. (See table 33.) This total makes Seoul National the second largest contributor overall, trailing only Berkeley. The next three largest foreign contributors are Beijing University, Tsinghua University, and National Taiwan University (1,332, 1,234, and 1,190 doctorate recipients, respectively), which rank as the 6<sup>th</sup>, 12<sup>th</sup>, and 13<sup>th</sup> largest undergraduate sources of U.S. research doctorates overall.

In terms of the broad S&E fields of doctoral study, Beijing University and China University of Science and Technology are the two largest baccalaureate origin institutions of U.S. doctoral physical scientists (558 and 461 doctorate recipients, respectively), surpassing both MIT and Berkeley by well over 100 doctorate recipients during the five-year span of 1999-2003. (See table 33.) In engineering, Tsinghua University was by far the largest baccalaureate origin, with more than twice as many graduates earning U.S. doctorates than the largest U.S. origin institution, MIT (863 from Tsinghua versus 344 from MIT). Seoul National and National Taiwan

Universities also provided the undergraduate education of more U.S. engineering doctorate recipients (447 and 367, respectively) than any U.S. institution. The foreign baccalaureate-granting institutions are also a strong force in the doctoral ranks of the life sciences, but their presence is relatively less among U.S. doctoral social scientists.

The non-U.S. baccalaureate origins of doctorate recipients are even more concentrated in a relatively small number of institutions than are the U.S. baccalaureate origins. As reported in table 33, over 33 percent of the U.S. doctorates in all broad fields of S&E except social sciences (29 percent) with non-U.S. baccalaureates came from the top 25 foreign institutions. The concentration is lower in the non-S&E fields, but is still much higher than the U.S. undergraduate origins except for the humanities, which are about equal.

### **Carnegie Classifications of U.S. Baccalaureate-Granting Institutions**

Perhaps the most widely-used classification of U.S. higher education institutions is the Carnegie system (see <http://www.carnegiefoundation.org/Classification/> for the full taxonomy). The breakdown in table 34 identifies the six Carnegie classes of baccalaureate-granting institutions from which almost all of the new doctorate recipients who earned the baccalaureate in the U.S. graduated<sup>21</sup>:

- Doctorate-granting Institutions
  - Doctoral/Research Universities—Extensive: These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the doctorate. In the 2000 Carnegie report, they awarded 50 or more doctoral degrees per year across at least 15 disciplines.
  - Doctoral/Research Universities—Intensive: These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the doctorate. In the 2000 Carnegie report, they awarded at least 10 doctoral degrees per year across three or more disciplines, or at least 20 doctoral degrees per year overall.
- Master's Colleges and Universities (Carnegie classes I and II combined): These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the master's degree. In the 2000 Carnegie report, they awarded 20 or more master's degrees per year.

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<sup>21</sup> These tabulations are restricted to the 2003 doctorate recipients who earned baccalaureates from U.S. institutions, since non-U.S. institutions are not included in the Carnegie classification.

- Baccalaureate Colleges
  - Baccalaureate Colleges—Liberal Arts: These institutions are primarily undergraduate colleges with major emphasis on baccalaureate programs. In the 2000 Carnegie report, they awarded at least half of their baccalaureate degrees in liberal arts fields.
  - Baccalaureate Colleges—General: These institutions are primarily undergraduate colleges with major emphasis on baccalaureate programs. In the 2000 Carnegie report, they awarded less than half of their baccalaureate degrees in liberal arts fields.
- Other institutions. These include a diverse array of specialized religious and technical institutions that grant baccalaureates.

The distribution of doctorate recipients across the different classes of baccalaureate-granting institutions is shown in table 34, and the top 20 baccalaureate-granting institutions in each class are listed in table 35. The percentage distributions shown in table 34 indicate that about 52 percent of the doctorate recipients with U.S.-earned baccalaureates obtained them from doctoral/research-extensive institutions and another 10 percent earned baccalaureates from doctoral/research-intensive universities. Outside the doctorate-granting universities, the most common baccalaureate-origin classes of institutions were the masters' colleges and universities (21 percent of the total) and liberal arts colleges (13 percent of the total).

The research-extensive institutions awarded baccalaureates to higher-than-average percentages of the doctorate recipients in the S&E fields, and especially in engineering, where almost 75 percent of the doctorate recipients earned their baccalaureates from these institutions (compared to the 52 percent of doctorate recipients overall earning baccalaureates from research-extensive institutions). The baccalaureate colleges with a liberal arts emphasis also produce higher-than-average percentages (i.e., compared to 13 percent overall) of doctoral physical scientists and social scientists, but a much lower-than-average percentage (4 percent) of doctoral engineers. (See table 34.)

The research-extensive doctoral universities are also the main source of baccalaureates for non-S&E doctorate recipients (43 percent overall). Higher-than-average percentages of the humanities doctorate recipients (49 percent) and the professional/other fields doctorate recipients (48 percent) earned baccalaureates from those institutions. Humanities doctorates were also more likely than other fields to have obtained the baccalaureate from liberal arts colleges (20

percent). Education was the most likely of all broad fields of doctorate recipients to have baccalaureates earned at institutions in the master's colleges and universities category. (See table 34.)

An additional piece of information included in table 35 is the percentage of the doctorate recipients from each of the top 20 baccalaureate-granting institutions who were female. Overall, women were most highly represented among the liberal arts college graduates who went on to earn doctorates (55 percent), and the top 20 liberal arts colleges were especially likely to provide the undergraduate education of female doctorate recipients (61 percent of the doctorate recipients who earned baccalaureates from these schools were female). This reflects the presence of several elite colleges that are all or almost all female, including Smith, Wellesley, Bryn Mawr, Barnard, and Mount Holyoke.

### **Baccalaureate-Granting Institutions of U.S. Racial/Ethnic Minority Doctorate Recipients**

The top 20 baccalaureate-origin institutions for the main U.S. racial/ethnic minority doctorate recipients are listed in table 36<sup>22</sup>. The University of California-Berkeley provided the undergraduate education of the largest number of Asian doctorate recipients, matriculating 501 of the 5,441 Asian doctorate recipients over the five-year period. UCLA was a distant second with 251 Asian doctorate recipients naming it as their baccalaureate institution. Seven of the top 20 baccalaureate-origin institutions for Asians were in California in the 1999-2003 period. Overall, 46 percent of the Asian doctorate recipients earned their baccalaureate degrees at one of these top 20 colleges or universities.

Hispanic doctorate recipients were most likely to earn their baccalaureate degrees at the University of Puerto Rico's Rio Piedras campus (498 doctorate recipients) and Mayaguez campus (159 doctorate recipients). Hispanic baccalaureate-origin institutions are strongly clustered in Puerto Rico, California, Texas, and Florida. Overall, 37 percent of the 5,436 Hispanic doctorate recipients in the five-year span came from the top 20 baccalaureate-granting institutions. (See table 36.)

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<sup>22</sup> The numbers of doctorate recipients tabulated in table 36 include only U.S. citizens in each of the four racial/ethnic groups.

African-American doctorate recipients were much less concentrated in their top 20 baccalaureate-granting institutions, with only 21 percent of the 7,668 blacks earning baccalaureates in that set in the five-year period. Of the top institutions, 9 of the top 10 and 12 of the top 20 are Historically Black Colleges and Universities (HBCUs), underscoring the continuing importance of this pipeline to the doctorate for African Americans. Howard University was the undergraduate alma mater of the largest number of African American doctorate recipients, with 178 in the 1999-2003 doctoral cohorts. (See table 36.)

The baccalaureate origins of the 757 American Indian doctorate recipients in the 1999-2003 period are also concentrated in a few states, particularly in the Southwest (Oklahoma, New Mexico, Texas, and Arizona), and the west coast (California, Oregon, and Washington). (See table 36.)

## **Summary and Conclusions**

Perhaps the most striking change from the 1996 report on the baccalaureate origins of the U.S. research doctorate recipients has been the growth of the foreign baccalaureate-earning contingent and the large numbers from a few “powerhouse” institutions in Korea, China, and Taiwan. These baccalaureate-origin institutions can now claim a presence in U.S. doctoral education that compares closely with the top U.S. baccalaureate-origin institutions, and surpass the top U.S. institutions in contributing doctorate earners in the broad fields of engineering and physical sciences.

This section has also highlighted the very large role of the U.S. doctorate-granting research-extensive institutions in the production of baccalaureates who go on to earn doctorates. This of course reflects the large undergraduate enrollments of most of these institutions, but may also indicate strong undergraduate preparation for entering and completing doctoral programs of study.

The breakdowns of baccalaureate-origin institutions for the main racial/ethnic identifications of U.S. citizen doctorate recipients show that a high percentage of Asian and Hispanic doctorate recipients earned their baccalaureates in the top 20 institutions for each group. While Asian doctorate recipients largely earned baccalaureates in the leading national research-extensive universities, Hispanic doctorate recipients were mixed between those institutions and the predominantly Hispanic universities of Puerto Rico. The racial/ethnic

tabulations also underscore the continuing importance of the Historically Black Colleges and Universities to African-Americans earning research doctorates.

The SED affords many avenues for investigating more fully the baccalaureate origins of the doctoral population. One line that has not been explored here, but which has been an area of interest historically, is the proportion of an institution's and aggregates of institutions' (such as the Carnegie classes) bachelor's degree recipients who go on to earn doctorates. Calculating these rates requires obtaining the full numbers of baccalaureate recipients from each institution (or set thereof), and that entails drawing on additional data sources beyond the SED. For the U.S. baccalaureate-origin institutions, that is relatively easy to accomplish with data collected by the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS), though some complications arise in defining the baccalaureate cohorts to use for a given year or set of years of doctorate recipients, because each annual doctoral cohort contains a range of baccalaureate cohort members.



## MAIN DATA TABLES

**TABLE 1. Number of doctorates awarded and annual percentage change in doctorates awarded by U.S. colleges and universities, 1957–2003**

Year	Number of doctorate recipients	Percent change from previous year
1957	8,611	1.1
1958	8,773	1.9
1959	9,213	5.0
1960	9,733	5.6
1961	10,413	7.0
1962	11,500	10.4
1963	12,728	10.7
1964	14,325	12.5
1965	16,340	14.1
1966	17,949	9.8
1967	20,403	13.7
1968	22,937	12.4
1969	25,743	12.2
1970	29,498	14.6
1971	31,867	8.0
1972	33,041	3.7
1973	33,755	2.2
1974	33,047	-2.1
1975	32,952	-0.3
1976	32,946	0.0
1977	31,716	-3.7
1978	30,875	-2.7
1979	31,239	1.2
1980	31,020	-0.7
1981	31,356	1.1
1982	31,110	-0.8
1983	31,281	0.5
1984	31,336	0.2
1985	31,296	-0.1
1986	31,901	1.9
1987	32,370	1.5
1988	33,500	3.5
1989	34,327	2.5
1990	36,068	5.1
1991	37,531	4.1
1992	38,887	3.6
1993	39,800	2.3
1994	41,036	3.1
1995	41,746	1.7
1996	42,436	1.7
1997	42,540	0.2
1998	42,645	0.2
1999	41,090	-3.6
2000	41,357	0.6
2001	40,808	-1.3
2002	39,964	-2.1
2003	40,710	1.9

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 2. Number of U.S. colleges and universities awarding doctorates and average doctorate recipients per institution, 1963–2003

Year	Number of doctorate recipients	Number of institutions	Mean number of doctorate recipients per institution	Median number of doctorate recipients per institution
1963	12,728	185	69	27.0
1964	14,325	195	73	27.0
1965	16,340	204	80	33.0
1966	17,949	215	83	32.0
1967	20,403	219	93	40.0
1968	22,937	229	100	43.0
1969	25,743	231	111	52.0
1970	29,498	240	123	55.0
1971	31,867	260	123	48.5
1972	33,041	267	124	52.0
1973	33,755	286	118	42.0
1974	33,047	292	113	39.5
1975	32,952	292	113	43.5
1976	32,946	294	112	43.5
1977	31,716	304	104	41.0
1978	30,875	311	99	36.0
1979	31,239	311	100	40.0
1980	31,020	320	97	37.0
1981	31,356	323	97	41.0
1982	31,110	328	95	35.0
1983	31,281	332	94	37.0
1984	31,336	331	95	39.0
1985	31,296	337	93	36.0
1986	31,901	340	94	36.0
1987	32,370	349	93	38.0
1988	33,500	351	95	36.0
1989	34,327	356	96	36.0
1990	36,068	354	102	42.5
1991	37,531	364	103	38.5
1992	38,887	367	106	42.0
1993	39,800	372	107	42.5
1994	41,036	374	110	43.0
1995	41,746	382	109	43.0
1996	42,436	390	109	44.0
1997	42,540	383	111	45.0
1998	42,645	388	110	43.5
1999	41,090	396	104	41.5
2000	41,357	408	101	40.0
2001	40,808	417	98	37.0
2002	39,964	415	96	38.0
2003	40,710	423	96	36.0

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 3. Top 20 doctorate-granting institutions by broad field of study, 2003

Page 1 of 2

Institution	Number of doctorate recipients	Institution	Number of doctorate recipients
All fields	40,710	Physical sciences <sup>a</sup>	5,963
U. CA, Berkeley	767	U. CA, Berkeley	168
Nova Southeastern U.	675	Stanford U.	144
U. TX Austin	674	MA Institute of Technology	126
U. WI Madison	653	U. IL Urbana-Champaign	115
U. IL Urbana-Champaign	618	U. MI	98
U. MI	615	U. WA	98
U. CA, Los Angeles	593	U. WI Madison	95
Stanford U.	578	U. TX Austin	93
OH State U., The	575	OH State U., The	92
U. MN Twin Cities	561	U. MN Twin Cities	92
Harvard U.	550	Purdue U.	91
PA State U., The	550	U. CA, Los Angeles	90
U. WA	493	Harvard U.	86
TX A&M U.	487	Cornell U.	85
U. Southern CA	468	PA State U., The	81
Purdue U.	464	U. Arizona	81
MA Institute of Technology	440	U. MA	81
U. FL	437	SUNY Stony Brook	77
Cornell U.	411	U. Colorado	77
U. MA	410	CA Institute Technology	73
Engineering	5,265	Life sciences	8,369
Stanford U.	193	U. WI Madison	194
MA Institute of Technology	181	U. CA, Davis	173
GA Institute of Technology	163	Johns Hopkins U.	172
U. CA, Berkeley	149	U. CA, Berkeley	164
U. IL Urbana-Champaign	146	Harvard U.	155
U. MI	146	OH State U., The	149
Purdue U.	136	U. NC Chapel Hill	142
U. TX Austin	134	U. FL	135
PA State U., The	129	U. WA	135
TX A&M U.	117	U. MN Twin Cities	133
U. WI Madison	96	U. IL Urbana-Champaign	131
NC State U. Raleigh	92	U. CA, Los Angeles	124
U. Southern CA	92	Cornell U.	122
U. FL	87	U. MI	121
VA Polytech Institute & State U.	87	TX A&M U.	118
Carnegie Mellon U.	81	U. GA	114
U. MA	77	PA State U., The	111
U. MN Twin Cities	77	U. AL Birmingham	101
U. WA	74	MI State U.	96
Rensselaer Polytechnic Institute	73	Purdue U.	93

TABLE 3. Top 20 doctorate-granting institutions by broad field of study, 2003

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Institution	Number of doctorate recipients	Institution	Number of doctorate recipients
Social sciences	6,777	Humanities	5,412
U. CA, Los Angeles	120	NY U.	132
U. CA, Berkeley	113	Columbia U.	128
U. Chicago, The	107	U. TX Austin	122
U. TX Austin	105	IN U. Bloomington	119
U. MI	98	U. CA, Los Angeles	114
Harvard U.	94	Harvard U.	113
U. WI Madison	85	Graduate School & U. Center, CUNY	110
U. MN Twin Cities	79	U. CA, Berkeley	107
Graduate School & U. Center, CUNY	76	U. Chicago, The	106
OH State U., The	75	U. MI	100
U. MA	74	U. WI Madison	95
Columbia U.	71	Yale U.	94
U. FL	70	U. PA	86
U. Southern CA	70	U. MN Twin Cities	80
MI State U.	68	Princeton U.	79
NY U.	68	FL State U.	78
Rutgers U.	68	SUNY Stony Brook	76
U. WA	68	OH State U., The	75
Yale U.	68	U. NC Chapel Hill	73
PA State U., The	67	U. IL Urbana-Champaign	69
U. GA	67		
Education	6,627	Professional/other fields	2,297
Nova Southeastern U.	482	Nova Southeastern U.	97
Teachers College Columbia U.	152	U. TX Austin	47
U. Sarasota	135	U. Southern CA	45
U. GA	107	U. Sarasota	41
U. TX Austin	97	U. GA	37
U. VA	95	U. NC Chapel Hill	36
OH State U., The	93	U. Pittsburgh	35
PA State U., The	90	Harvard U.	34
Loyola U. Chicago	84	U. IL Urbana-Champaign	34
U. Southern CA	79	U. PA	34
U. MN Twin Cities	76	NY U.	33
TX A&M U.	73	TX A&M U.	32
IN U. Bloomington	71	PA State U., The	32
FL State U.	70	OH State U., The	31
U. IL Urbana-Champaign	68	MA Institute of Technology	29
U. Central FL	65	MI State U.	29
OK State U.	63	U. TN Knoxville	29
Harvard U.	60	U. WI Madison	28
U. WI Madison	60	Walden U.	28
Northern IL U.	58	U. CA, Berkeley	27

<sup>a</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 4. Number of doctorate recipients by state, including the District of Columbia and Puerto Rico, 2003**

Rank	State	Number of doctorate recipients
1	California	4,763
2	New York	3,413
3	Texas	2,572
4	Florida	2,157
5	Illinois	2,113
6	Massachusetts	2,029
7	Pennsylvania	2,013
8	Ohio	1,585
9	Michigan	1,422
10	North Carolina	1,108
11	Indiana	1,082
12	Virginia	1,009
13	Georgia	990
14	Maryland	953
15	New Jersey	899
16	Wisconsin	819
17	Colorado	764
18	Minnesota	741
19	Missouri	734
20	Arizona	719
21	Washington	651
22	Tennessee	650
23	Connecticut	578
24	Alabama	537
25	District of Columbia	519
26	Louisiana	517
27	Iowa	503
28	Kansas	414
29	Oregon	383
30	South Carolina	376
31	Kentucky	372
32	Oklahoma	360
33	Mississippi	339
34	Utah	336
35	Nebraska	303
36	New Mexico	254
37	Rhode Island	215
38	Arkansas	168
39	Delaware	167
40	West Virginia	156
41	Nevada	133
42	Hawaii	128
43	New Hampshire	126
44	Idaho	124
45	Puerto Rico	94
46	North Dakota	90
47	Montana	74
47	South Dakota	74
49	Wyoming	56
50	Vermont	47
51	Maine	45
52	Alaska	36

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 5. Major field of study of doctorate recipients for selected years, 1973–2003**

Field of study	1973	1978	1983	1988	1993	1998	2003
All fields	33,755	30,875	31,281	33,500	39,800	42,645	40,710
Physical sciences <sup>a</sup>	5,311	4,193	4,425	5,309	6,496	6,742	5,963
Engineering	3,364	2,423	2,781	4,187	5,698	5,924	5,265
Life sciences	5,168	5,041	5,553	6,164	7,395	8,539	8,369
Social sciences	5,757	6,038	6,096	5,781	6,545	7,073	6,777
Humanities	5,414	4,231	3,500	3,555	4,481	5,514	5,412
Education	7,238	7,194	7,174	6,362	6,689	6,571	6,627
Professional/other fields	1,503	1,755	1,752	2,142	2,496	2,282	2,297
Physical sciences							
Physics & astronomy	1,589	1,067	1,043	1,302	1,544	1,584	1,247
Chemistry	1,855	1,544	1,758	2,015	2,137	2,216	2,037
Earth, atmospheric, & marine sciences	634	623	637	728	789	838	819
Mathematics	1,233	838	701	749	1,146	1,177	994
Computer science <sup>b</sup>	-----	121	286	515	880	927	866
Engineering	3,364	2,423	2,781	4,187	5,698	5,924	5,265
Life sciences							
Biological sciences	3,648	3,516	3,741	4,111	5,092	5,845	5,694
Health sciences	486	512	639	882	1,197	1,500	1,633
Agricultural sciences	1,034	1,013	1,173	1,171	1,106	1,194	1,042
Social sciences							
Psychology	2,458	3,055	3,347	3,074	3,420	3,675	3,275
Anthropology	326	399	373	325	342	425	472
Economics	942	800	813	852	930	1,001	932
Political science/international relations	908	695	473	469	609	758	759
Sociology	599	610	525	449	513	549	597
Other social sciences	524	479	565	612	731	665	742
Humanities							
History	1,216	852	616	603	726	990	940
English language & literature	1,414	1,025	715	717	948	1,078	929
Foreign language & literature	917	637	504	430	575	643	622
Other humanities	1,867	1,717	1,665	1,805	2,232	2,803	2,921
Education							
Teacher education	675	551	483	473	428	342	241
Teaching fields	1,536	1,352	1,327	989	943	954	714
Other education	5,027	5,291	5,364	4,900	5,318	5,275	5,672
Professional/other							
Business & management	785	713	750	1,033	1,281	1,172	1,035
Communications	199	292	250	247	321	373	415
Other professional fields	446	736	730	812	867	721	844
Other fields	73	14	22	50	27	16	3

<sup>a</sup> Includes mathematics and computer sciences.

<sup>b</sup> Computer sciences first appeared on the survey form in 1978.

Dashes (-----) indicate that the field was not on the questionnaire's Specialties List that year.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 6. Number of doctorate recipients and percent female, by selected subfield of study, 1993 and 2003

Field of study	1993 <sup>a</sup>		2003 <sup>b</sup>		Percentage change earned by females, 1993-2003 <sup>c</sup>
	Number of doctorate recipients	Percent of doctorates to females	Number of doctorate recipients	Percent of doctorates to females	
All fields	39,505	38.3	40,590	45.3	18.4
Physical sciences	6,426	20.9	5,949	26.7	27.9
Physics & astronomy	1,530	12.7	1,242	18.8	48.6
Chemistry	2,112	27.6	2,032	31.8	15.5
Earth, atmospheric, & marine sciences	780	21.0	818	33.0	57.0
Mathematics	1,129	23.4	992	26.5	13.4
Computer science	875	15.8	865	20.2	28.3
Engineering	5,619	9.3	5,242	17.1	84.0
Life sciences	7,348	42.0	8,345	48.4	15.2
Biological sciences	5,064	40.5	5,681	45.7	13.0
Health sciences	1,185	65.6	1,626	66.7	1.8
Agricultural sciences	1,099	23.6	1,038	34.0	44.3
Social sciences	6,518	49.5	6,763	55.4	11.8
Psychology	3,410	61.2	3,271	68.1	11.3
Anthropology	342	62.3	472	61.0	-2.0
Economics	920	23.4	928	28.2	20.8
Political science/international relations	604	26.0	756	36.6	41.0
Sociology	512	47.5	597	59.0	24.2
Other social sciences	730	42.9	739	45.6	6.4
Humanities	4,451	47.8	5,401	50.8	6.4
History	723	35.4	940	40.1	13.3
English language & literature	947	58.2	928	59.9	3.0
Foreign language & literature	572	59.6	620	60.6	1.7
Other humanities	2,209	44.3	2,913	49.3	11.2
Education	6,669	58.8	6,602	66.1	12.4
Teacher education	427	71.4	241	75.5	5.7
Teaching fields	941	54.4	712	64.3	18.2
Other education	5,301	58.6	5,649	65.9	12.6
Professional/other	2,474	36.1	2,288	44.9	24.3
Business & management	1,272	27.8	1,030	34.2	22.8
Communications	320	49.1	414	59.4	21.1
Other professional fields	858	43.8	841	51.0	16.4
Other fields	24	29.2	3	33.3	14.3

<sup>a</sup> 1993 field total excludes 295 individuals for whom sex was not reported.

<sup>b</sup> 2003 field total excludes 120 individuals for whom sex was not reported.

<sup>c</sup> Change in percent to females computed as (2003 percent - 1993 percent) / 1993 percent.

See Appendix Table A-1.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.



TABLE 7. Number and percent of doctorate recipients, by sex within broad field of study for selected years, 1973–2003

Field of study and sex	1973		1978		1983		1988		1993 <sup>a</sup>		1998 <sup>b</sup>		2003 <sup>c</sup>	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
All fields	33,755	100.0	30,875	100.0	31,281	100.0	33,499	100.0	39,505	100.0	42,481	100.0	40,590	100.0
Male	27,670	82.0	22,553	73.0	20,748	66.3	21,680	64.7	24,384	61.7	24,633	58.0	22,188	54.7
Female	6,085	18.0	8,322	27.0	10,533	33.7	11,819	35.3	15,121	38.3	17,848	42.0	18,402	45.3
Physical sciences <sup>d</sup>	5,311	100.0	4,193	100.0	4,425	100.0	5,309	100.0	6,426	100.0	6,709	100.0	5,949	100.0
Male	4,929	92.8	3,754	89.5	3,808	86.1	4,430	83.4	5,084	79.1	5,108	76.1	4,360	73.3
Female	382	7.2	439	10.5	617	13.9	879	16.6	1,342	20.9	1,601	23.9	1,589	26.7
Engineering	3,364	100.0	2,423	100.0	2,781	100.0	4,187	100.0	5,619	100.0	5,885	100.0	5,242	100.0
Male	3,318	98.6	2,370	97.8	2,657	95.5	3,901	93.2	5,097	90.7	5,111	86.8	4,346	82.9
Female	46	1.4	53	2.2	124	4.5	286	6.8	522	9.3	774	13.2	896	17.1
Life sciences	5,168	100.0	5,041	100.0	5,553	100.0	6,164	100.0	7,348	100.0	8,518	100.0	8,345	100.0
Male	4,246	82.2	3,882	77.0	3,832	69.0	3,893	63.2	4,262	58.0	4,638	54.4	4,309	51.6
Female	922	17.8	1,159	23.0	1,721	31.0	2,271	36.8	3,086	42.0	3,880	45.6	4,036	48.4
Social sciences	5,757	100.0	6,038	100.0	6,096	100.0	5,780	100.0	6,518	100.0	7,042	100.0	6,763	100.0
Male	4,546	79.0	4,177	69.2	3,690	60.5	3,178	55.0	3,289	50.5	3,209	45.6	3,018	44.6
Female	1,211	21.0	1,861	30.8	2,406	39.5	2,602	45.0	3,229	49.5	3,833	54.4	3,745	55.4
Humanities	5,414	100.0	4,231	100.0	3,500	100.0	3,555	100.0	4,451	100.0	5,504	100.0	5,401	100.0
Male	3,864	71.4	2,635	62.3	1,969	56.3	1,980	55.7	2,324	52.2	2,817	51.2	2,656	49.2
Female	1,550	28.6	1,596	37.7	1,531	43.7	1,575	44.3	2,127	47.8	2,687	48.8	2,745	50.8
Education	7,238	100.0	7,194	100.0	7,174	100.0	6,362	100.0	6,669	100.0	6,554	100.0	6,602	100.0
Male	5,455	75.4	4,339	60.3	3,555	49.6	2,848	44.8	2,748	41.2	2,424	37.0	2,239	33.9
Female	1,783	24.6	2,855	39.7	3,619	50.4	3,514	55.2	3,921	58.8	4,130	63.0	4,363	66.1
Professional/other fields	1,503	100.0	1,755	100.0	1,752	100.0	2,142	100.0	2,474	100.0	2,269	100.0	2,288	100.0
Male	1,312	87.3	1,396	79.5	1,237	70.6	1,450	67.7	1,580	63.9	1,328	58.5	1,260	55.1
Female	191	12.7	359	20.5	515	29.4	692	32.3	894	36.1	946	41.7	1,028	44.9

<sup>a</sup> Group total for 1993 excludes 295 individuals for whom sex was not reported.

<sup>b</sup> Group total for 1998 excludes 164 individuals for whom sex was not reported.

<sup>c</sup> Group total for 2003 excludes 120 individuals for whom sex was not reported.

<sup>d</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 8. Number of U.S. citizen doctorate recipients, by race/ethnicity and broad field of study, for selected years, 1983–2003

Page 1 of 2

Field of study and race/ethnicity	1983	1988	1993	1998	2003
All fields	24,393	23,290	26,449	28,456	26,413
Known race/ethnicity	23,772	22,910	26,221	27,540	25,705
Asian <sup>b</sup>	492	615	876	1,155	1,350
Black	925	813	1,109	1,485	1,708
Hispanic	542	595	833	1,205	1,270
American Indian <sup>c</sup>	81	94	120	189	133
White	21,732	20,784	23,245	23,454	20,818
Other <sup>d</sup>	0	9	38	52	426
Physical sciences <sup>a</sup>	3,144	3,238	3,477	3,693	3,143
Known race/ethnicity	3,030	3,151	3,433	3,555	3,034
Asian <sup>b</sup>	93	112	177	188	198
Black	26	33	41	82	96
Hispanic	38	70	87	102	96
American Indian <sup>c</sup>	9	11	11	19	8
White	2,864	2,922	3,111	3,160	2,580
Other <sup>d</sup>	0	3	6	4	56
Engineering	1,164	1,780	2,228	2,565	1,898
Known race/ethnicity	1,120	1,738	2,208	2,473	1,844
Asian <sup>b</sup>	66	141	216	243	204
Black	19	19	41	73	69
Hispanic	18	43	56	100	90
American Indian <sup>c</sup>	0	4	2	13	10
White	1,017	1,530	1,891	2,037	1,453
Other <sup>d</sup>	0	1	2	7	18
Life sciences	4,442	4,406	4,830	5,358	5,429
Known race/ethnicity	4,341	4,342	4,786	5,211	5,294
Asian <sup>b</sup>	132	129	213	290	450
Black	64	71	123	169	190
Hispanic	48	85	126	213	213
American Indian <sup>c</sup>	8	18	14	25	17
White	4,089	4,039	4,304	4,506	4,323
Other <sup>d</sup>	0	0	6	8	101
Social sciences	5,054	4,349	4,952	5,349	4,947
Known race/ethnicity	4,916	4,284	4,915	5,170	4,816
Asian <sup>b</sup>	64	85	103	170	193
Black	185	161	204	281	307
Hispanic	138	134	182	294	276
American Indian <sup>c</sup>	12	12	19	42	34
White	4,517	3,890	4,401	4,368	3,912
Other <sup>d</sup>	0	2	6	15	94
Humanities	2,986	2,795	3,509	4,282	4,129
Known race/ethnicity	2,905	2,751	3,472	4,128	3,998
Asian <sup>b</sup>	35	37	58	109	136
Black	73	77	95	151	151
Hispanic	96	93	129	163	216
American Indian <sup>c</sup>	6	7	13	22	17
White	2,695	2,536	3,168	3,676	3,415
Other <sup>d</sup>	0	1	9	7	63

**TABLE 8. Number of U.S. citizen doctorate recipients, by race/ethnicity and broad field of study, for selected years, 1983–2003**

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Field of study and race/ethnicity	1983	1988	1993	1998	2003
Education	6,256	5,300	5,791	5,573	5,501
Known race/ethnicity	6,152	5,239	5,763	5,421	5,382
Asian <sup>b</sup>	74	82	83	99	108
Black	496	372	515	628	743
Hispanic	181	151	213	285	327
American Indian <sup>c</sup>	45	36	51	50	39
White	5,356	4,596	4,892	4,349	4,091
Other <sup>d</sup>	0	2	9	10	74
Professional/other fields	1,347	1,422	1,662	1,636	1,366
Known race/ethnicity	1,308	1,405	1,644	1,582	1,337
Asian <sup>b</sup>	28	29	26	56	61
Black	62	80	90	101	152
Hispanic	23	19	40	48	52
American Indian <sup>c</sup>	1	6	10	18	8
White	1,194	1,271	1,478	1,358	1,044
Other <sup>d</sup>	0	0	0	1	20

<sup>a</sup> Includes mathematics and computer sciences.

<sup>b</sup> Includes Native Hawaiians/other Pacific Islanders through 2000, but excludes them in 2003 per revised OMB guidelines.

<sup>c</sup> Includes Alaskan Natives.

<sup>d</sup> Includes Native Hawaiians and other Pacific Islanders and respondents choosing multiple races (excluding those selecting an Hispanic ethnicity) in 2003.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 9. Major field of study of U.S. citizen doctorate recipients, by race/ethnicity, 2003**

Field of study	Total U.S. citizen doctorate recipients	Number with known race/ ethnicity	U.S. citizens					
			Asian <sup>a</sup>	Black	Hispanic	American Indian <sup>b</sup>	White	Other <sup>c</sup>
All fields	26,413	25,705	1,350	1,708	1,270	133	20,818	426
Physical sciences	3,143	3,034	198	96	96	8	2,580	56
Physics & astronomy	625	598	45	13	23	0	506	11
Chemistry	1,169	1,126	62	35	38	2	972	17
Earth, atmospheric, & marine sciences	495	482	10	17	13	2	432	8
Mathematics	470	456	38	14	14	2	379	9
Computer science	384	372	43	17	8	2	291	11
Engineering	1,898	1,844	204	69	90	10	1,453	18
Life sciences	5,429	5,294	450	190	213	17	4,323	101
Biological sciences	3,782	3,689	373	100	157	11	2,970	78
Health sciences	1,166	1,138	70	75	38	2	935	18
Agricultural sciences	481	467	7	15	18	4	418	5
Social sciences	4,947	4,816	193	307	276	34	3,912	94
Psychology	2,776	2,713	103	162	161	22	2,215	50
Anthropology	379	359	13	21	31	2	280	12
Economics	309	305	26	6	10	1	259	3
Political science/international relations	536	521	12	38	25	2	437	7
Sociology	461	446	13	46	39	0	334	14
Other social sciences	486	472	26	34	10	7	387	8
Humanities	4,129	3,998	136	151	216	17	3,415	63
History	806	772	23	39	33	5	658	14
English language & literature	795	773	24	40	34	6	655	14
Foreign language & literature	387	377	8	8	67	0	289	5
Other humanities	2,141	2,076	81	64	82	6	1,813	30
Education	5,501	5,382	108	743	327	39	4,091	74
Teacher education	196	193	1	36	9	0	146	1
Teaching fields	561	548	14	57	24	2	440	11
Other education	4,744	4,641	93	650	294	37	3,505	62
Professional/other	1,366	1,337	61	152	52	8	1,044	20
Business & management	556	545	33	59	27	1	419	6
Communications	273	264	7	28	7	1	217	4
Other professional fields	537	528	21	65	18	6	408	10
Other fields	0	0	0	0	0	0	0	0

<sup>a</sup> Does not include Native Hawaiians and other Pacific Islanders.

<sup>b</sup> Includes Alaskan Natives.

<sup>c</sup> Includes Native Hawaiians and other Pacific Islanders and respondents choosing multiple races (excluding those selecting an Hispanic ethnicity) in 2003.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 10. Doctorate-granting institutions having the largest number of U.S. minority doctorate recipients, 1999–2003

Institution	Number of doctorate recipients	Institution	Number of doctorate recipients
Asian <sup>a</sup>		Black	
U. CA, Los Angeles	373	Nova Southeastern U.	423
U. CA, Berkeley	351	Howard U.	255
Stanford U.	215	U. MI	147
Harvard U.	165	OH State U.	127
MA Institute of Technology	155	U. MD	121
U. Southern CA	149	Loyola U. Chicago	120
U. MI	137	U. NC Chapel Hill	117
U. CA, Davis	128	U. Sarasota	117
Columbia U.	126	Wayne State U.	108
U. PA	120	Temple U.	104
U. WA	116	Harvard U.	99
U. IL Urbana-Champaign	113	U. IL Urbana-Champaign	97
Johns Hopkins U.	105	Teachers College Columbia U.	95
U. TX Austin	98	U. TX Austin	95
U. CA, Irvine	97	NC State U. Raleigh	93
U. CA, San Diego	94	Walden U.	93
NY U.	86	U. CA, Berkeley	92
Northwestern U.	81	FL State U.	91
U. WI Madison	79	VA Polytech Institute & State U.	91
U. Chicago	78	MI State U.	89
<i>Top 20 Institutions</i>	<i>2,866</i>	<i>Top 20 Institutions</i>	<i>2,574</i>
<i>Total institutions reported (334)</i>	<i>6,775</i>	<i>Total institutions reported (348)</i>	<i>8,242</i>
Hispanic		American Indian <sup>b</sup>	
U. PR Rio Piedras	232	OK State U.	27
U. TX Austin	179	Nova Southeastern U.	21
U. CA, Berkeley	172	U. TX Austin	19
U. CA, Los Angeles	153	U. OK	17
TX A&M U.	126	U. CA, Berkeley	14
Carlos Albizu U.	121	U. WA	14
Nova Southeastern U.	120	U. WI Madison	14
Harvard U.	106	Fielding Institute	13
Stanford U.	106	U. MN Twin Cities	13
U. AZ	91	U. NM	13
Inter American U. PR Metro Campus	88	Stanford U.	12
U. WI Madison	86	AZ State U.	11
U. MI	85	U. IL Urbana-Champaign	11
U. CA, Davis	83	U. AR Fayetteville	11
U. Southern CA	82	U. CA, Santa Barbara	11
AZ State U.	79	U. ND	11
U. NM	79	Cornell U.	10
Graduate School & U. Center, CUNY	77	U. CA, Los Angeles	10
U. IL Urbana-Champaign	67	U. AZ	10
NY U.	66	U. FL	10
		U. MI	10
<i>Top 20 Institutions</i>	<i>2,198</i>	<i>Top 20 Institutions</i>	<i>282</i>
<i>Total institutions reported (331)</i>	<i>5,998</i>	<i>Total institutions reported (220)</i>	<i>812</i>

<sup>a</sup> Does not include Native Hawaiians and other Pacific Islanders.

<sup>b</sup> Includes Alaskan Natives.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 11. Citizenship status of doctorate recipients, by broad field of study for selected years, 1973–2003

Field/citizenship	1973	1978	1983	1988	1993	1998	2003
<b>All fields</b>							
Total	33,755	30,875	31,281	33,500	39,800	42,645	40,710
U.S. citizen	27,974	25,303	24,393	23,290	26,449	28,456	26,413
Non-U.S., permanent visa	1,998	1,344	1,274	1,622	2,259	2,702	1,631
Non-U.S., temporary visa	3,209	3,459	4,540	6,243	9,973	9,496	10,585
Unknown	574	769	1,074	2,345	1,119	1,991	2,081
<b>Physical sciences<sup>a</sup></b>							
Total	5,311	4,193	4,425	5,309	6,496	6,742	5,963
U.S. citizen	4,109	3,201	3,144	3,238	3,477	3,693	3,143
Non-U.S., permanent visa	433	257	223	252	456	554	291
Non-U.S., temporary visa	689	654	928	1,492	2,368	2,194	2,271
Unknown	80	81	130	327	195	301	258
<b>Engineering</b>							
Total	3,364	2,423	2,781	4,187	5,698	5,924	5,265
U.S. citizen	2,144	1,262	1,164	1,780	2,228	2,565	1,898
Non-U.S., permanent visa	557	325	319	366	469	479	265
Non-U.S., temporary visa	629	775	1,180	1,731	2,792	2,582	2,909
Unknown	34	61	118	310	209	298	193
<b>Life sciences</b>							
Total	5,168	5,041	5,553	6,164	7,395	8,539	8,369
U.S. citizen	4,067	4,032	4,442	4,406	4,830	5,358	5,429
Non-U.S., permanent visa	367	215	190	305	419	732	365
Non-U.S., temporary visa	656	674	784	1,080	1,996	2,151	2,190
Unknown	78	120	137	373	150	298	385
<b>Social sciences</b>							
Total	5,757	6,038	6,096	5,781	6,545	7,073	6,777
U.S. citizen	4,892	5,121	5,054	4,349	4,952	5,349	4,947
Non-U.S., permanent visa	236	211	191	223	323	300	211
Non-U.S., temporary visa	526	491	579	716	1,079	1,031	1,202
Unknown	103	215	272	493	191	393	417
<b>Humanities</b>							
Total	5,414	4,231	3,500	3,555	4,481	5,514	5,412
U.S. citizen	4,829	3,780	2,986	2,795	3,509	4,282	4,129
Non-U.S., permanent visa	232	139	118	168	267	338	261
Non-U.S., temporary visa	256	204	261	352	579	627	780
Unknown	97	108	135	240	126	267	242
<b>Education</b>							
Total	7,238	7,194	7,174	6,362	6,689	6,571	6,627
U.S. citizen	6,747	6,503	6,256	5,300	5,791	5,573	5,501
Non-U.S., permanent visa	105	128	148	177	177	172	130
Non-U.S., temporary visa	292	416	561	487	555	489	585
Unknown	94	147	209	398	166	337	411
<b>Professional/other fields</b>							
Total	1,503	1,755	1,752	2,142	2,496	2,282	2,297
U.S. citizen	1,186	1,404	1,347	1,422	1,662	1,636	1,366
Non-U.S., permanent visa	68	69	85	131	148	127	108
Non-U.S., temporary visa	161	245	247	385	604	422	648
Unknown	88	37	73	204	82	97	175

<sup>a</sup> Includes mathematics and computer sciences

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 12. Top 30 countries of origin of non-U.S. citizens earning doctorates at U.S. colleges and universities (ranked by number of doctorate recipients), 2003**

Rank	Country	Number of doctorate recipients
1	China, Peoples Republic of <sup>a</sup>	2,784
2	Korea <sup>b</sup>	1,308
3	India	910
4	China, Republic of (Taiwan)	727
5	Canada	539
6	Turkey	447
7	Thailand	420
8	Japan	296
9	Germany	268
10	Mexico	259
11	Russia	256
12	Great Britain, UK	172
13	Brazil	161
14	Italy	160
15	Romania	145
16	Spain	138
17	Egypt	130
18	Saudi Arabia	115
19	France	113
20	Colombia	109
21	Argentina	100
22	Greece	99
23	Jordan	96
24	Venezuela	93
25	Israel	92
26	Chile	81
27	Iran	70
[ 27	Malaysia	70
29	Australia	69
30	Bulgaria	60
<i>Top 30 countries of origin</i>		<i>10,287</i>
<i>Total non-U.S. citizens (155 countries) *</i>		<i>12,063</i>

<sup>a</sup> Includes Hong Kong.

<sup>b</sup> Includes Republic of Korea (South Korea) and Democratic People's Republic of Korea (North Korea).

\* Excludes cases with unknown country of origin

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 13. Doctorate-granting institutions having the largest number of non-U.S. citizen doctorate recipients (ordered by number of doctorate recipients), 2003

Institution	Number of doctorate recipients	Institution	Number of doctorate recipients
U. IL Urbana-Champaign	256	U. MI	203
U. TX Austin	251	MA Inst of Technology	193
OH State U.	241	U. MN Twin Cities	192
Purdue U.	224	Cornell U.	169
PA State U., The	224	U. CA, Los Angeles	160
U. WI Madison	221	U. FL	156
U. CA, Berkeley	218	MI State U.	155
U. Southern CA	211	U. MD	155
Stanford U.	210	Harvard U.	154
TX A&M U.	208	Columbia U.	148
		<i>Top 20 institutions</i>	<i>3,949</i>
		<i>Total institutions reported (417)</i>	<i>12,216</i>

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.



TABLE 14. Parental educational attainment of doctorate recipients, by selected demographic characteristics, 2003

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Demographic characteristic	Total percent	Parental education			Total number
		High school or less	Some college <sup>a</sup>	Advanced degree	
Total					
Father's education	100.0	28.9	36.5	34.6	36,566
Mother's education	100.0	37.9	40.3	21.8	36,647
Sex					
Male					
Father's education	100.0	29.6	36.3	34.1	20,028
Mother's education	100.0	39.8	39.6	20.6	20,056
Female					
Father's education	100.0	28.0	36.7	35.3	16,533
Mother's education	100.0	35.6	41.2	23.1	16,586
Race/ethnicity (U.S. citizens only)					
Asian <sup>b</sup>					
Father's education	100.0	19.8	28.9	51.3	1,311
Mother's education	100.0	32.9	39.4	27.7	1,315
Black					
Father's education	100.0	51.2	28.4	20.3	1,505
Mother's education	100.0	44.4	34.1	21.5	1,533
Hispanic					
Father's education	100.0	41.5	29.8	28.7	1,195
Mother's education	100.0	49.3	32.3	18.4	1,201
American Indian <sup>c</sup>					
Father's education	100.0	41.3	38.8	19.8	121
Mother's education	100.0	47.5	40.2	12.3	122
White					
Father's education	100.0	24.3	36.3	39.5	19,939
Mother's education	100.0	30.4	44.2	25.4	19,967
Citizenship					
U.S. Citizen					
Father's education	100.0	26.6	34.9	38.4	25,000
Mother's education	100.0	32.4	42.6	25.1	25,072
Non-U.S., permanent visa					
Father's education	100.0	33.4	35.2	31.4	1,569
Mother's education	100.0	47.7	33.7	18.6	1,573
Non-U.S., temporary visa					
Father's education	100.0	33.9	40.5	25.6	9,977
Mother's education	100.0	50.3	35.7	13.9	9,982
Broad field of study					
Physical sciences <sup>d</sup>					
Father's education	100.0	25.7	38.7	35.7	5,458
Mother's education	100.0	35.3	42.0	22.7	5,473
Engineering					
Father's education	100.0	28.4	42.2	29.4	4,837
Mother's education	100.0	41.6	40.9	17.6	4,842
Life sciences					
Father's education	100.0	25.9	36.3	37.8	7,693
Mother's education	100.0	35.0	41.7	23.4	7,707
Social sciences					
Father's education	100.0	24.9	35.8	39.3	5,980
Mother's education	100.0	33.5	40.3	26.2	5,995

TABLE 14. Parental educational attainment of doctorate recipients, by selected demographic characteristics, 2003

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Characteristic	Total percent	Parental education			Total number
		High school or less	Some college <sup>a</sup>	Advanced degree	
Humanities					
Father's education	100.0	22.4	32.3	45.4	4,923
Mother's education	100.0	29.9	41.8	28.3	4,927
Education					
Father's education	100.0	44.6	33.3	22.1	5,716
Mother's education	100.0	50.7	35.7	13.6	5,735
Professional/other fields					
Father's education	100.0	33.3	39.1	27.6	1,959
Mother's education	100.0	44.4	38.7	16.9	1,968

<sup>a</sup> Includes those who have earned a bachelor's but not an advanced degree.<sup>b</sup> Does not include Native Hawaiians and other Pacific Islanders.<sup>c</sup> Includes Alaskan Natives.<sup>d</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 15. Median number of years from baccalaureate to doctorate award by broad field of study for selected years, 1978–2003**

Field of study and time to degree	1978	1983	1988	1993	1998	2003
All fields						
Since baccalaureate	9.0	9.9	10.6	10.7	10.4	10.1
Since starting graduate school	6.3	6.9	7.1	7.3	7.5	7.5
Physical sciences <sup>a</sup>						
Since baccalaureate	7.0	7.2	7.6	8.4	8.0	7.9
Since starting graduate school	5.9	6.1	6.3	6.7	6.7	6.8
Engineering						
Since baccalaureate	7.6	8.1	8.2	9.0	8.8	8.6
Since starting graduate school	5.8	5.9	6.0	6.5	6.7	6.9
Life sciences						
Since baccalaureate	7.4	8.0	9.0	9.5	9.2	8.8
Since starting graduate school	5.9	6.2	6.7	7.0	7.0	7.0
Social sciences						
Since baccalaureate	8.2	9.5	10.6	10.6	9.9	10.0
Since starting graduate school	6.2	7.0	7.6	7.7	7.6	7.8
Humanities						
Since baccalaureate	10.2	11.2	12.3	12.0	11.6	11.3
Since starting graduate school	7.5	8.2	8.7	8.5	8.8	9.0
Education						
Since baccalaureate	12.9	14.2	17.0	19.3	20.0	18.2
Since starting graduate school	6.8	7.6	8.3	8.5	8.7	8.3
Professional/other fields						
Since baccalaureate	10.9	12.1	13.0	13.3	13.8	13.8
Since starting graduate school	6.3	7.0	7.5	7.8	8.0	8.3

<sup>a</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 16. Median number of years from baccalaureate to doctorate award, by selected demographic group and broad field of study, 2003**

Time to degree and demographic characteristics	All fields		Physical sciences <sup>a</sup>		Engineering		Life sciences		Social sciences		Humanities		Education		Professional/ other	
	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number
<b>Elapsed time from baccalaureate (years)</b>																
All doctorate recipients	10.1	36,451	7.9	5,396	8.6	4,792	8.8	7,487	10.0	6,042	11.3	4,951	18.2	5,813	13.8	1,970
<b>Sex</b>																
Male	9.7	19,892	7.9	3,952	8.8	3,967	8.7	3,846	10.2	2,690	11.3	2,427	17.3	1,949	13.8	1,061
Female	10.9	16,554	7.7	1,442	8.0	824	9.0	3,639	9.8	3,352	11.3	2,524	18.6	3,864	13.8	909
<b>Citizenship</b>																
U.S. citizen	10.6	25,356	7.3	3,051	8.0	1,839	8.5	5,260	10.0	4,738	11.5	4,012	19.0	5,158	16.0	1,298
Non-U.S., permanent visa	10.9	1,476	10.0	269	10.1	246	10.1	315	11.2	190	12.0	233	16.0	122	14.7	101
Non-U.S., temporary visa	9.3	9,538	8.3	2,063	8.8	2,705	9.3	1,903	9.8	1,087	10.3	703	13.1	509	10.5	568
<b>Race/ethnicity (U.S. citizens only)</b>																
Asian <sup>b</sup>	8.7	1,311	7.2	192	7.8	197	8.1	443	9.0	187	10.5	134	16.8	100	14.3	58
Black	12.7	1,581	8.8	92	9.1	66	9.5	175	10.5	286	10.3	148	18.0	672	17.0	142
Hispanic	10.6	1,195	7.5	91	8.5	88	8.3	204	10.1	263	10.9	203	16.1	297	13.7	49
American Indian <sup>c</sup>	14.4	131	11.6	8	14.1	10	7.5	17	11.5	32	12.2	17	23.0	39	21.5	8
White	10.6	20,224	7.3	2,534	8.0	1,424	8.5	4,241	10.0	3,780	11.6	3,347	19.4	3,897	16.3	1,001
<b>Years in graduate school</b>																
All doctorate recipients	7.5	34,089	6.8	5,006	6.9	4,561	7.0	6,802	7.8	5,667	9.0	4,690	8.3	5,511	8.3	1,852
<b>Sex</b>																
Male	7.4	18,501	6.8	3,656	6.9	3,773	7.0	3,437	7.9	2,501	9.0	2,297	8.3	1,846	8.5	991
Female	7.7	15,583	6.8	1,348	6.7	787	7.0	3,363	7.7	3,166	9.0	2,393	8.3	3,665	8.0	861
<b>Citizenship</b>																
U.S. citizen	7.7	23,798	6.5	2,848	6.6	1,750	7.0	4,777	7.9	4,448	9.1	3,826	8.4	4,918	8.7	1,231
Non-U.S., permanent visa	8.2	1,406	7.9	260	7.8	240	7.5	291	8.7	183	9.9	220	8.5	116	8.6	96
Non-U.S., temporary visa	7.2	8,868	7.2	1,893	6.9	2,570	7.2	1,731	7.6	1,033	8.2	643	7.3	473	7.7	525
<b>Race/ethnicity (U.S. citizens only)</b>																
Asian <sup>b</sup>	7.3	1,216	6.7	182	6.9	188	7.0	389	7.6	174	9.5	129	8.7	97	9.0	57
Black	8.2	1,452	7.5	85	7.3	60	7.6	158	8.0	270	8.8	139	8.3	614	8.5	126
Hispanic	8.0	1,109	6.6	82	7.0	84	7.3	183	8.3	241	9.0	187	8.1	285	7.5	47
American Indian <sup>c</sup>	9.0	113	6.7	6	9.5	8	6.0	14	8.6	29	9.0	15	10.9	33	11.5	8
White	7.6	19,084	6.4	2,377	6.6	1,357	7.0	3,882	7.7	3,559	9.2	3,206	8.4	3,748	8.8	955

<sup>a</sup> Includes mathematics and computer sciences.

<sup>b</sup> Does not include Native Hawaiians and other Pacific Islanders.

<sup>c</sup> Includes Alaskan Natives.

SOURCE: NSF/NIH/USED/NEH/USDANASA, 2003 Survey of Earned Doctorates.

**TABLE 17. Median age and number of doctorate recipients at different age levels, by field of study and demographic characteristics, 2003**

Field of study and demographic characteristics	Median age at doctorate	Age grouping					
		21–25	26–30	31–35	36–40	41–45	Over 45
All fields	33.3	243	12,192	12,017	5,317	3,107	5,423
Broad field of study							
Physical sciences <sup>a</sup>	30.6	89	2,937	1,676	548	206	192
Engineering	31.4	59	2,234	1,700	625	237	151
Life sciences	31.8	43	3,270	2,625	893	505	558
Social sciences	33.1	28	1,987	2,243	945	464	693
Humanities	34.6	9	991	1,992	922	508	700
Education	43.5	11	472	1,185	976	899	2,622
Professional/other fields	37.5	4	301	596	408	288	507
Sex							
Male	32.9	163	7,065	7,017	3,096	1,529	2,041
Female	34.0	80	5,124	4,997	2,220	1,578	3,381
Citizenship							
U.S. citizen	33.9	132	7,977	7,234	3,466	2,369	4,933
Permanent visa	34.5	10	344	614	348	156	139
Temporary visa	32.2	99	3,831	4,128	1,481	566	303
Unknown	36.1	2	40	41	22	16	48
Race/ethnicity (U.S. citizens only)							
Asian <sup>b</sup>	31.4	16	604	394	132	74	119
Black	37.4	9	322	433	228	211	484
Hispanic	34.4	5	321	387	195	131	217
American Indian <sup>c</sup>	40.0	0	22	27	19	17	48
White	33.8	100	6,411	5,702	2,753	1,855	3,878

<sup>a</sup> Includes mathematics and computer sciences.

<sup>b</sup> Does not include Native Hawaiians and other Pacific Islanders.

<sup>c</sup> Includes Alaskan Natives.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 18. Primary sources of financial support for doctorate recipients by broad field of study and demographic group, 2003<sup>a</sup>

Primary source of support by broad field of study	Sex			Citizenship			U.S. citizens and permanent residents				
	Total <sup>b</sup>	Men	Women	U.S. citizen	Permanent resident	Temporary resident	Asian <sup>c</sup>	Black	Hispanic	Indian <sup>d</sup>	White
All fields	35,484	19,390	16,088	24,299	1,500	9,574	1,873	1,537	1,288	120	20,037
Teaching assistantships	17.3	17.6	16.8	16.7	19.8	18.2	14.5	9.3	14.3	8.3	18.0
Research assistantships/traineeships	27.0	32.5	20.4	19.5	32.9	45.1	32.9	9.0	13.8	10.0	20.4
Fellowships/dissertation grants	21.9	21.4	22.5	23.3	20.8	18.7	29.2	29.7	33.1	30.0	21.3
Own resources	27.8	21.9	34.9	35.5	21.7	9.2	19.6	46.0	33.3	45.8	35.2
Foreign government	2.3	2.8	1.6	0.1	1.9	7.9	0.6	0.1	1.0	0.0	0.1
Employer	3.6	3.6	3.6	4.7	2.9	0.7	3.0	5.6	4.1	5.0	4.8
Other	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.4	0.8	0.2
Physical sciences <sup>e</sup>	5,322	3,906	1,414	2,957	272	2,075	316	96	114	6	2,564
Teaching assistantships	24.1	24.3	23.6	21.9	27.2	26.8	21.2	18.8	21.1	33.3	22.8
Research assistantships/traineeships	46.0	46.5	44.9	41.6	48.9	52.1	52.8	18.8	36.0	0.0	42.2
Fellowships/dissertation grants	17.6	16.9	19.7	21.7	10.7	12.8	11.7	44.8	32.5	0.0	20.4
Own resources	8.0	8.0	7.9	11.1	9.2	3.4	9.5	12.5	3.5	50.0	11.1
Foreign government	1.9	1.9	1.8	0.0	1.5	4.6	0.0	0.0	2.6	0.0	0.1
Employer	2.2	2.4	1.8	3.5	2.6	0.3	4.7	3.1	4.4	16.7	3.3
Other	0.1	0.1	0.1	0.2	0.0	0.0	0.0	2.1	0.0	0.0	0.1
Engineering	4,673	3,863	808	1,762	241	2,657	317	70	93	10	1,454
Teaching assistantships	8.1	8.0	8.7	6.8	14.1	8.4	8.8	11.4	3.2	0.0	7.6
Research assistantships/traineeships	57.6	59.2	49.6	42.1	56.4	68.0	50.8	24.3	34.4	10.0	44.5
Fellowships/dissertation grants	16.4	14.4	25.7	27.1	10.8	9.9	20.5	47.1	39.8	30.0	23.9
Own resources	9.1	9.2	8.2	14.8	10.8	5.0	12.9	14.3	11.8	40.0	14.4
Foreign government	4.6	4.5	5.0	0.1	1.2	7.8	0.3	0.0	2.2	0.0	0.1
Employer	4.3	4.6	2.8	9.1	6.6	0.9	6.6	2.9	8.6	20.0	9.4
Other	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Life sciences	7,486	3,831	3,653	5,112	332	2,022	594	189	230	15	4,225
Teaching assistantships	10.1	10.9	9.2	10.0	8.1	10.7	7.2	5.8	5.2	0.0	10.7
Research assistantships/traineeships	37.1	39.9	34.3	31.6	47.0	49.7	36.7	17.5	25.2	33.3	32.9
Fellowships/dissertation grants	32.8	32.7	32.9	36.2	30.7	24.7	44.4	46.6	52.2	46.7	33.2
Own resources	14.3	11.1	17.6	18.3	9.9	4.5	9.4	23.8	14.3	6.7	19.0
Foreign government	2.8	3.1	2.4	0.1	1.2	9.8	0.3	0.0	1.3	0.0	0.1
Employer	2.7	2.2	3.2	3.5	3.0	0.5	1.7	5.8	1.3	13.3	3.8
Other	0.2	0.1	0.3	0.3	0.0	0.0	0.2	0.5	0.4	0.0	0.3

TABLE 18. Primary sources of financial support for doctorate recipients by broad field of study and demographic group, 2003<sup>a</sup>

Primary source of support (responses only)	Sex			Citizenship			U.S. citizens and permanent residents				
	Total <sup>b</sup>	Men	Women	U.S. citizen	Permanent resident	Temporary resident	Asian <sup>c</sup>	Black	Hispanic	Indian <sup>d</sup>	White
Social sciences	5,812	2,602	3,210	4,494	195	1,105	235	291	259	31	3,680
Teaching assistantships	21.7	24.1	19.8	20.0	24.1	28.4	26.4	10.7	13.1	12.9	21.3
Research assistantships/traineeships	16.2	14.9	17.2	15.7	17.4	17.7	18.7	8.9	11.2	16.1	16.1
Fellowships/dissertation grants	23.2	24.4	22.1	21.5	24.6	29.8	26.4	36.8	32.8	25.8	19.2
Own resources	35.4	31.7	38.4	40.9	31.3	14.4	27.7	40.9	39.8	41.9	41.3
Foreign government	1.8	3.0	0.7	0.1	2.1	8.5	0.9	0.0	0.8	0.0	0.1
Employer	1.6	1.7	1.5	1.8	0.5	1.1	0.0	2.7	2.3	0.0	1.8
Other	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	3.2	0.1
Humanities	4,834	2,354	2,480	3,887	245	685	186	147	242	15	3,372
Teaching assistantships	32.7	31.8	33.5	32.3	32.7	34.9	25.3	20.4	37.6	13.3	33.1
Research assistantships/traineeships	1.8	1.9	1.7	1.5	1.2	3.4	0.0	1.4	1.2	0.0	1.6
Fellowships/dissertation grants	28.6	29.0	28.2	28.3	26.5	31.1	38.2	44.2	30.2	33.3	26.8
Own resources	34.4	34.2	34.6	36.4	35.1	22.6	34.4	31.3	29.8	53.3	36.9
Foreign government	1.2	1.2	1.2	0.0	3.3	7.2	1.1	0.0	0.0	0.0	0.2
Employer	1.2	1.7	0.7	1.3	1.2	0.7	0.5	2.0	0.8	0.0	1.3
Other	0.1	0.2	0.1	0.2	0.0	0.1	0.5	0.7	0.4	0.0	0.1
Education	5,458	1,810	3,648	4,852	113	475	134	614	298	34	3,734
Teaching assistantships	8.7	9.1	8.5	8.5	11.5	10.1	7.5	4.1	5.0	5.9	9.7
Research assistantships/traineeships	7.5	7.0	7.7	6.0	13.3	20.4	9.0	5.5	4.7	0.0	6.3
Fellowships/dissertation grants	9.5	9.6	9.4	8.5	13.3	18.7	17.2	13.2	20.5	29.4	6.3
Own resources	63.6	61.3	64.8	66.6	53.1	36.4	58.2	68.4	60.4	61.8	66.6
Foreign government	1.2	1.8	0.9	0.1	3.5	11.6	3.0	0.3	0.3	0.0	0.1
Employer	9.3	10.9	8.4	10.0	5.3	2.3	4.5	8.5	8.7	2.9	10.7
Other	0.3	0.3	0.3	0.3	0.0	0.4	0.7	0.0	0.3	0.0	0.3
Professional/other fields	1,899	1,024	875	1,235	102	555	91	130	52	9	1,008
Teaching assistantships	20.6	19.8	21.6	17.9	21.6	26.3	16.5	15.4	9.6	0.0	19.2
Research assistantships/traineeships	12.0	11.0	13.1	8.4	15.7	19.1	16.5	6.2	1.9	11.1	9.2
Fellowships/dissertation grants	19.7	18.8	20.7	16.8	26.5	24.7	26.4	30.8	25.0	33.3	14.5
Own resources	39.4	40.3	38.4	49.6	33.3	18.4	37.4	42.3	50.0	55.6	49.8
Foreign government	3.3	4.2	2.2	0.1	1.0	10.8	0.0	0.0	3.8	0.0	0.0
Employer	4.8	5.6	3.9	7.0	1.0	0.7	3.3	5.4	5.8	0.0	7.1
Other	0.2	0.2	0.1	0.2	1.0	0.0	0.0	0.0	3.8	0.0	0.1

<sup>a</sup> Includes only doctorate recipients who reported a primary source of support.

<sup>b</sup> Total includes 120 doctoral recipients for whom sex was not reported, 2,081 missing citizenship information, and 1,189 U.S. citizens and permanent residents with missing race/ethnicity (n=467) or racial/ethnic identifications other than those listed here (n=722).

<sup>c</sup> Does not include Native Hawaiians and other Pacific Islanders. <sup>d</sup> Includes Alaskan Natives. <sup>e</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 19. Debt related to the education of the doctorate recipients, by broad field of study, 2003

Debt level	Total		Physical sciences <sup>a</sup>		Engineering		Life sciences		Social sciences		Humanities		Education		Professional/ other fields	
Cumulative debt	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Mean	\$12,478		\$8,940		\$7,860		\$11,478		\$18,083		\$15,152		\$12,834		\$12,880	
No debt	18,247	50.0	3,151	57.6	3,169	65.6	3,891	50.7	2,182	36.6	1,950	39.6	2,897	51.0	1,007	51.1
\$5,000 or less	2,340	6.4	391	7.2	295	6.1	531	6.9	297	5.0	357	7.3	348	6.1	121	6.1
\$5,001-\$10,000	2,195	6.0	367	6.7	218	4.5	522	6.8	362	6.1	330	6.7	294	5.2	102	5.2
\$10,001-\$15,000	1,962	5.4	320	5.9	191	4.0	439	5.7	328	5.5	335	6.8	260	4.6	89	4.5
\$15,001-\$20,000	1,822	5.0	277	5.1	179	3.7	417	5.4	312	5.2	289	5.9	267	4.7	81	4.1
\$20,001-\$25,000	1,434	3.9	198	3.6	132	2.7	307	4.0	279	4.7	258	5.2	181	3.2	79	4.0
\$25,001-\$30,000	1,147	3.1	123	2.2	93	1.9	242	3.2	255	4.3	186	3.8	190	3.3	58	2.9
\$30,001-\$35,000	1,093	3.0	117	2.1	79	1.6	243	3.2	262	4.4	177	3.6	174	3.1	41	2.1
\$35,001 and up	6,260	17.2	523	9.6	477	9.9	1,079	14.1	1,677	28.2	1,041	21.1	1,072	18.9	391	19.9
Total	36,500	100.0	5,467	100.0	4,833	100.0	7,671	100.0	5,954	100.0	4,923	100.0	5,683	100.0	1,969	100.0
Graduate debt			\$5,120		\$5,027		\$7,031		\$13,451		\$11,143		\$9,792		\$9,826	
Mean	\$8,662		Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
No debt	23,001	63.2	4,017	73.7	3,653	75.7	5,184	67.8	2,950	49.7	2,593	52.9	3,401	60.0	1,203	61.2
\$5,000 or less	1,749	4.8	270	5.0	205	4.2	400	5.2	233	3.9	276	5.6	283	5.0	82	4.2
\$5,001-\$10,000	1,621	4.5	241	4.4	182	3.8	332	4.3	296	5.0	267	5.4	228	4.0	75	3.8
\$10,001-\$15,000	1,205	3.3	158	2.9	121	2.5	246	3.2	208	3.5	225	4.6	182	3.2	65	3.3
\$15,001-\$20,000	1,088	3.0	131	2.4	101	2.1	206	2.7	206	3.5	196	4.0	196	3.5	52	2.6
\$20,001-\$25,000	923	2.5	105	1.9	71	1.5	151	2.0	215	3.6	187	3.8	141	2.5	53	2.7
\$25,001-\$30,000	767	2.1	60	1.1	61	1.3	146	1.9	159	2.7	139	2.8	150	2.6	52	2.6
\$30,001-\$35,000	781	2.1	69	1.3	61	1.3	147	1.9	202	3.4	127	2.6	136	2.4	39	2.0
\$35,001 and up	5,264	14.5	397	7.3	369	7.6	838	11.0	1,469	24.7	895	18.2	951	16.8	345	17.5
Total	36,399	100.0	5,448	100.0	4,824	100.0	7,650	100.0	5,938	100.0	4,905	100.0	5,668	100.0	1,966	100.0
Undergraduate debt			\$3,842		\$2,845		\$4,476		\$4,675		\$4,059		\$3,073		\$3,073	
Mean	\$3,847		Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
No debt	27,012	74.1	3,980	72.9	3,894	80.7	5,375	70.2	4,131	69.5	3,470	70.6	4,589	80.9	1,573	80.0
\$5,000 or less	1,916	5.3	302	5.5	229	4.7	442	5.8	327	5.5	334	6.8	200	3.5	82	4.2
\$5,001-\$10,000	1,772	4.9	281	5.1	162	3.4	424	5.5	349	5.9	285	5.8	199	3.5	72	3.7
\$10,001-\$15,000	1,692	4.6	297	5.4	134	2.8	412	5.4	331	5.6	275	5.6	179	3.2	64	3.3
\$15,001-\$20,000	1,394	3.8	248	4.5	132	2.7	360	4.7	259	4.4	189	3.8	154	2.7	52	2.6
\$20,001-\$25,000	932	2.6	135	2.5	107	2.2	222	2.9	194	3.3	133	2.7	97	1.7	44	2.2
\$25,001-\$30,000	657	1.8	83	1.5	61	1.3	160	2.1	147	2.5	90	1.8	91	1.6	25	1.3
\$30,001-\$35,000	467	1.3	56	1.0	42	0.9	116	1.5	96	1.6	69	1.4	65	1.1	23	1.2
\$35,001 and up	596	1.6	78	1.4	67	1.4	143	1.9	111	1.9	67	1.4	99	1.7	31	1.6
Total	36,438	100.0	5,460	100.0	4,828	100.0	7,654	100.0	5,945	100.0	4,912	100.0	5,673	100.0	1,966	100.0

<sup>a</sup>Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.



TABLE 20. Debt related to the education of the doctorate recipients, by demographic group, 2003

Debt level	Sex		Citizenship				Race/ethnicity (U.S. citizens and permanent residents)							
	Male	Female	U.S. citizen	Permanent visa	Temporary visa	Asian <sup>a</sup>	Black	Hispanic	American Indian <sup>b</sup>	White				
Cumulative debt														
Mean	\$11,840	\$13,256	\$15,035	\$7,717	\$6,738	\$11,014	\$22,941	\$18,189	\$19,260	\$14,003				
	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count
No debt	10,359	7,884	10,359	1,045	6,809	1,096	409	454	44	8,996	43.8			
\$5,000 or less	1,307	1,031	1,528	84	723	103	109	89	6	1,244	6.1			
\$5,001-\$10,000	1,202	993	1,692	73	426	114	70	94	10	1,406	6.8			
\$10,001-\$15,000	1,054	908	1,575	58	327	94	102	76	7	1,295	6.3			
\$15,001-\$20,000	976	846	1,553	46	221	98	104	82	8	1,250	6.1			
\$20,001-\$25,000	821	613	1,223	35	173	65	79	68	4	997	4.8			
\$25,001-\$30,000	592	554	1,015	23	107	60	77	58	3	784	3.8			
\$30,001-\$35,000	561	532	946	34	110	47	74	72	3	754	3.7			
\$35,000 and up	3,139	3,121	5,136	166	948	279	591	349	40	3,835	18.7			
Total	20,011	16,482	25,027	1,564	9,844	1,956	1,615	1,342	125	20,561	100.0			
Graduate debt														
Mean	\$7,991	\$9,478	\$10,246	\$5,856	\$5,088	\$6,981	\$16,821	\$12,705	\$14,440	\$9,519				
	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count
No debt	12,976	10,021	14,496	1,148	7,315	1,359	622	674	59	12,345	60.2			
\$5,000 or less	984	763	1,122	61	561	77	82	61	6	914	4.5			
\$5,001-\$10,000	870	751	1,198	57	366	83	76	64	6	981	4.8			
\$10,001-\$15,000	663	542	901	42	260	41	59	58	3	751	3.7			
\$15,001-\$20,000	572	516	883	34	169	54	83	53	7	687	3.4			
\$20,001-\$25,000	520	403	758	29	135	48	61	51	2	602	2.9			
\$25,001-\$30,000	406	360	653	18	94	43	54	40	2	500	2.4			
\$30,001-\$35,000	390	391	624	25	129	34	58	44	3	495	2.4			
\$35,000 and up	2,578	2,686	4,316	146	795	213	518	295	37	3,217	15.7			
Total	19,959	16,433	24,951	1,560	9,824	1,952	1,613	1,340	125	20,492	100.0			
Undergraduate debt														
Mean	\$3,876	\$3,814	\$4,827	\$1,883	\$1,664	\$4,057	\$6,148	\$5,511	\$4,820	\$4,522				
	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count
No debt	14,750	12,257	17,088	1,341	8,534	1,443	1,008	862	88	14,355	69.9			
\$5,000 or less	1,087	827	1,385	64	463	92	117	89	6	1,093	5.3			
\$5,001-\$10,000	988	784	1,513	41	214	97	91	101	10	1,190	5.8			
\$10,001-\$15,000	915	777	1,474	37	181	91	107	74	4	1,175	5.7			
\$15,001-\$20,000	780	614	1,246	22	125	85	87	66	4	985	4.8			
\$20,001-\$25,000	525	407	822	14	93	36	62	51	2	650	3.2			
\$25,001-\$30,000	333	324	576	15	66	34	48	32	5	442	2.2			
\$30,001-\$35,000	256	211	407	9	50	30	24	28	3	318	1.5			
\$35,000 and up	345	251	481	16	96	43	69	37	3	324	1.6			
Total	19,979	16,452	24,992	1,559	9,822	1,951	1,613	1,340	125	20,532	100.0			

<sup>a</sup> Does not include Native Hawaiians and other Pacific Islanders. <sup>b</sup> Includes Alaskan Natives.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 21. Percentage of doctorate recipients with levels of graduate school debt greater than \$30,000, by broad field of study and race/ethnicity (U.S. citizens and permanent residents only), 2003**

Broad field of study	Total		Asian <sup>a</sup>		Black		Hispanic		American Indian <sup>b</sup>		White		Other <sup>c</sup>	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All fields	25,949	23.3	1,952	12.7	1,613	35.7	1,340	25.3	125	32.0	20,492	18.1	427	22.7
Physical sciences <sup>d</sup>	3,224	14.5	332	5.7	100	20.0	114	17.5	8	-----	2,611	9.6	59	15.3
Engineering	2,034	21.1	330	7.0	74	17.6	100	14.0	11	0.0	1,501	7.3	18	-----
Life sciences	5,469	18.0	615	10.4	194	32.0	236	18.2	15	-----	4,307	13.5	102	13.7
Social sciences	4,704	35.5	242	25.6	303	42.9	274	33.2	31	45.2	3,761	31.4	93	37.6
Humanities	4,089	25.0	191	18.8	151	34.4	251	24.7	15	46.7	3,417	22.5	64	25.0
Education	5,081	21.4	144	19.4	650	38.5	313	28.8	36	33.3	3,867	15.6	71	23.9
Professional/other fields	1,348	28.5	98	15.3	141	34.8	52	36.5	9	44.4	1,028	21.1	20	25.0

NOTE: Cell percentages are based on the number of cases listed in the adjacent cell.

----- = Cell value suppressed to protect confidentiality of doctorate recipients

<sup>a</sup> Does not include Native Hawaiians and other Pacific Islanders.

<sup>b</sup> Includes Alaskan Natives.

<sup>c</sup> Includes Native Hawaiians and other Pacific Islanders and respondents choosing multiple races (excluding those selecting an Hispanic ethnicity) in 2003.

<sup>d</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 22. Postgraduation status of doctorate recipients by broad field of study for selected years, 1983–2003

Year and commitments	All fields	Physical sciences <sup>a</sup>	Engineering	Life sciences	Social sciences	Humanities	Education	Professional/ other fields
Total								
1983	31,281	4,425	2,781	5,553	6,096	3,500	7,174	1,752
1988	33,500	5,309	4,187	6,164	5,781	3,555	6,362	2,142
1993	39,800	6,496	5,698	7,395	6,545	4,481	6,689	2,496
1998	42,645	6,742	5,924	8,539	7,073	5,514	6,571	2,282
2003	40,710	5,963	5,265	8,369	6,777	5,412	6,627	2,297
Total responses to postgraduation status								
1983	28,719	4,080	2,479	5,136	5,537	3,197	6,681	1,609
1988	30,224	4,799	3,707	5,626	5,147	3,254	5,798	1,893
1993	36,546	5,947	5,165	6,877	6,010	4,158	6,116	2,273
1998	38,240	6,114	5,334	7,754	6,187	5,017	5,791	2,043
2003	36,703	5,493	4,851	7,726	5,999	4,940	5,718	1,976
Percent								
Definite commitments for employment or study <sup>b</sup>								
1983	73.8	77.2	74.6	76.2	69.9	64.7	74.5	84.4
1988	73.5	76.3	67.3	76.4	71.7	64.9	75.7	82.2
1993	67.0	66.0	55.7	73.4	65.9	59.9	73.0	75.6
1998	69.7	71.5	69.8	71.8	67.9	58.8	73.7	76.4
2003	71.3	73.3	64.6	72.2	73.4	64.2	75.7	77.4
Seeking employment or study <sup>b</sup>								
1983	26.2	22.8	25.4	23.8	30.1	35.3	25.5	15.6
1988	26.5	23.7	32.7	23.6	28.3	35.1	24.3	17.8
1993	33.0	34.0	44.3	26.6	34.1	40.1	27.0	24.4
1998	30.3	28.5	30.2	28.2	32.1	41.2	26.3	23.6
2003	28.7	26.7	35.4	27.8	26.6	35.8	24.3	22.6

<sup>a</sup> Includes mathematics and computer sciences.

<sup>b</sup> Percent calculated on those responding to the item on postgraduation status.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 23. Postgraduation status of doctorate recipients, by selected demographic groups for selected years, 1983–2003

Year and status	Sex			Citizenship			U.S. citizens & permanent residents				
	Total	Men	Women	U.S. citizens	Permanent visa	Temporary visa	Asian <sup>a</sup>	Black	Hispanic	American Indian <sup>b</sup>	White
Total											
1983	31,281	20,748	10,533	24,393	1,274	4,540	1,042	1,008	611	82	22,277
1988	33,500	21,680	11,819	23,290	1,622	6,243	1,236	965	693	94	21,458
1993 <sup>c</sup>	39,800	24,384	15,121	26,449	2,259	9,973	2,002	1,278	972	120	24,036
1998 <sup>d</sup>	42,645	24,633	17,848	28,456	2,702	9,496	2,707	1,604	1,327	189	24,273
2003 <sup>e</sup>	40,710	22,188	18,402	26,413	1,631	10,585	2,018	1,796	1,419	136	21,486
Total responses to postgraduation status											
1983	28,719	18,992	9,727	23,403	1,181	4,113	975	968	578	79	21,597
1988	30,224	19,429	10,795	22,843	1,527	5,830	1,162	934	676	92	21,098
1993	36,546	22,534	14,006	25,284	2,074	9,178	1,836	1,181	917	113	23,116
1998	38,240	22,164	16,041	26,791	2,545	8,833	2,558	1,488	1,207	173	23,239
2003	36,703	20,109	16,588	25,115	1,565	9,960	1,952	1,608	1,347	122	20,642
Percent											
Definite commitments for employment or study <sup>f</sup>											
1983	73.8	75.8	69.8	74.9	64.2	70.3	66.3	69.3	73.0	57.0	75.1
1988	73.5	74.4	71.7	75.8	59.8	67.7	66.5	68.6	72.0	69.6	75.7
1993	67.0	66.2	68.2	71.5	53.3	57.8	59.2	65.1	68.2	67.3	71.4
1998	69.7	70.5	68.5	71.8	62.5	65.6	66.0	65.6	70.2	62.4	72.2
2003	71.3	72.3	70.1	73.0	64.2	68.1	66.0	69.0	70.5	65.6	73.8
Seeking employment or study <sup>f</sup>											
1983	26.2	24.2	30.2	25.1	35.8	29.7	33.7	30.7	27.0	43.0	24.9
1988	26.5	25.6	28.3	24.2	40.2	32.3	33.5	31.4	28.0	30.4	24.3
1993	33.0	33.8	31.8	28.5	46.7	42.2	40.8	34.9	31.8	32.7	28.6
1998	30.3	29.5	31.5	28.2	37.5	34.4	34.0	34.4	29.8	37.6	27.8
2003	28.7	27.7	29.9	27.0	35.8	31.9	34.0	31.0	29.5	34.4	26.2

<sup>a</sup> Includes Native Hawaiians/other Pacific Islanders through 1998, but excludes them in 2003 per revised OMB guidelines.<sup>b</sup> Includes Alaskan Natives.<sup>c</sup> Group total for 1993 includes 295 doctoral recipients for whom sex was not reported.<sup>d</sup> Group total for 1998 includes 164 doctoral recipients for whom sex was not reported.<sup>e</sup> Total includes 120 doctoral recipients for whom sex was not reported, 2,081 missing citizenship information, and 1,189 U.S. citizens and permanent residents with missing race/ethnicity (n=467) or racial/ethnic identifications other than those listed here (n=722).<sup>f</sup> Percent calculated on those responding to the item on postgraduation status.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 24. Postgraduation plans of doctorate recipients with definite commitments, by broad field of study for selected years, 1983–2003

Year and commitments	All fields	Physical sciences <sup>a</sup>	Engineering	Life sciences	Social sciences	Humanities	Education	Professional/ other fields
All definite commitments								
1983	21,186	3,150	1,850	3,913	3,869	2,068	4,978	1,358
1988	22,201	3,661	2,495	4,296	3,691	2,112	4,390	1,556
1993	24,480	3,925	2,876	5,046	3,960	2,490	4,464	1,719
1998	26,643	4,374	3,722	5,567	4,203	2,951	4,266	1,560
2003	26,167	4,028	3,132	5,575	4,404	3,170	4,329	1,529
Definite commitments with responses to type of plans								
1983	21,139	3,144	1,844	3,909	3,862	2,062	4,966	1,352
1988	22,037	3,648	2,484	4,285	3,660	2,088	4,328	1,544
1993	24,362	3,917	2,867	5,034	3,941	2,464	4,429	1,710
1998	26,080	4,326	3,669	5,497	4,120	2,860	4,091	1,517
2003	26,085	4,018	3,122	5,562	4,395	3,163	4,302	1,523
Percent								
Employment								
1983	79.3	61.9	87.5	44.8	86.1	95.3	97.4	97.2
1988	73.5	51.3	80.0	39.3	84.1	92.8	95.5	97.4
1993	71.0	50.1	74.7	35.8	79.9	93.0	96.9	97.1
1998	70.9	54.1	80.2	38.9	75.4	91.4	95.5	95.6
2003	67.2	47.3	68.4	37.0	71.8	89.1	93.9	93.9
Study								
1983	20.7	38.1	12.5	55.2	13.9	4.7	2.6	2.8
1988	26.5	48.7	20.0	60.7	15.9	7.2	4.5	2.6
1993	29.0	49.9	25.3	64.2	20.1	7.0	3.1	2.9
1998	29.1	45.9	19.8	61.1	24.6	8.6	4.5	4.4
2003	32.8	52.7	31.6	63.0	28.2	10.9	6.1	6.1

<sup>a</sup>Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 25. Postgraduation plans of doctorate recipients with definite commitments, by demographic group for selected years, 1983–2003

Year and commitment	Total	Sex		Citizenship			U.S. citizens and permanent residents				
		Male	Female	U.S. citizen	Permanent visa	Temporary visa	Asian <sup>a</sup>	Black	Hispanic	American Indian <sup>b</sup>	White
All definite commitments											
1983	21,186	14,398	6,788	17,519	758	2,893	646	671	422	45	16,211
1988	22,201	14,463	7,738	17,325	913	3,946	773	641	487	64	15,981
1993	24,480	14,919	9,559	18,066	1,105	5,303	1,087	769	625	76	16,498
1998	26,643	15,633	10,988	19,223	1,590	5,795	1,688	976	847	108	16,769
2003	26,167	14,529	11,632	18,335	1,004	6,782	1,288	1,109	950	80	15,228
Definite commitments with responses to type of plans											
1983	21,139	14,364	6,775	17,491	757	2,875	644	668	422	45	16,191
1988	22,037	14,365	7,672	17,207	904	3,909	766	635	481	63	15,877
1993	24,362	14,858	9,502	17,989	1,096	5,271	1,079	763	623	76	16,429
1998	26,080	15,349	10,712	18,825	1,557	5,670	1,665	928	825	105	16,449
2003	26,085	14,485	11,594	18,292	1,002	6,752	1,282	1,105	947	80	15,202
Percent											
Employment <sup>c</sup>											
1983	79.3	77.9	82.1	79.6	80.2	77.1	73.6	92.4	86.5	97.8	79.1
1988	73.5	71.6	77.0	75.7	71.6	64.5	70.0	87.7	73.4	82.5	75.4
1993	71.0	68.4	75.1	74.3	65.8	60.8	60.9	83.5	74.0	85.5	74.3
1998	70.9	69.6	72.8	74.6	62.9	61.1	61.6	83.4	75.2	82.9	74.3
2003	67.2	64.7	70.5	71.1	68.7	56.6	59.4	77.5	72.8	81.3	71.6
Study <sup>c</sup>											
1983	20.7	22.1	17.9	20.4	19.8	22.9	26.4	7.6	13.5	2.2	20.9
1988	26.5	28.4	23.0	24.3	28.4	35.5	30.0	12.3	26.6	17.5	24.6
1993	29.0	31.6	24.9	25.7	34.2	39.2	39.1	16.5	26.0	14.5	25.7
1998	29.1	30.4	27.2	25.4	37.1	38.9	38.4	16.6	24.8	17.1	25.7
2003	32.8	35.3	29.5	28.9	31.3	43.4	40.6	22.5	27.2	18.8	28.4

<sup>a</sup> Includes Native Hawaiians/other Pacific Islanders through 1998, but excludes them in 2003 per revised OMB guidelines.

<sup>b</sup> Includes Alaskan Natives.

<sup>c</sup> Percent based on those with definite commitments.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 26. Employment sector of doctorate recipients with definite postgraduation employment commitments in the U.S., by broad field of study for selected years, 1983–2003**

Year and commitment	Total	Physical sciences <sup>a</sup>	Engineering	Life sciences	Social sciences	Humanities	Education	Professional/ other fields
All employment commitments								
1983	15,088	1,757	1,314	1,405	3,070	1,820	4,531	1,191
1988	14,628	1,683	1,695	1,342	2,853	1,807	3,894	1,354
1993	15,029	1,671	1,660	1,444	2,727	2,073	4,052	1,402
1998	16,540	2,135	2,564	1,786	2,745	2,361	3,667	1,282
2003	15,559	1,725	1,735	1,711	2,748	2,599	3,807	1,234
Employment commitments with responses to sector								
1983	14,873	1,745	1,302	1,383	3,025	1,791	4,443	1,184
1988	14,382	1,666	1,664	1,313	2,800	1,783	3,818	1,338
1993	14,792	1,657	1,647	1,425	2,658	2,055	3,960	1,390
1998	15,983	2,068	2,531	1,612	2,666	2,300	3,548	1,258
2003	15,513	1,724	1,730	1,705	2,743	2,590	3,790	1,231
Percent <sup>b</sup>								
Academe								
1983	50.7	36.3	33.3	53.0	49.7	80.5	44.0	71.8
1988	50.7	39.7	31.6	52.4	46.9	80.0	43.8	75.2
1993	52.5	39.5	23.5	50.5	51.2	85.9	45.6	77.0
1998	47.3	31.3	11.7	46.2	51.6	81.7	47.8	72.5
2003	54.5	41.9	21.7	51.1	57.5	82.6	48.6	75.3
Industry/self-employed								
1983	20.4	51.2	54.4	25.4	16.9	6.4	7.4	10.4
1988	21.1	47.7	55.2	23.5	18.6	5.7	7.4	8.1
1993	20.6	49.0	60.7	25.3	17.5	3.6	5.4	8.8
1998	29.5	58.3	74.5	31.3	19.9	7.1	7.1	14.4
2003	20.8	45.3	62.8	25.0	17.5	5.1	4.7	11.1
Government								
1983	10.6	10.5	10.4	15.5	15.2	3.3	10.2	6.3
1988	10.0	10.6	11.7	16.1	13.5	3.5	9.0	6.0
1993	9.2	9.4	13.0	15.4	13.7	1.9	7.6	5.5
1998	7.3	6.9	10.8	11.9	11.3	2.0	4.2	4.5
2003	7.4	9.4	12.6	13.1	9.9	1.7	4.3	5.4
Other <sup>c</sup>								
1983	18.2	2.1	1.8	6.1	18.2	9.9	38.4	11.6
1988	18.2	2.1	1.6	8.1	21.0	10.9	39.9	10.8
1993	17.7	2.1	2.8	8.8	17.6	8.6	41.4	8.6
1998	15.9	3.4	3.0	10.5	17.2	9.2	40.9	8.6
2003	17.4	3.4	2.9	10.8	15.1	10.6	42.5	8.1

<sup>a</sup> Includes mathematics and computer sciences.

<sup>b</sup> Percent based on those with definite employment commitments and sector.

<sup>c</sup> "Other" is mainly composed of elementary and secondary schools and non-profit organizations.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 27. Employment sector of doctorate recipients with definite postgraduation employment commitments in the U.S., by selected demographic groups for selected years, 1983–2003**

		Sex		Citizenship			U.S. citizens & permanent residents				
		Male	Female	U.S. citizen	Permanent visa	Temporary visa	Asian <sup>b</sup>	Black	Hispanic	American Indian <sup>c</sup>	White
Commitments	Total <sup>a</sup>										
All employment commitments											
1983	15,088	9,783	5,305	13,736	557	785	445	609	359	43	12,632
1988	14,628	9,007	5,621	12,879	563	1,178	499	545	343	49	11,816
1993	15,029	8,371	6,657	13,077	598	1,351	576	622	446	65	11,897
1998	16,540	9,297	7,240	13,625	884	2,018	946	754	585	85	11,869
2003	15,559	8,063	7,495	12,723	637	2,179	712	846	675	64	10,640
Employment commitments with responses to sector											
1983	14,873	9,660	5,213	13,597	544	722	439	591	349	42	12,523
1988	14,382	8,855	5,527	12,749	556	1,070	496	535	337	49	11,703
1993	14,792	8,260	6,531	12,884	586	1,319	569	604	435	64	11,732
1998	15,983	9,005	6,975	13,162	851	1,958	894	717	552	82	11,513
2003	15,513	8,044	7,468	12,696	631	2,169	709	840	672	64	10,620
		Percent <sup>d</sup>									
Academe											
1983	50.7	48.2	55.5	50.4	46.0	61.4	37.6	48.6	53.6	50.0	50.6
1988	50.7	47.6	55.6	49.5	54.1	62.8	35.3	56.6	52.8	40.8	50.0
1993	52.5	47.6	58.7	52.2	57.2	53.2	44.1	57.1	59.3	57.8	52.3
1998	47.3	40.7	55.7	50.8	33.7	29.4	28.7	52.0	59.4	54.9	50.7
2003	54.5	50.5	58.9	55.2	52.0	51.1	42.5	54.2	58.9	50.0	55.6
Industry/self-employed											
1983	20.4	24.6	12.5	18.9	40.4	32.3	46.9	9.1	15.8	11.9	19.4
1988	21.1	25.8	13.6	19.9	32.4	29.8	45.0	9.5	16.9	12.2	19.9
1993	20.6	26.8	12.8	18.1	33.8	39.7	40.6	8.4	16.1	7.8	18.4
1998	29.5	39.2	17.1	22.6	54.4	65.3	55.8	13.4	14.7	17.1	23.3
2003	20.8	27.7	13.2	16.3	36.0	42.6	38.1	10.5	12.4	15.6	16.7
Government											
1983	10.6	11.6	8.7	11.3	4.6	1.8	8.2	13.9	12.9	11.9	11.0
1988	10.0	11.0	8.4	11.1	3.4	1.0	8.7	11.2	12.2	20.4	10.8
1993	9.2	10.3	7.9	10.2	3.6	2.2	7.9	9.6	12.0	17.2	9.9
1998	7.3	8.3	6.0	8.3	4.6	1.3	7.0	7.9	7.4	7.3	8.3
2003	7.4	8.5	6.2	8.6	4.1	1.5	9.6	8.6	7.0	14.1	8.3
Other <sup>e</sup>											
1983	18.2	15.6	23.2	19.4	9.0	4.6	7.3	28.4	17.8	26.2	19.0
1988	18.2	15.6	22.4	19.5	10.1	6.4	11.1	22.6	18.1	26.5	19.4
1993	17.7	15.3	20.7	19.5	5.5	4.9	7.4	24.8	12.6	17.2	19.4
1998	15.9	11.8	21.2	18.3	7.3	4.0	8.4	26.6	18.5	20.7	17.8
2003	17.4	13.3	21.7	20.0	7.9	4.8	9.9	26.8	21.7	20.3	19.4

<sup>a</sup> Includes doctoral recipients for whom sex is reported.

<sup>b</sup> Includes Native Hawaiians/other Pacific Islanders through 1998, but excludes them in 2003 per revised OMB guidelines.

<sup>c</sup> Includes Alaskan Natives.

<sup>d</sup> Percent based on those with definite employment commitments and sector.

<sup>e</sup> "Other" is mainly composed of elementary and secondary schools and non-profit organizations.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.



TABLE 28. Sources of support for doctorate recipients with postgraduation commitments for postdoctoral study, by selected demographic groups for selected years, 1983–2003

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Commitments	Total <sup>a</sup>	Sex		Citizenship			U.S. citizens & permanent residents				
		Male	Female	U.S. citizen	Permanent visa	Temporary visa	Asian <sup>b</sup>	Black	Hispanic	American Indian <sup>c</sup>	White
All postgraduate study commitments											
1983	4,076	2,950	1,126	3,365	140	567	162	40	50	1	3,188
1988	5,042	3,538	1,504	3,729	203	1,104	192	57	104	10	3,486
1993	6,168	4,100	2,068	4,178	309	1,680	376	104	147	8	3,816
1998	6,483	3,997	2,483	4,184	467	1,823	543	118	168	13	3,710
2003	7,203	4,349	2,851	4,536	248	2,409	427	174	223	11	3,748
Postgraduate study commitments with responses to source of support											
1983	3,806	2,763	1,043	3,136	128	539	150	39	47	1	2,972
1988	4,803	3,396	1,407	3,552	189	1,057	183	53	98	10	3,320
1993	5,807	3,857	1,950	3,942	280	1,585	348	94	136	6	3,607
1998	6,307	3,892	2,412	4,078	457	1,767	517	114	162	13	3,634
2003	7,150	4,321	2,826	4,502	246	2,393	424	170	222	11	3,723
Percent											
U.S. government <sup>d</sup>											
1983	50.4	50.3	50.6	54.9	49.2	24.7	56.7	43.6	48.9	0.0	54.9
1988	45.2	43.5	49.4	51.9	41.3	23.7	45.4	32.1	48.0	60.0	52.2
1993	38.9	37.6	41.6	47.1	35.0	19.3	40.5	40.4	43.4	83.3	47.0
1998	39.1	38.9	39.6	46.2	37.2	23.3	41.4	42.1	41.4	61.5	46.3
2003	34.2	34.5	33.5	41.8	34.6	19.8	41.5	30.0	36.0	63.6	42.5
College or university <sup>d</sup>											
1983	17.6	19.2	13.3	14.3	21.1	35.4	15.3	30.8	14.9	0.0	14.4
1988	25.6	28.3	19.2	19.6	29.6	45.0	23.5	32.1	20.4	10.0	19.6
1993	29.6	32.0	24.7	22.0	31.8	48.0	28.4	33.0	18.4	16.7	22.0
1998	31.8	33.5	29.0	26.7	32.4	43.3	28.0	28.1	35.8	30.8	26.5
2003	41.4	42.7	39.3	34.3	40.7	54.7	34.7	44.1	37.4	27.3	34.2
Private foundation <sup>d</sup>											
1983	11.4	10.2	14.6	11.6	9.4	10.9	14.7	12.8	8.5	0.0	11.5
1988	11.0	9.8	13.8	11.8	8.5	8.9	9.8	11.3	7.1	10.0	11.9
1993	10.8	10.4	11.7	10.8	11.4	10.8	10.3	14.9	15.4	0.0	10.7
1998	10.5	10.3	10.9	10.0	12.9	11.2	12.2	13.2	8.0	0.0	10.0
2003	6.2	5.6	7.0	6.8	3.3	5.3	4.7	7.1	7.2	0.0	6.7
Nonprofit, other than private foundation <sup>d</sup>											
1983	3.2	3.0	3.7	2.7	5.5	5.2	0.7	5.1	10.6	0.0	2.7
1988	2.6	2.7	2.4	2.1	3.2	4.4	6.0	1.9	3.1	0.0	1.9
1993	2.7	2.7	2.6	2.2	3.2	3.6	1.1	2.1	2.2	0.0	2.4
1998	3.0	2.9	3.3	2.5	3.3	4.2	2.7	4.4	0.6	0.0	2.6
2003	3.4	2.7	4.5	3.3	5.3	3.5	4.0	4.1	3.6	0.0	3.2
Other <sup>d</sup>											
1983	9.1	9.5	7.9	8.1	5.5	15.2	5.3	2.6	2.1	100.0	8.2
1988	8.8	8.9	8.5	8.3	10.6	9.9	7.7	5.7	9.2	10.0	8.3
1993	10.9	10.9	11.0	10.7	11.8	11.4	10.9	6.4	12.5	0.0	10.8
1998	7.4	6.9	8.3	7.0	5.5	8.8	7.2	5.3	9.3	7.7	6.8
2003	9.3	9.3	9.2	8.6	7.7	10.7	10.4	7.1	7.7	0.0	8.5

TABLE 28. Sources of support for doctorate recipients with postgraduation commitments for postdoctoral study, by selected demographic groups for selected years, 1983–2003

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Commitments	Total <sup>a</sup>	Sex		Citizenship			U.S. citizens & permanent residents				
		Male	Female	U.S. citizen	Permanent visa	Temporary visa	Asian <sup>b</sup>	Black	Hispanic	American Indian <sup>c</sup>	White
Unknown <sup>d</sup>											
1983	8.3	7.7	9.9	8.3	9.4	8.5	7.3	5.1	14.9	0.0	8.2
1988	6.7	6.7	6.8	6.4	6.9	8.0	7.7	17.0	12.2	10.0	6.1
1993	7.1	6.4	8.4	7.2	6.8	6.9	8.6	3.2	8.1	0.0	7.1
1998	8.1	7.6	9.0	7.6	8.8	9.2	8.5	7.0	4.9	0.0	7.7
2003	5.6	5.1	6.4	5.2	8.5	6.0	4.7	7.6	8.1	9.1	4.9

<sup>a</sup> Includes doctoral recipients for whom sex is reported.

<sup>b</sup> Includes Native Hawaiians/other Pacific Islanders through 1998, but excludes them in 2003 per revised OMB guidelines.

<sup>c</sup> Includes Alaskan Natives.

<sup>d</sup> Percent based on those with definite commitments.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 29. Postdoctoral location and type of plan of non-U.S. citizen doctorate recipients with definite postgraduation commitments, by broad field of study and visa status, 2003

Field of study	Permanent visa						Temporary visa					
	U.S. location			Foreign location			U.S. location			Foreign location		
	Number of responses	Employment percent	Study percent	Employment percent	Study percent	Number of responses	Employment percent	Study percent	Employment percent	Study percent	Employment percent	Study percent
All fields	810	78.6	14.6	5.8	1.0	5,347	40.8	24.4	30.5	4.3		
Physical sciences <sup>a</sup>	145	75.9	22.8	1.4	0.0	1,155	40.3	40.6	13.4	5.6		
Physics & astronomy	30	66.7	33.3	0.0	0.0	229	24.9	55.9	7.9	11.4		
Chemistry	46	73.9	23.9	2.2	0.0	339	36.0	51.3	8.3	4.4		
Earth, atmospheric, & marine sciences	19	68.4	31.6	0.0	0.0	135	25.9	46.7	23.0	4.4		
Mathematics	20	80.0	15.0	5.0	0.0	218	46.3	28.0	18.3	7.3		
Computer science	30	90.0	10.0	0.0	0.0	234	64.5	18.4	16.2	0.9		
Engineering	154	86.4	13.0	0.6	0.0	1,483	46.1	25.8	25.2	3.0		
Life sciences	125	49.6	41.6	6.4	2.4	897	20.2	40.2	34.6	5.0		
Biological sciences	79	41.8	54.4	2.5	1.3	461	16.9	57.9	20.6	4.6		
Health sciences	31	71.0	12.9	16.1	0.0	189	34.9	12.2	47.1	5.8		
Agricultural sciences	15	46.7	33.3	6.7	13.3	247	15.0	28.7	51.0	5.3		
Social sciences	103	78.6	8.7	11.7	1.0	737	45.3	7.2	43.8	3.7		
Psychology	26	76.9	19.2	3.8	0.0	93	47.3	22.6	26.9	3.2		
Anthropology	5	60.0	20.0	20.0	0.0	28	28.6	10.7	46.4	14.3		
Economics	37	86.5	2.7	10.8	0.0	397	46.9	2.5	48.4	2.3		
Political science/international relations	11	81.8	0.0	18.2	0.0	75	40.0	5.3	52.0	2.7		
Sociology	8	62.5	12.5	12.5	12.5	41	43.9	12.2	43.9	0.0		
Other social sciences	16	75.0	6.3	18.8	0.0	103	46.6	9.7	35.0	8.7		
Humanities	135	93.3	1.5	4.4	0.7	361	52.4	3.9	39.3	4.4		
History	16	93.8	0.0	6.3	0.0	34	44.1	5.9	47.1	2.9		
English language & literature	9	88.9	0.0	11.1	0.0	36	55.6	5.6	33.3	5.6		
Foreign language & literature	46	100.0	0.0	0.0	0.0	83	73.5	6.0	18.1	2.4		
Other humanities	64	89.1	3.1	6.3	1.6	208	44.7	2.4	47.6	5.3		
Education	69	82.6	1.4	11.6	4.3	291	28.2	4.1	60.5	7.2		
Teacher education	3	100.0	0.0	0.0	0.0	9	33.3	11.1	55.6	0.0		
Teaching fields	9	77.8	11.1	11.1	0.0	55	25.5	5.5	60.0	9.1		
Other education	57	82.5	0.0	12.3	5.3	227	28.6	3.5	60.8	7.0		
Professional/other fields	79	86.1	1.3	12.7	0.0	423	57.7	3.3	36.4	2.6		
Business & management	45	88.9	0.0	11.1	0.0	252	69.4	2.0	27.8	0.8		
Communications	11	90.9	0.0	9.1	0.0	59	59.3	1.7	39.0	0.0		
Other professional fields	23	78.3	4.3	17.4	0.0	112	30.4	7.1	54.5	8.0		
Other fields	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0		

<sup>a</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 30. Postdoctoral location of non-U.S. citizen doctorate recipients with definite postgraduation commitments, by visa status for selected years, 1983–2003**

Year and location	All non-U.S. citizens	Permanent visa	Temporary visa
All definite commitments			
1983	3,651	758	2,893
1988	4,859	913	3,946
1993	6,408	1,105	5,303
1998	7,385	1,590	5,795
2003	7,786	1,004	6,782
Definite commitments with response to location			
1983	3,651	758	2,893
1988	4,859	913	3,946
1993	6,408	1,105	5,303
1998	7,315	1,569	5,746
2003	7,753	998	6,755
	Percent		
U.S. location <sup>a</sup>			
1983	54.3	92.1	44.4
1988	64.6	86.3	59.6
1993	60.8	85.3	55.6
1998	73.3	92.4	68.0
2003	71.8	93.4	68.6
Foreign location <sup>a</sup>			
1983	45.7	7.9	55.6
1988	35.4	13.7	40.4
1993	39.2	14.7	44.4
1998	26.7	7.6	32.0
2003	28.2	6.6	31.4

<sup>a</sup> Percent based on those with definite commitments with response to location.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 31. U.S. versus foreign location of baccalaureate institutions of 1999-2003 doctorate recipients, by broad field of doctoral study

Field of doctoral study	Total known colleges and universities	U.S. colleges and universities	Foreign colleges and universities	Percentage distribution of baccalaureate degrees from U.S. and foreign institutions		
				Total known colleges and universities	U.S. colleges and universities	Foreign colleges and universities
All fields, total	186,868	135,960	50,908	100.0	72.8	27.2
Science & engineering, total	121,623	80,989	40,634	100.0	66.6	33.4
Physical sciences <sup>a</sup>	27,436	16,508	10,928	100.0	60.2	39.8
Engineering	24,371	11,191	13,180	100.0	45.9	54.1
Life sciences	38,391	27,370	11,021	100.0	71.3	28.7
Social sciences	31,425	25,920	5,505	100.0	82.5	17.5
Non-S&E, total	65,245	54,971	10,274	100.0	84.3	15.7
Humanities	25,570	21,301	4,269	100.0	83.3	16.7
Education	29,420	26,419	3,001	100.0	89.8	10.2
Professional/other fields	10,255	7,251	3,004	100.0	70.7	29.3

<sup>a</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 32. Top 25 U.S. baccalaureate-origin institutions of 1999-2003 doctorate recipients, ordered according to total doctorates earned by their graduates, by broad field of doctoral study

Baccalaureate-origin institution	Total doctorates	S&E field				Non-S&E field				
		Total	Physical sciences <sup>a</sup>	Engineering	Life sciences	Social sciences	Total	Humanities	Education	Professional/ other fields
U. CA, Berkeley	2,175	1,550	324	272	516	438	625	426	140	59
U. MI	1,537	1,072	151	226	322	373	465	259	140	66
Cornell U.	1,499	1,206	218	245	462	281	293	156	66	71
U. IL Urbana-Champaign	1,420	1,018	180	294	351	193	402	149	175	78
U. TX Austin, The	1,330	833	150	152	246	285	497	218	216	63
Harvard U.	1,290	870	276	37	285	272	420	334	50	36
U. CA, Los Angeles	1,287	867	143	122	294	308	420	216	162	42
PA State U.	1,250	903	155	237	322	189	347	84	187	76
U. WI Madison	1,249	880	151	129	329	271	369	172	140	57
Brigham Young U.	1,065	649	112	116	198	223	416	187	152	77
MA Institute of Technology	1,011	945	347	344	195	59	66	29	13	24
Stanford U.	982	695	145	95	221	234	287	194	64	29
U. CA, Davis	967	766	133	99	394	140	201	101	70	30
Yale U.	944	529	119	35	174	201	415	365	18	32
U. FL	938	636	112	131	194	199	302	71	165	66
MI State U.	904	562	87	94	209	172	342	103	178	61
TX A & M U.	886	676	92	148	299	137	210	40	129	41
U. CA, San Diego	885	744	147	83	306	208	141	87	41	13
U. MN Twin Cities	854	561	109	124	191	137	293	127	117	49
U. VA	844	581	104	104	160	213	263	146	71	46
U. PA	840	562	84	73	184	221	278	160	58	60
OH State U., The	818	531	76	108	205	142	287	87	154	46
Princeton U.	794	545	154	96	146	149	249	198	20	31
U. MD College Park	789	556	93	122	176	165	233	74	112	47
Rutgers U. New Brunswick	781	565	91	102	203	169	216	102	76	38
Total, top 25	27,339	19,302	3,753	3,588	6,582	5,379	8,037	4,085	2,714	1,238
Total, all U.S. institutions	135,960	80,989	16,508	11,191	27,370	25,920	54,971	21,301	26,419	7,251
Percent										
Top 25 as a percent of all institutions	20.1	23.8	22.7	32.1	24.0	20.8	14.6	19.2	10.3	17.1

NOTE: Order is based on the number of persons who responded to the Survey of Earned Doctorates.

NOTE: Order is based on the number of persons who responded to the Survey of Earned Doctorates.

<sup>a</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

TABLE 33. Top 26 foreign baccalaureate-origin institutions of 1999-2003 non-U.S. doctorate recipients, ordered according to total doctorates, by broad field of doctoral study

	Total doctorates	S&E field					Non-S&E field				
		Total	Physical sciences <sup>a</sup>	Engineering	Life sciences	Social sciences	Total	Humanities	Education	Professional/ other fields	
Baccalaureate-origin institution											
Seoul National U. (Republic of Korea)	1,657	1,295	311	447	277	260	362	144	84	134	
Beijing U. (Peking U.)(China)	1,332	1,247	558	189	386	114	85	30	11	44	
Tsinghua U. (China)	1,234	1,203	226	863	92	22	31	2	3	26	
National Taiwan U. (Taiwan)	1,190	1,015	198	367	313	137	175	57	59	59	
China U. of Science and Technology (China)	988	966	461	291	189	25	22	2	3	17	
Yonsei U. (Republic of Korea)	721	536	96	236	89	115	185	59	33	93	
Fudan U. (China)	626	590	220	80	247	43	36	14	0	22	
Chulalongkorn U. (Thailand)	466	353	64	172	87	30	113	22	39	52	
Korea U. (Republic of Korea)	446	343	86	115	85	57	103	37	24	42	
Nanjing U. (China)	437	422	220	57	118	27	15	6	4	5	
Middle East Technical U. (Turkey)	421	371	68	219	24	60	50	6	11	33	
Nankai U. (China)	396	371	133	34	177	27	25	6	6	13	
U. of Toronto (Canada)	384	228	69	30	58	71	156	118	17	21	
McGill U. (Canada)	372	245	49	23	75	98	127	87	19	21	
U. of Mumbai (U. of Bombay) (India)	371	324	88	75	126	35	47	9	10	28	
Zhejiang U. (China)	357	352	70	212	61	9	5	1	0	4	
Wuhan U. (China)	340	324	85	56	167	16	16	5	1	10	
Beijing Medical U. (China)	339	333	57	7	265	4	6	1	2	3	
Shanghai Jiao Tong U. (China)	334	314	57	224	23	10	20	3	5	12	
Hanyang U. (Republic of Korea)	323	255	40	178	20	17	68	26	17	25	
IIT - Mumbai (IIT - Bombay) (India)	316	304	99	188	11	6	12	0	0	12	
Lomonosov Moscow State University (Russia)	261	232	116	20	54	42	29	18	4	7	
U. of Bucharest (Romania)	258	249	186	21	35	7	9	6	1	2	
U. of Delhi (India)	255	185	41	8	52	84	70	25	16	29	
IIT - Chennai (IIT - Madras) (India)	247	237	54	180	2	1	10	1	1	8	
National Cheng Kung U. (Taiwan)	247	201	34	127	24	16	46	4	25	17	
Total, top 26	14,318	12,495	3,686	4,419	3,057	1,333	1,823	689	395	739	
Total, all known foreign institutions	42,114	33,977	9,275	10,835	9,204	4,663	8,137	3,466	2,274	2,397	
Total, all foreign institutions	50,908	40,634	10,928	13,180	11,021	5,505	10,274	4,269	3,001	3,004	
Percent											
Top 26 as a percent of all known institutions	34.0	36.8	39.7	40.8	33.2	28.6	22.4	19.9	17.4	30.8	

<sup>a</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Eamed Doctorates.

**TABLE 34. Carnegie classification of U.S. baccalaureate-origin institutions of 1999-2003 doctorate recipients, by broad field of doctoral study**

Field of doctoral study	Total known Carnegie classification	Doctoral/ research- extensive	Doctoral/ research- intensive	Master's colleges and universities	Baccalaureate colleges- liberal arts	Baccalaureate colleges- general	Other institutions
All fields, total	134,873	70,368	12,748	28,001	17,102	4,617	2,037
Science and engineering, total	80,538	46,815	7,008	13,447	10,295	1,939	1,034
Physical sciences <sup>a</sup>	16,432	8,822	1,498	2,893	2,586	439	194
Engineering	11,158	8,310	1,039	954	427	108	320
Life sciences	27,211	15,880	2,225	4,640	3,445	730	291
Social sciences	25,737	13,803	2,246	4,960	3,837	662	229
Non-S&E, total	54,335	23,553	5,740	14,554	6,807	2,678	1,003
Humanities	21,106	10,355	1,673	3,810	4,128	694	446
Education	26,075	9,741	3,320	8,961	2,001	1,646	406
Professional/other Fields	7,154	3,457	747	1,783	678	338	151
Percent							
All fields, total	100.0	52.2	9.5	20.8	12.7	3.4	1.5
Science and engineering, total	100.0	58.1	8.7	16.7	12.8	2.4	1.3
Physical sciences <sup>a</sup>	100.0	53.7	9.1	17.6	15.7	2.7	1.2
Engineering	100.0	74.5	9.3	8.5	3.8	1.0	2.9
Life sciences	100.0	58.4	8.2	17.1	12.7	2.7	1.1
Social sciences	100.0	53.6	8.7	19.3	14.9	2.6	0.9
Non-S&E, total	100.0	43.3	10.6	26.8	12.5	4.9	1.8
Humanities	100.0	49.1	7.9	18.1	19.6	3.3	2.1
Education	100.0	37.4	12.7	34.4	7.7	6.3	1.6
Professional/other Fields	100.0	48.3	10.4	24.9	9.5	4.7	2.1

<sup>a</sup> Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.



TABLE 35. U.S. baccalaureate-origin institutions having the largest number of 1999-2003 doctorate recipients, and the percentage earned by women, by Carnegie classification of the baccalaureate institution

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Baccalaureate Institution	Number of doctorate recipients	Percent of doctorates earned by women	Baccalaureate Institution	Number of doctorate recipients	Percent of doctorates earned by women
Carnegie class: Doctoral/research-extensive universities			Carnegie class: Baccalaureate colleges-liberal arts		
U. CA, Berkeley	2,175	43.0	Oberlin C.	566	49.8
U. MI	1,537	50.0	Wesleyan U.	434	55.3
Cornell U.	1,499	43.7	Carlton C.	389	46.3
U. IL Urbana-Champaign	1,420	39.6	Williams C.	359	42.1
U. TX Austin	1,330	47.2	Swarthmore C.	359	47.4
Harvard U.	1,290	41.1	Smith C.	330	99.4
U. CA, Los Angeles	1,287	51.4	Wellesley C.	329	100.0
PA State U.	1,250	39.6	St. Olaf C.	284	50.4
U. WI Madison	1,249	44.3	Amherst C.	279	48.0
Brigham Young U.	1,065	22.3	Reed C.	275	36.7
MA Institute of Technology	1,011	30.7	Pomona C.	272	64.3
Stanford U.	982	48.8	Vassar C.	255	69.0
U. CA, Davis	967	44.9	Bryn Mawr C.	234	100.0
Yale U.	944	44.9	Bucknell U.	226	43.8
U. FL	938	47.1	Grinnell C.	224	42.4
MI State U.	904	50.8	Barnard C.	224	99.6
TX A&M U.	886	40.5	Mount Holyoke C.	216	99.5
U. CA, San Diego	885	46.8	Colgate U.	207	52.2
U. MN Twin Cities	854	45.0	Macalester C.	202	49.0
U. VA	844	45.1	Haverford C.	189	35.4
<i>Top 20 Institutions</i>	<i>23,317</i>	<i>43.4</i>	<i>Top 20 Institutions</i>	<i>5,853</i>	<i>60.6</i>
<i>Total institutions reported (150)</i>	<i>70,368</i>	<i>45.8</i>	<i>Total institutions reported (217)</i>	<i>17,102</i>	<i>55.3</i>
Carnegie class: Doctoral/research-intensive universities			Carnegie class: Baccalaureate colleges-general		
C. of William and Mary	548	51.3	Calvin C.	163	35.0
U. Puerto Rico Rio Piedras Campus	515	62.1	Grove City C.	65	47.7
Miami U. Oxford	460	48.0	OH Northern U.	64	37.5
Dartmouth C.	434	48.8	Augustana C.	63	52.4
San Diego State U.	388	52.1	Berea C.	58	41.4
Baylor U.	363	49.6	Metropolitan State C. Denver	57	61.4
Bowling Green State U.	306	50.3	St. Norbert C.	56	48.2
IL State U.	297	52.5	Central C.	55	36.4
U. Central FL	271	53.5	Messiah C.	54	46.3
Wake Forest U.	249	50.6	St. Mary'S C.	53	100.0
U. Dayton	225	44.9	Oklahoma Baptist U.	53	34.0
U. Akron	222	46.8	U. AR Pine Bluff	51	47.1
Indiana U. Pa	211	57.8	Berry C.	51	62.7
Northern AZ U.	193	44.6	Millikin U.	49	55.1
Central MI U.	170	60.6	Taylor U. Upland	46	45.7
Ball State U.	168	52.4	Ouachita Baptist U.	45	40.0
U. TX El Paso	164	51.8	Asbury C.	45	31.1
MT State U. Bozeman	161	37.9	Carroll C.	44	70.5
U. ND	157	56.1	Oakwood C.	41	48.8
George Mason U.	157	54.8	MO Southern State C.	41	39.0
<i>Top 20 Institutions</i>	<i>5,659</i>	<i>51.6</i>	<i>Top 20 Institutions</i>	<i>1,154</i>	<i>47.7</i>
<i>Total institutions reported (106)</i>	<i>12,748</i>	<i>50.9</i>	<i>Total institutions reported (323)</i>	<i>4,617</i>	<i>51.7</i>

TABLE 35. U.S. baccalaureate-origin institutions having the largest number of 1999-2003 doctorate recipients, and the percentage earned by women, by Carnegie classification of the baccalaureate institution

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Baccalaureate Institution	Number of doctorate recipients	Percent of doctorates earned by women	Baccalaureate Institution	Number of doctorate recipients	Percent of doctorates earned by women
Carnegie class: Master's colleges & universities			Carnegie class: Other institutions		
CA Polytechnic State U. San Luis Obispo	295	36.9	United States Military Academy	151	10.6
San Francisco State U.	286	58.0	United States Air Force Academy	147	15.0
CA State U. Long Beach	274	55.1	United States Naval academy	115	7.0
James Madison U.	265	46.0	Colorado School of Mines	72	18.1
CA State U. Northridge	264	50.8	Cooper Union for the Advancement of Science & Art	61	23.0
CUNY Hunter C.	248	73.8	Rose-Hulman Institute of Technology	59	0.0
CA State U. Fullerton	231	49.8	Juilliard School, The	45	71.1
Trinity U.	228	54.8	New England Conservatory of Music	38	57.9
San Jose State U.	223	55.2	Cleveland Institute of Music	37	51.4
CA State U. Sacramento	211	49.8	U. TN Health Science Center, The	32	59.4
CA State U. Fresno	209	48.3	Kettering U.	30	33.3
CUNY City C.	209	47.4	Peabody Institute of Johns Hopkins U.	28	53.6
Southwest MO State U.	197	52.8	Manhattan School of Music	27	48.1
Villanova U.	189	48.7	U. of the Sciences in Philadelphia	24	50.0
CUNY Queens C.	187	64.2	Medical C. Georgia	23	100.0
Truman State U.	182	41.8	U. Oklahoma Health Sciences Center	23	78.3
SUNY Geneseo	181	49.2	United States Coast Guard Academy	22	4.5
Eastern MI U.	174	62.1	Berklee C. of Music	22	13.6
CA State U. Chico	171	40.4	Milwaukee School of Engineering	22	4.5
CA State U. Los Angeles	171	51.5	Philadelphia Biblical U. Langhorne	21	9.5
CUNY Brooklyn C.	171	59.1			
<i>Top 20 Institutions</i>	<i>4,566</i>	<i>52.1</i>	<i>Top 20 Institutions</i>	<i>999</i>	<i>26.3</i>
<i>Total institutions reported (604)</i>	<i>28,001</i>	<i>53.2</i>	<i>Total institutions reported (240)</i>	<i>1,939</i>	<i>35.4</i>

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**TABLE 36. U.S. baccalaureate-origin institutions having the largest number of 1999-2003 U.S. citizen minority doctorate recipients, by race/ethnicity of the doctorate recipients**

Baccalaureate institution	Number of doctorate recipients	Baccalaureate institution	Number of doctorate recipients
<b>Asian<sup>a</sup></b>		<b>Black</b>	
U. CA, Berkeley	501	Howard U.	178
U. CA, Los Angeles	251	Spelman C.	134
MA Institute of Technology	178	Hampton U.	130
Harvard U.	176	Jackson State U.	104
Stanford U.	139	NC Agricultural & Technological State U.	88
Cornell U.	138	FL A&M U.	86
U. CA, Irvine	120	Morehouse C.	78
U. CA, Davis	117	Southern U. & A&M C.	74
U. CA, San Diego	105	Morgan State U.	69
U. IL Urbana-Champaign	93	U. CA, Berkeley	66
U. MI Ann Arbor	92	U. NC Ch	64
Yale U.	84	Tuskegee U.	60
U. TX Austin	75	NC Central U.	59
U. HI Manoa	74	TN State U.	59
CA Institute of Technology	71	U. VA	59
U. PA	71	Chicago State U.	57
U. WA Seattle	68	Harvard U.	54
U. MD College Park	63	U. MD College Park	54
Princeton U.	57	U. CA, Los Angeles	53
U. Chicago, The	56	U. IL Urbana-Champaign	53
<i>Top 20 institutions</i>	<i>2,529</i>	<i>Top 20 institutions</i>	<i>1,579</i>
<i>Total institutions reported (684)</i>	<i>5,441</i>	<i>Total institutions reported (1,085)</i>	<i>7,668</i>
<b>Hispanic</b>		<b>American Indian<sup>b</sup></b>	
U. PR Rio Piedras	498	U. NM	18
U. PR Mayaguez	159	OK State U.	16
U. CA, Berkeley	134	U. OK	13
U. TX Austin	122	Northeastern State U.	10
U. CA, Los Angeles	114	U. CA, Berkeley	10
FL International U.	89	CA State U. Fresno	9
U. TX El Paso	78	U. TX Austin	9
TX A&M U.	74	Northern AZ U.	8
U. NM	69	U. Central OK	8
U. FL	62	Bemidji State U.	7
U. AZ	60	Harvard U.	7
U. CA, Irvine	60	Ft. Lewis C.	6
Stanford U.	58	U. CA, Davis	6
U. CA, Davis	56	U. CA, Los Angeles	6
U. CA, San Diego	54	U. FL	6
U. Miami	54	U. ND	6
Inter American U. PR	49	U. OR	6
U. CA, Santa Cruz	46	U. WA Seattle	6
San Diego State U.	45	Baylor U.	5
CA State U. Long Beach	43	CA State U. Long Beach	5
Cornell U.	43	Dartmouth C.	5
U. TX Pan American	43	OH State U., The	5
<i>Top 20 institutions</i>	<i>2,010</i>	OR State U.	5
<i>Total institutions reported (847)</i>	<i>5,436</i>	San Francisco State U.	5
		Southeast MO State U.	5
		Southeastern OK State U.	5
		TX A&M U.	5
		U. CA, San Diego	5
		U. WI Madison	5
		<i>Top 20 institutions</i>	<i>212</i>
		<i>Total institutions reported (480)</i>	<i>757</i>

<sup>a</sup> Does not include Native Hawaiians and other Pacific Islanders. <sup>b</sup> Includes Alaskan Natives.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.



## APPENDICES



## APPENDIX A: The Eight Basic Tables, 2003

Appendix A includes the following eight tables:

- A-1 Number of doctorate recipients, by sex and subfield, 2003
- A-2 Number of doctorate recipients, by citizenship, race/ethnicity, and subfield, 2003
- A-3 Statistical profile of doctorate recipients, by major field, 2003
- A-4 Statistical profile of doctorate recipients, by race/ethnicity and citizenship, 2003
- A-5 Sources of graduate school support for doctorate recipients, by broad field and sex, 2003
- A-6 State of doctoral institution of doctorate recipients, by broad field and sex, 2003
- A-7 Institutions granting doctorates, by major field, 2003
- A-8 Top 50 doctorate granting institutions, 2003

**TABLE A-1 and TABLE A-2:** Tables A-1 and A-2 display data for the most recent year by subfield of doctorate. Field groupings may differ from those in reports published by Federal sponsors of the Survey of Earned Doctorates (SED). The “general” field categories—e.g., “chemistry, general”—include individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The “other” field categories—e.g., “chemistry, other”—include individuals whose specified doctoral discipline was not among the specialty fields listed.

Table A-1 presents data by doctoral specialty and sex. Table A-2 displays doctoral specialty by citizenship and race/ethnicity. For a detailed description of the racial/ethnic variable, see the explanatory note for Table A-4.

**TABLE A-3:** Table A-3 is composed of three two-page tables. The first table (A-3a) includes data on *all* research doctorate recipients from the most recent year; the other two tables (A-3b and A-3c) present the same data by sex. Field groupings may differ from those in reports published by Federal sponsors of the SED. Terms requiring definition are as follows:

— *Percentage with Master’s*: The percentage of doctorate recipients in a field who received a master's degree in any field before earning the doctorate.

— *Median Age at Doctorate*: One-half of the respondents received the doctorate at or before this age. A recipient's age is obtained by subtracting the month/year of birth from the month/year of doctorate (see note on next page).

— *Median Time Lapse*: "Total Time" refers to the total calendar time elapsed between the month/year of baccalaureate and the month/year of doctorate. "Registered Time" refers to the actual time in attendance at colleges and universities between receipt of the baccalaureate and the doctorate.

— *Postgraduation Plans*: Each year's doctorate recipients provide information on post-graduation employment or study plans in response to items B1 through B9 on the survey form. Since the questionnaire is filled out around the time the doctorate is awarded, a recipient's plans are subject to change. However, comparisons with the longitudinal Survey of Doctorate Recipients (SDR) have shown SED data to be a reasonable indicator of actual employment status in the year following the doctorate, although results vary by sector. (The SDR is a follow-up employment survey of a sample of doctorate recipients in science, engineering, and, until 1995, humanities fields.)

In Table A-3 the postgraduation plans of doctorate recipients are grouped as follows: "Postdoctoral Study Plans" (fellowship, research internship, traineeship, other), "Planned Employment after Doctorate" (educational institution, industry, etc.), and "Postdoctoral Plans Unknown." These categories include recipients who were still negotiating or seeking positions at the time of survey completion, as well as those whose plans were definite. The sum of these lines equals 100 percent for each column, with allowance for rounding. The postdoctoral study row is further subdivided by type of study or appointment (fellowships, research associateships, traineeships, and other study). The percentages in these subdivisions sum to the percent of respondents in the given column who reported plans for postdoctoral study. The employment row is similarly subdivided by type of employer. The percentages for these rows add to percentage of respondents in the given column who planned employment. The category for educational institutions includes elementary and secondary schools as well as colleges and universities, and the category for government includes military service.

The four lines of data beginning with "Definite Postdoctoral Study" distinguish between individuals who had definite postgraduation plans at the time of survey completion (item B1: "Am returning to, or continuing in, predoctoral employment" or "Have signed contract or made



definite commitment”) and those who were still seeking employment or postdoctoral study (item B1: “Am negotiating with one or more specific organizations,” “Am seeking position but have no specific prospects,” or “Other”). These four lines, when added to the prior line, “Postdoctoral Plans Unknown,” total 100 percent with allowance for rounding. The two lines “Definite Postdoctoral Study” and “Seeking Postdoctoral Study” add to give the percentage for “Postdoctoral Study Plans”; the two lines “Definite Employment” and “Seeking Employment” add to give the percentage for “Planned Employment After Doctorate.”

Percentages showing the distribution of doctorate recipients by postdoctoral work activity and region of employment are based only on the number of recipients who had *definite employment commitments* at the time they completed the questionnaire. These percentages exclude recipients who planned postdoctoral study (as described above) and recipients who were still *seeking* employment at the time they completed the questionnaire. (Note that the rows on specific postdoctoral study and employment plans discussed earlier include individuals whose plans were *not definite*.)

The U.S. regions of employment shown in Table A-3 include the following states and territories:

<i>New England:</i>	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
<i>Middle Atlantic:</i>	New Jersey, New York, Pennsylvania
<i>East North Central:</i>	Illinois, Indiana, Michigan, Ohio, Wisconsin
<i>West North Central:</i>	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
<i>South Atlantic:</i>	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
<i>East South Central:</i>	Alabama, Kentucky, Mississippi, Tennessee
<i>West South Central:</i>	Arkansas, Louisiana, Oklahoma, Texas
<i>Mountain:</i>	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
<i>Pacific &amp; Insular:</i>	Alaska, California, Hawaii, Oregon, Washington, American Samoa, Guam, Puerto Rico, Trust Territory, Virgin Islands

**TABLE A-4:** Table A-4 contains data by race/ethnicity and citizenship for selected variables included in Tables A-3 and A-5. Field groupings may differ from those in reports published by Federal sponsors of the SED.

The racial/ethnic question has undergone several revisions over the years. In 2001, it was modified to correspond to a standard question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use in Federally sponsored surveys.

In the section of “Doctoral Program Support” a recipient counts in more than one category if support was received from multiple sources. Because a student counts more than once for sources of support, the vertical percentages sum to more than 100 percent. See the explanatory note on Appendix Table A-5 for further detail. (Data on the *primary* source of support for doctorate recipients are presented in the body of the report.)

The other sections in Table A-4 correspond to many of those in Appendix Table A-3. The reader is referred to the explanatory note on Table A-3 for additional information.

**TABLE A-5:** Table A-5 displays data reported in item A5 on financial resources used in support of the respondent's doctoral program, by broad field and sex of recipient. Field groupings may differ from those in reports published by Federal sponsors of the SED.

A recipient counts in more than one category in Table A-5 if more than one financial resource was reported. Because a student counts once for each of his/her financial resources, the vertical percentages sum to more than 100 percent. (Data on the *primary* financial resources for doctorate recipients are presented in the body of the report.)

**TABLE A-6:** Table A-6 shows, by broad field and sex, the number of persons receiving a research doctorate in the most recent year from institutions in each of the 50 states, the District of Columbia, and Puerto Rico. Field groupings may differ from those in reports published by Federal sponsors of the SED. See Appendix E of the Summary Report for a description of field groupings as reported in this table; see the questionnaire’s Specialties List in Appendix D of the Summary Report for the names and codes of the subfields included.

**TABLE A-7:** Table A-7 displays data by doctorate-granting institution and major field. It includes all institutions in the United States (the 50 states, the District of Columbia, and Puerto Rico) that awarded research doctoral degrees in the most recent year. Field groupings may differ

from those in reports published by Federal sponsors of the SED and from departmental designations at institutions.

**TABLE A-8:** Table A-8 presents the 50 doctorate granting institutions which conferred the greatest number of doctorates in AY 2003. The number of doctorate degrees granted is also shown for each ranked institution.



APPENDIX TABLE A-1. Number of doctorate recipients, by sex and subfield of study, 2003

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Field of study	Number of doctorates		
	Total <sup>a</sup>	Male	Female
<u>TOTAL ALL FIELDS</u>	40,710	22,188	18,402
<u>PHYSICAL SCIENCES</u>	5,963	4,360	1,589
MATHEMATICS	994	729	263
Applied mathematics	223	167	56
Algebra	68	45	23
Analysis & functional analysis	84	69	15
Geometry	48	38	10
Logic	18	13	5
Number theory	46	39	7
Mathematical statistics	191	122	69
Topology	49	36	13
Computing theory & practice	8	8	0
Operations research	19	15	4
Mathematics, general	150	118	32
Mathematics, other	90	59	29
COMPUTER SCIENCE	866	690	175
Computer science	698	578	119
Information sciences & systems	65	41	24
Computer/info science, other	103	71	32
PHYSICS & ASTRONOMY	1,247	1,008	234
Astronomy	69	50	19
Astrophysics	98	76	22
Acoustics	25	20	5
Chemical & atomic/molecular	72	58	14
Elementary particles	134	119	15
Fluids	9	9	0
Nuclear	66	56	10
Optics	95	72	23
Plasma & high-temperature	32	30	2
Polymer	13	11	1
Solid state & low-temperature	272	224	48
Physics, general	172	143	25
Physics, other	190	140	50
CHEMISTRY	2,037	1,385	647
Analytical	336	200	136
Inorganic	264	168	95
Nuclear	4	2	2
Organic	556	411	145
Medicinal/pharmaceutical	109	68	40
Physical	320	236	84
Polymer	110	85	25
Theoretical	49	37	12
Chemistry, general	186	115	68
Chemistry, other	103	63	40
EARTH, ATMOS., & MARINE SCI.	819	548	270
Atmospheric physics & chemistry	39	24	15
Atmospheric dynamics	21	15	6
Meteorology	25	21	4
Atmos. sci./meteorology, general	33	28	5
Atmos. sci./meteorology, other	21	12	9
Geology	119	81	38
Geochemistry	53	36	17
Geophysics & seismology	75	58	17

APPENDIX TABLE A-1. Number of doctorate recipients, by sex and subfield of study, 2003

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Field of study	Number of doctorates		
	Total <sup>a</sup>	Male	Female
Paleontology	18	15	3
Mineralogy, petrology	8	4	4
Stratigraphy, sedimentation	16	10	6
Geomorphology & glacial geology	20	17	3
Geological & related sci., general	8	6	2
Geological & related sci., other	30	20	10
Environmental science	138	80	57
Hydrology & water resources	26	22	4
Oceanography	97	59	38
Marine sciences	36	15	21
Misc. physical sciences, other	36	25	11
<b>ENGINEERING</b>	5,265	4,346	896
Aerospace, aeronautic., astronautic.	199	172	27
Agricultural	54	47	6
Bioengineering & biomedical	280	202	78
Ceramic sciences	18	17	1
Chemical	562	421	140
Civil	550	461	86
Communications	36	29	7
Computer	191	163	27
Electrical, electronics	1,236	1,084	145
Engineering mechanics	63	53	9
Engineering physics	28	19	9
Engineering science	39	36	2
Environmental health engineering	122	83	39
Industrial/manufacturing	211	156	53
Materials science	437	338	99
Mechanical	751	673	75
Metallurgical	18	17	1
Mining & mineral	13	12	1
Nuclear	75	63	11
Ocean	12	11	1
Operations research	80	60	19
Petroleum	36	31	5
Polymer/plastics	45	36	9
Systems	46	37	9
Engineering, general	20	16	4
Engineering, other	143	109	33
<b>LIFE SCIENCES</b>	8,369	4,309	4,036
<b>BIOLOGICAL SCIENCES</b>	5,694	3,083	2,598
Biochemistry	772	452	319
Biomedical sciences	183	92	88
Biophysics	161	108	53
Biotechnology research	24	17	7
Bacteriology	6	4	2
Plant genetics	38	21	17
Plant pathology	27	15	12
Plant physiology	32	19	13
Botany, other	80	43	37
Anatomy	33	22	11
Biometrics & biostatistics	84	35	49
Cell biology	301	155	145

APPENDIX TABLE A-1. Number of doctorate recipients, by sex and subfield of study, 2003

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Field of study	Number of doctorates		
	Total <sup>a</sup>	Male	Female
Ecology	348	205	143
Developmental biology/embryology	125	55	70
Endocrinology	21	9	12
Entomology	111	80	30
Biological immunology	261	140	121
Molecular biology	613	323	289
Microbiology	363	204	159
Neuroscience	472	270	201
Nutritional sciences	127	25	102
Parasitology	15	9	6
Toxicology	123	59	64
Human & animal genetics	225	102	122
Human & animal pathology	102	54	47
Human & animal pharmacology	274	148	126
Human & animal physiology	213	126	86
Zoology, other	127	71	56
Biological sciences, general	196	110	85
Biological sciences, other	237	110	126
HEALTH SCIENCES	1,633	541	1,085
Speech-Lang. pathology & audiology	94	23	71
Environmental health	52	30	21
Health systems/services admin.	58	34	23
Public health	204	56	147
Epidemiology	234	79	153
Exercise physiology/sci., kinesiology	145	85	60
Nursing	411	34	377
Pharmacy	118	68	49
Rehabilitation/therapeutic services	69	25	44
Veterinary medicine	49	25	24
Health sciences, general	39	16	23
Health sciences, other	159	66	92
AGRICULTURAL SCIENCES	1,042	685	353
Agricultural economics	119	78	40
Agricultural business & management	1	1	0
Animal breeding & genetics	21	15	6
Animal nutrition	41	32	9
Dairy science	18	10	8
Poultry science	17	11	5
Fisheries science & management	47	35	12
Animal sciences, other	88	55	33
Agronomy & crop science	55	41	14
Plant breeding & genetics	50	37	13
Plant pathology	48	30	18
Plant sciences, other	29	19	10
Food engineering	11	6	5
Food sciences, other	157	77	78
Soil chemistry/microbiology	24	14	10
Soil sciences, other	50	37	13
Horticulture science	54	36	18
Forest biology	16	13	3
Forest engineering	3	3	0
Forest management	18	12	6
Wood sci. & pulp/paper tech.	19	14	5
Conservation/renewable nat. res.	47	34	13
Forestry & related sci., other	47	32	15

APPENDIX TABLE A-1. Number of doctorate recipients, by sex and subfield of study, 2003

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Field of study	Number of doctorates		
	Total <sup>a</sup>	Male	Female
Wildlife/range management	45	33	12
Agricultural sciences, general	2	2	0
Agricultural sciences, other	15	8	7
<b><u>SOCIAL SCIENCES &amp; PSYCHOLOGY</u></b>	<b>6,777</b>	<b>3,018</b>	<b>3,745</b>
SOCIAL SCIENCES	3,502	1,976	1,516
Anthropology	472	184	288
Area studies	12	5	7
Criminology	76	45	30
Demography/population studies	15	6	9
Economics	909	649	256
Econometrics	23	17	6
Geography	168	103	65
International relations/affairs	99	71	27
Political science & government	660	408	250
Public policy analysis	146	76	70
Sociology	597	245	352
Statistics	48	28	19
Urban affairs/studies	78	45	32
Social sciences, general	27	16	11
Social sciences, other	172	78	94
PSYCHOLOGY	3,275	1,042	2,229
Clinical	1,184	339	845
Cognitive & psycholinguistics	133	63	70
Comparative	4	2	2
Counseling	437	124	312
Developmental & child	178	33	144
Human/indv. & family development	150	39	111
Experimental	119	54	65
Educational	52	10	42
Family & marriage counseling	62	20	42
Industrial & organizational	155	71	84
Personality	17	6	11
Physiological/psychobiology	85	43	42
Psychometrics	7	3	4
Quantitative	11	8	3
School	102	30	72
Social	202	73	129
Psychology, general	226	81	143
Psychology, other	151	43	108
<b><u>HUMANITIES</u></b>	<b>5,412</b>	<b>2,656</b>	<b>2,745</b>
GENERAL HUMANITIES	3,684	1,981	1,695
History, American	415	257	158
History, Asian	66	36	30
History, European	189	118	71
History/philosophy of sci. & tech.	46	23	23
History, general	72	46	26
History, other	152	83	69
Classics	75	44	31
Comparative literature	164	58	105
Linguistics	224	91	132
Speech & rhetorical studies	151	66	85
Letters, general	27	9	18
Letters, other	68	29	39



APPENDIX TABLE A-1. Number of doctorate recipients, by sex and subfield of study, 2003

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Field of study	Number of doctorates		
	Total <sup>a</sup>	Male	Female
American studies	94	28	66
Archaeology	33	13	20
Art history/criticism/conservation	254	69	185
Music	874	483	385
Philosophy	391	285	106
Religion	303	206	97
Drama/theater arts	86	37	49
LANGUAGE & LITERATURE	1,551	616	932
American literature	362	151	211
English literature	435	165	270
English language	132	56	75
French	102	31	71
German	100	43	57
Italian	33	12	21
Spanish	238	95	142
Russian	28	5	23
Slavic	11	3	8
Chinese	24	12	11
Japanese	20	10	10
Hebrew	5	5	0
Arabic	4	1	3
Other language & literature	57	27	30
OTHER HUMANITIES	177	59	118
Humanities, general	27	11	16
Humanities, other	150	48	102
<u>EDUCATION</u>	6,627	2,239	4,363
RESEARCH & ADMINISTRATION	5,307	1,762	3,533
Curriculum & instruction	998	263	732
Educational admin. & supervision	772	308	462
Educational leadership	1,580	576	1,003
Educ./instruct. media design	129	62	67
Educ. stat./research methods	61	29	32
Educ. assess., test., & meas.	47	21	26
Educational psychology	285	65	219
School psychology	124	27	97
Social/phil. found. of educ.	146	61	84
Special education	214	38	176
Counseling educ./couns. & guidance	221	77	143
Higher educ./evaluation & research	489	176	310
Pre-elementary/early childhood	70	7	63
Elementary education	34	3	31
Secondary education	19	10	9
Adult & continuing education	118	39	79
TEACHING FIELDS	714	254	458
Agricultural education	25	16	9
Art education	34	8	26
Business education	6	3	3
English education	47	13	34
Foreign languages education	45	17	28
Health education	54	16	38
Home economics education	4	0	4
Technical/industrial arts education	13	9	4
Mathematics education	80	33	46

APPENDIX TABLE A-1. Number of doctorate recipients, by sex and subfield of study, 2003

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Field of study	Number of doctorates		
	Total <sup>a</sup>	Male	Female
Music education	74	34	40
Nursing education	8	0	8
Physical education & coaching	74	27	47
Reading education	60	8	52
Science education	69	28	41
Social science education	10	2	8
Technical education	24	13	10
Trade & industrial education	5	3	2
Teacher ed./spec. acad. & voc., other	82	24	58
OTHER EDUCATION	606	223	372
Education, general	312	128	173
Education, other	294	95	199
<u>PROFESSIONAL/OTHER FIELDS</u>	2,297	1,260	1,028
BUSINESS AND MANAGEMENT	1,035	678	352
Accounting	106	63	43
Banking/financial support services	79	61	18
Business admin. & management	342	229	110
Business/managerial economics	44	36	8
International business	44	32	11
Mgmt. info. sys./bus. data proc.	86	65	21
Marketing management & research	111	66	45
Operations research	26	23	3
Organizational behavior	111	55	56
Bus. mgmt./admin. serv., general	18	11	7
Bus. mgmt./admin. serv., other	67	36	30
COMMUNICATIONS	415	168	246
Communications research	63	26	37
Mass communications	161	73	87
Communications theory	42	18	24
Communications, general	89	32	57
Communications, other	60	19	41
OTHER PROFESSIONAL FIELDS	844	412	429
Architectural/environmental design	69	34	35
Home economics	21	4	17
Law	52	34	17
Library science	42	13	29
Parks/recreation/leisure/fitness	38	24	14
Public administration	121	70	50
Social work	273	85	188
Theology/religious education	173	126	47
Professional fields, general	4	2	2
Professional fields, other	51	20	30
OTHER FIELDS	3	2	1

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

<sup>a</sup> Totals include doctorate recipients whose sex was unknown (total is 120).

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>								
			Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African-American	White	Puerto Rican	Mexican American	Other Hispanic	Other/ unknown race <sup>e</sup>
TOTAL ALL FIELDS	40,710	10,585	28,044	136	2,018	1,796	21,486	259	448	712	1,189
PHYSICAL SCIENCES	5,963	2,271	3,434	8	336	107	2,692	26	33	57	175
MATHEMATICS	994	440	516	2	51	16	407	3	5	8	24
Applied mathematics	223	91	126	0	8	11	97	0	1	4	5
Algebra	68	27	41	1	3	1	32	1	1	1	1
Analysis & functional analysis	84	46	38	0	2	1	32	0	0	1	2
Geometry	48	26	21	0	1	0	17	0	0	0	3
Logic	18	7	11	0	1	0	9	0	0	0	1
Number theory	46	16	29	0	6	0	22	0	0	0	1
Mathematical statistics	191	91	93	0	13	2	74	0	1	1	2
Topology	49	19	30	0	2	0	27	1	0	0	0
Computing theory & practice	8	6	2	0	1	0	1	0	0	0	0
Operations research	19	9	10	0	2	0	8	0	0	0	0
Mathematics, general	150	68	63	1	7	1	46	0	2	0	6
Mathematics, other	90	34	52	0	5	0	42	1	0	1	3
COMPUTER SCIENCE	866	379	440	2	79	17	304	2	3	5	28
Computer science	698	340	330	2	59	11	229	1	3	5	20
Information sciences & systems	65	16	44	0	9	5	28	0	0	0	2
Computer/info science, other	103	23	66	0	11	1	47	1	0	0	6
PHYSICS & ASTRONOMY	1,247	528	682	0	70	13	533	3	6	18	39
Astronomy	69	11	55	0	5	1	44	1	0	0	4
Astrophysics	98	23	75	0	3	0	60	0	0	2	10
Acoustics	25	7	15	0	2	0	13	0	0	0	0
Chemical & atomic/molecular	72	29	43	0	6	2	31	1	0	2	1
Elementary particles	134	72	60	0	10	1	46	0	0	3	0
Fluids	9	5	3	0	0	0	3	0	0	0	0
Nuclear	66	35	31	0	1	1	25	0	0	0	4
Optics	95	33	62	0	5	3	50	0	0	2	2
Plasma & high-temperature	32	10	22	0	3	0	15	0	1	2	1
Polymer	13	9	3	0	1	0	2	0	0	0	0
Solid state & low-temperature	272	152	119	0	20	1	88	1	2	3	4
Physics, general	172	66	92	0	5	2	72	0	2	2	9
Physics, other	190	76	102	0	9	2	84	0	1	2	4

APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>								Other/ unknown race <sup>e</sup>
			Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African- American	White	Puerto Rican	Mexican American	Other Hispanic	
CHEMISTRY	2,037	689	1,262	2	110	42	1,001	14	19	12	62
Analytical	336	104	227	1	13	9	190	2	5	0	7
Inorganic	264	78	182	0	10	4	152	0	3	1	12
Nuclear	4	1	3	0	2	0	1	0	0	0	0
Organic	556	200	348	0	35	10	278	5	4	6	10
Medicinal/pharmaceutical	109	36	65	0	9	1	51	0	2	0	2
Physical	320	109	210	0	21	6	164	2	4	2	11
Polymer	110	53	55	1	9	6	38	1	0	0	0
Theoretical	49	23	26	0	3	0	20	1	0	2	0
Chemistry, general	186	42	90	0	4	4	63	0	1	1	17
Chemistry, other	103	43	56	0	4	2	44	3	0	0	3
EARTH, ATMOS., & MARINE SCI.	819	235	534	2	26	19	447	4	0	14	22
Atmospheric physics & chemistry	39	16	23	0	2	0	19	0	0	0	2
Atmospheric dynamics	21	10	10	0	0	0	9	0	0	0	1
Meteorology	25	6	19	0	2	1	16	0	0	0	0
Atmos. sci./meteorology, general	33	20	13	0	2	0	11	0	0	0	0
Atmos. sci./meteorology, other	21	5	13	0	1	2	10	0	0	0	0
Geology	119	28	87	1	3	0	78	0	0	1	4
Geochemistry	53	15	37	0	2	0	30	0	0	0	5
Geophysics & seismology	75	33	41	0	4	2	31	1	0	1	2
Paleontology	18	2	16	0	0	0	16	0	0	0	0
Mineralogy, petrology	8	4	4	0	0	0	4	0	0	0	0
Stratigraphy, sedimentation	16	4	12	0	0	0	11	0	0	0	1
Geomorphology & glacial geology	20	4	15	0	0	0	15	0	0	0	0
Geological & related sci., general	8	2	3	0	0	0	3	0	0	0	0
Geological & related sci., other	30	8	22	0	0	0	21	0	0	1	0
Environmental science	138	35	83	0	4	6	68	0	0	3	2
Hydrology & water resources	26	7	19	0	1	2	13	0	0	0	3
Oceanography	97	25	65	0	4	4	52	1	0	3	1
Marine sciences	36	4	30	1	0	0	22	2	0	5	0
Misc. physical sciences, other	36	7	22	0	1	2	18	0	0	0	1
ENGINEERING	5,265	2,909	2,163	11	339	75	1,556	19	16	68	79
Aerospace, aeronautic., astronautic.	199	111	80	0	7	1	66	2	1	1	2
Agricultural	54	25	25	1	2	1	18	0	0	1	2
Bioengineering & biomedical	280	86	183	0	23	11	139	1	0	4	5
Ceramic sciences	18	8	10	0	0	0	10	0	0	0	0
Chemical	562	269	281	1	43	8	205	4	2	9	9

APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>								
			Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African- American	White	Puerto Rican	Mexican American	Other Hispanic	Other/ unknown race <sup>e</sup>
Civil	550	331	203	1	17	5	162	2	1	8	7
Communications	36	24	12	0	5	0	5	0	1	1	0
Computer	191	114	73	1	20	2	40	2	0	4	4
Electrical & electronics	1,236	782	409	4	104	17	250	2	2	11	19
Engineering mechanics	63	43	15	0	1	0	14	0	0	0	0
Engineering physics	28	9	19	0	1	0	17	0	0	0	1
Engineering science	39	23	14	1	0	2	9	0	0	2	0
Environmental health engineering	122	55	66	0	3	4	55	2	0	0	2
Industrial/manufacturing	211	137	70	0	14	3	47	0	0	3	3
Materials science	437	242	181	0	21	4	139	0	5	6	6
Mechanical	751	404	317	1	49	9	232	2	2	9	13
Metallurgical	18	9	9	0	2	0	5	0	1	1	0
Mining & mineral	13	7	6	0	1	0	5	0	0	0	0
Nuclear	75	30	41	0	3	1	35	0	0	1	1
Ocean	12	7	3	0	0	0	1	1	0	0	1
Operations research	80	39	38	1	4	0	32	0	0	1	0
Petroleum	36	34	1	0	0	0	0	0	0	1	0
Polymer/plastics	45	34	10	0	3	1	5	0	0	0	1
Systems	46	21	20	0	6	0	12	0	0	2	0
Engineering, general	20	11	7	0	1	0	6	0	0	0	0
Engineering, other	143	54	70	0	9	6	47	1	1	3	3
<u>LIFE SCIENCES</u>	8,369	2,190	5,794	17	635	206	4,448	42	70	133	243
BIOLOGICAL SCIENCES	5,694	1,401	4,047	11	524	108	3,053	35	50	90	176
Biochemistry	772	252	493	1	70	16	368	6	6	8	18
Biomedical sciences	183	45	124	0	24	3	84	0	2	5	6
Biophysics	161	62	96	0	16	1	71	2	3	1	2
Biotechnology research	24	12	12	0	3	0	8	0	0	1	0
Bacteriology	6	3	3	0	0	0	2	0	0	1	0
Plant genetics	38	12	26	0	0	0	23	0	0	0	3
Plant pathology	27	14	10	0	1	0	7	1	0	0	1
Plant physiology	32	13	17	1	0	0	16	0	0	0	0
Botany, other	80	20	57	0	3	0	47	0	0	4	3
Anatomy	33	7	25	0	5	2	16	1	0	1	0
Biometrics & biostatistics	84	31	48	0	11	1	32	0	0	2	2
Cell biology	301	71	216	0	29	7	164	2	2	5	7
Ecology	348	43	294	0	10	5	249	1	2	9	18
Developmental biology/embryology	125	28	94	1	17	3	63	0	2	1	7

APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>								
			Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African- American	White	Puerto Rican	Mexican American	Other Hispanic	Other/ unknown race <sup>e</sup>
Endocrinology	21	7	14	0	5	1	8	0	0	0	0
Entomology	111	40	62	0	1	1	56	0	0	2	2
Biological immunology	261	56	194	0	40	4	142	0	2	3	3
Molecular biology	613	159	435	0	75	4	314	2	6	10	24
Microbiology	363	82	268	0	29	8	203	6	3	7	12
Neuroscience	472	102	362	3	52	10	268	2	5	5	17
Nutritional sciences	127	28	94	0	13	5	72	0	1	1	2
Parasitology	15	2	13	0	1	1	11	0	0	0	0
Toxicology	123	36	80	0	13	3	58	0	1	1	4
Human & animal genetics	225	38	173	2	19	4	131	1	4	3	9
Human & animal pathology	102	23	66	1	11	3	48	0	0	1	2
Human & animal pharmacology	274	63	199	0	31	12	139	0	5	3	9
Human & animal physiology	213	47	153	1	15	8	119	1	1	1	7
Zoology, other	127	18	105	0	3	0	95	0	0	4	3
Biological sciences, general	196	28	151	1	9	3	119	6	2	4	7
Biological sciences, other	237	59	163	0	18	3	120	4	3	7	8
HEALTH SCIENCES	1,633	326	1,225	2	86	79	967	4	13	27	47
Speech-Lang. pathology & audiology	94	12	79	0	2	5	67	1	2	1	1
Environmental health	53	16	31	0	1	2	26	0	0	1	1
Health systems/services admin.	58	18	39	0	7	5	22	0	0	1	4
Public health	204	25	175	0	19	21	117	1	5	4	8
Epidemiology	234	36	186	0	17	5	147	1	2	7	7
Exercise physiology/sci., kinesiology	145	29	113	0	3	2	101	0	0	2	5
Nursing	411	54	343	1	11	25	287	0	3	5	11
Pharmacy	118	66	45	1	10	2	32	0	0	0	0
Rehabilitation/therapeutic services	69	9	59	0	0	3	54	0	0	1	1
Veterinary medicine	49	26	19	0	2	1	13	0	0	0	3
Health sciences, general	39	3	35	0	3	3	25	0	1	1	2
Health sciences, other	159	32	101	0	11	5	76	1	0	4	4
AGRICULTURAL SCIENCES	1,042	463	522	4	25	19	428	3	7	16	20
Agricultural economics	119	70	45	0	4	3	32	0	0	4	2
Agricultural business & management	1	1	0	0	0	0	0	0	0	0	0
Animal breeding & genetics	21	12	9	0	0	0	9	0	0	0	0
Animal nutrition	41	9	31	0	0	0	26	0	2	2	1
Dairy science	18	10	5	0	0	0	5	0	0	0	0
Poultry science	17	7	3	0	0	0	2	0	1	0	0
Animal sciences, other	47	13	33	0	1	1	29	0	0	1	1

APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>								Other/ unknown race <sup>e</sup>
			Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African- American	White	Puerto Rican	Mexican American	Other Hispanic	
Fisheries science & management	88	31	56	0	0	5	47	1	0	0	3
Agronomy & crop science	55	17	33	1	0	1	30	0	0	0	1
Plant breeding & genetics	50	33	17	0	1	0	16	0	0	0	0
Plant pathology	48	19	27	0	0	0	21	0	1	4	1
Plant sciences, other	29	17	12	0	2	0	10	0	0	0	0
Food engineering	11	9	2	0	0	0	2	0	0	0	0
Food sciences, other	157	87	52	1	13	3	32	1	0	1	1
Soil chemistry/microbiology	24	7	17	0	0	0	15	0	1	0	1
Soil sciences, other	50	26	24	1	0	1	17	0	0	2	3
Horticulture science	54	27	22	0	1	0	19	0	1	0	1
Forest biology	16	4	12	0	0	0	11	0	0	1	0
Forest engineering	3	2	1	0	0	0	1	0	0	0	0
Forest management	18	7	10	0	1	0	8	0	0	0	1
Wood sci. & pulp/paper tech.	19	13	6	0	1	0	5	0	0	0	0
Conservation/renewable nat. res.	47	13	31	0	0	1	28	0	0	0	2
Forestry & related sci., other	47	16	26	0	1	1	23	0	0	1	0
Wildlife/range management	45	6	38	1	0	2	32	0	1	0	2
Agricultural sciences, general	2	0	2	0	0	0	2	0	0	0	0
Agricultural sciences, other	15	7	8	0	0	1	6	1	0	0	0
<b>SOCIAL SCIENCES &amp; PSYCHOLOGY</b>	<b>6,777</b>	<b>1,202</b>	<b>5,158</b>	<b>34</b>	<b>259</b>	<b>325</b>	<b>4,011</b>	<b>64</b>	<b>92</b>	<b>140</b>	<b>233</b>
<b>SOCIAL SCIENCES</b>	<b>3,502</b>	<b>1,005</b>	<b>2,312</b>	<b>12</b>	<b>141</b>	<b>157</b>	<b>1,757</b>	<b>17</b>	<b>44</b>	<b>66</b>	<b>118</b>
Anthropology	472	56	394	2	17	24	286	3	13	17	32
Area studies	12	1	11	1	1	2	7	0	0	0	0
Criminology	76	13	59	0	2	5	50	0	1	0	1
Demography/population studies	15	6	7	0	2	0	5	0	0	0	0
Economics	909	512	355	1	48	8	276	2	4	7	9
Econometrics	23	17	6	0	2	0	4	0	0	0	0
Geography	168	39	122	1	4	1	108	0	1	1	6
International relations/affairs	99	34	59	1	1	4	47	0	1	4	1
Political science & government	660	125	502	1	18	36	403	2	9	11	22
Public policy analysis	146	26	114	3	6	13	85	0	0	1	6
Sociology	597	82	480	0	20	47	343	8	14	18	30
Statistics	48	26	13	0	2	0	11	0	0	0	0
Urban affairs/studies	78	29	38	0	3	6	26	0	0	2	1
Social sciences, general	27	8	17	0	3	1	10	0	0	1	2
Social sciences, other	172	31	135	2	12	10	96	2	1	4	8

APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>								
			Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African- American	White	Puerto Rican	Mexican American	Other Hispanic	Other/ unknown race <sup>e</sup>
PSYCHOLOGY	3,275	197	2,846	22	118	168	2,254	47	48	74	115
Clinical	1,184	37	1,086	7	48	55	870	18	18	30	40
Cognitive & psycholinguistics	133	23	108	2	7	3	88	0	0	3	5
Comparative	4	0	4	0	0	0	3	0	0	0	1
Counseling	437	19	401	7	15	39	301	3	12	10	14
Developmental & child	178	19	155	1	9	9	118	1	1	6	10
Human/individual & family development	150	8	132	1	5	14	106	0	1	3	2
Experimental	119	19	97	0	5	0	83	0	3	1	5
Educational	52	3	46	0	0	3	35	1	2	1	4
Family & marriage counseling	62	4	56	0	5	0	48	0	0	1	2
Industrial & organizational	155	12	140	0	2	6	115	6	1	6	4
Personality	17	2	15	1	0	1	11	1	0	0	1
Physiological/psychobiology	85	11	74	0	1	4	67	0	0	1	1
Psychometrics	7	2	5	0	0	1	4	0	0	0	0
Quantitative	11	0	11	0	0	0	11	0	0	0	0
School	102	1	95	0	1	8	78	1	0	4	3
Social	202	17	184	1	5	8	148	5	5	4	8
Psychology, general	226	5	125	0	8	8	87	10	2	2	8
Psychology, other	151	15	112	2	7	9	81	1	3	2	7
<u>HUMANITIES</u>	5,412	780	4,390	17	198	164	3,541	41	67	156	206
GENERAL HUMANITIES	3,684	533	2,980	9	150	101	2,447	19	40	70	144
History, American	415	13	399	3	9	31	324	2	6	4	20
History, Asian	66	14	52	0	12	0	37	0	0	0	3
History, European	189	8	181	1	1	0	158	2	5	2	12
History/philosophy of sci. & tech.	46	9	36	0	0	0	31	0	0	1	4
History, general	72	6	44	1	0	6	29	2	1	0	5
History, other	152	29	119	0	6	5	92	1	4	5	6
Classics	75	10	64	0	0	0	59	0	0	0	5
Comparative literature	164	39	116	0	4	2	96	1	2	5	6
Linguistics	224	100	114	1	12	0	86	0	3	6	6
Speech & rhetorical studies	151	5	139	1	1	10	116	1	4	0	6
Letters, general	27	0	27	0	0	0	25	0	0	1	1
Letters, other	68	8	60	0	1	3	52	0	0	2	2
American studies	94	9	82	1	4	10	53	1	4	3	6
Archeology	33	5	28	0	1	0	24	0	0	1	2
Art history/criticism/conservation	254	24	215	0	11	4	180	0	2	7	11
Music	874	174	640	0	54	10	525	4	4	18	25



APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>										
	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African- American	White	Puerto Rican	Mexican American	Other Hispanic	Other/ unknown race <sup>e</sup>
Philosophy	391	48	314	0	8	3	279	2	2	9	11
Religion	303	27	271	1	23	12	217	3	1	4	10
Drama/theater arts	86	5	79	0	3	5	64	0	2	2	3
LANGUAGE & LITERATURE	1,551	219	1,280	6	43	52	993	19	25	86	56
American literature	362	25	335	3	13	31	252	4	8	8	16
English literature	435	36	393	2	13	6	348	2	3	7	12
English language	132	18	86	1	1	5	68	2	0	1	8
French	102	21	80	0	0	6	66	1	0	1	6
German	100	17	82	0	0	2	73	0	1	1	5
Italian	33	12	21	0	0	0	21	0	0	0	0
Spanish	238	63	169	0	2	1	75	10	13	64	4
Russian	28	2	26	0	1	0	23	0	0	0	2
Slavic	11	2	9	0	0	0	9	0	0	0	0
Chinese	24	10	14	0	6	0	8	0	0	0	0
Japanese	20	3	15	0	3	0	11	0	0	0	1
Hebrew	5	1	4	0	1	0	3	0	0	0	0
Arabic	4	0	4	0	0	0	3	0	0	0	1
Other language & literature	57	9	42	0	3	1	33	0	0	4	1
OTHER HUMANITIES	177	28	130	2	5	11	101	3	2	0	6
Humanities, general	27	3	18	0	0	0	15	0	0	0	3
Humanities, other	150	25	112	2	5	11	86	3	2	0	3
EDUCATION	6,627	585	5,631	40	150	758	4,148	52	152	133	198
RESEARCH & ADMINISTRATION	5,307	422	4,622	35	111	631	3,409	39	132	111	154
Curriculum & instruction	998	111	855	9	31	96	636	11	24	19	29
Educational admin. & supervision	772	55	671	4	12	103	487	6	17	12	30
Educational leadership	1,580	74	1,416	12	21	231	1,028	8	45	35	36
Educ./instruct. media design	129	22	106	0	5	3	91	2	1	1	3
Educ. stat./research methods	61	14	46	0	3	5	37	0	0	1	0
Educ. assess., test., & meas.	47	14	32	0	1	2	25	0	0	0	4
Educational psychology	285	24	244	3	6	25	181	1	10	6	12
School psychology	124	4	115	0	4	4	92	1	5	5	4
Social/phil. found. of educ.	146	16	127	1	4	23	76	2	8	7	6
Special education	214	22	187	1	6	21	146	0	3	3	7
Counseling educ./couns. & guidance	221	17	190	1	5	23	141	3	1	7	9
Higher educ./evaluation & research	489	28	429	4	7	59	322	4	14	10	9

APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>								
			Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African- American	White	Puerto Rican	Mexican American	Other Hispanic	Other/ unknown race <sup>e</sup>
Pre-elementary/early childhood	70	11	58	0	4	12	37	1	3	1	0
Elementary education	34	1	30	0	0	4	23	0	0	1	2
Secondary education	19	0	17	0	2	3	11	0	0	0	1
Adult & continuing education	118	9	99	0	0	17	76	0	1	3	2
TEACHING FIELDS	714	98	582	2	24	61	447	8	5	11	24
Agricultural education	25	2	22	0	0	5	16	0	0	0	1
Art education	34	4	29	0	5	3	16	0	1	1	3
Business education	6	0	6	0	0	1	4	0	0	0	1
English education	47	12	35	0	3	4	27	0	0	0	1
Foreign languages education	45	24	19	0	6	1	8	1	1	1	1
Health education	54	2	49	1	1	5	38	1	1	2	0
Home economics education	4	1	3	0	0	1	2	0	0	0	0
Technical/Industrial arts education	13	3	6	0	1	0	4	0	0	1	0
Mathematics education	80	9	66	0	1	12	48	1	1	1	2
Music education	74	6	66	0	0	5	59	0	0	1	1
Nursing education	8	0	8	0	0	0	7	0	0	1	0
Physical education & coaching	74	6	63	0	1	6	49	3	0	1	3
Reading education	60	5	51	0	1	6	41	1	1	0	1
Science education	69	8	58	0	0	7	44	1	0	1	5
Social science education	10	2	8	0	2	0	5	0	0	0	1
Technical education	24	5	18	0	0	1	17	0	0	0	0
Trade & industrial education	5	0	5	0	0	0	5	0	0	0	0
Teacher ed./spec. acad. & voc., other	82	9	70	1	3	4	57	0	0	1	4
OTHER EDUCATION	606	65	427	3	15	66	292	5	15	11	20
Education, general	312	27	191	2	4	44	125	1	4	3	8
Education, other	294	38	236	1	11	22	167	4	11	8	12
PROFESSIONAL/OTHER FIELDS	2,297	648	1,474	9	101	161	1,090	15	18	25	55
BUSINESS AND MANAGEMENT	1,035	355	611	1	51	64	445	7	10	13	20
Accounting	106	28	76	0	7	12	54	1	0	0	2
Banking/financial support services	79	51	27	0	8	1	16	1	0	1	0
Business admin. & management	342	111	197	0	13	19	151	2	3	6	3
Business/managerial economics	44	17	25	0	3	0	17	1	1	0	3
International business	44	17	26	0	3	5	14	0	0	3	1
Mgmt. info. sys./bus. data proc.	86	41	42	0	4	7	26	0	2	2	1
Marketing management & research	111	47	59	0	5	2	48	0	1	0	3
Operations research	26	12	13	0	1	1	11	0	0	0	0

APPENDIX TABLE A-2. Number of doctorate recipients, by citizenship, race/ethnicity, and subfield of study, 2003

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Subfield of study	Total doctorate recipients <sup>b</sup>	Non-U.S. citizens temporary visas	U.S. citizens and non-U.S. with permanent visas <sup>a</sup>								Other/ unknown race <sup>e</sup>
			Total	American Indian <sup>c</sup>	Asian <sup>d</sup>	Black/ African- American	White	Puerto Rican	Mexican American	Other Hispanic	
Organizational behavior	111	10	99	1	3	11	73	2	2	1	6
Bus. mgmt./admin. serv., general	18	2	14	0	1	3	8	0	1	0	1
Bus. mgmt./admin. serv., other	68	19	33	0	3	3	27	0	0	0	0
COMMUNICATIONS	415	104	286	1	11	29	223	2	3	3	14
Communications research	63	19	42	0	6	4	31	0	0	0	1
Mass communications	161	49	101	0	3	13	72	1	2	2	8
Communications theory	42	6	35	0	1	1	31	0	1	0	1
Communications, general	89	16	68	0	1	6	56	1	0	1	3
Communications, other	60	14	40	1	0	5	33	0	0	0	1
OTHER PROFESSIONAL FIELDS	844	189	577	7	39	68	422	6	5	9	21
Architectural environmental design	69	40	26	0	1	1	21	1	0	0	2
Home economics	21	8	13	0	1	1	10	0	0	0	1
Law	52	27	11	0	0	0	9	0	0	1	1
Library science	42	12	30	2	2	1	25	0	0	0	0
Parks/recreation/leisure/fitness	38	14	21	2	2	0	17	0	0	0	0
Public administration	121	20	85	2	5	17	55	0	1	2	3
Social work	273	32	221	1	14	36	150	2	4	5	9
Theology/religious education	173	27	131	0	12	8	104	2	0	1	4
Professional fields, general	4	0	4	0	0	0	4	0	0	0	0
Professional fields, other	51	9	35	0	2	4	27	1	0	0	1
OTHER FIELDS	3	0	0	0	0	0	0	0	0	0	0

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table.

Refer also to the explanatory note about this table in front of Appendix A.

<sup>a</sup> Persons reporting an Hispanic ethnicity, whether singly or in combination with another race/ethnicity, are included in the respondent-selected Hispanic ethnicity category.

<sup>b</sup> Includes 2,075 individuals who did not report their citizenship at time of doctorate. See the "Important Notice" for discussion of item response rate issues.

<sup>c</sup> Includes Alaskan Natives.

<sup>d</sup> Does not include Native Hawaiians and other Pacific Islanders.

<sup>e</sup> Includes Native Hawaiians and other Pacific Islanders, respondents choosing multiple races (excluding those selecting an Hispanic ethnicity), and respondents with unknown race/ethnicity.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

APPENDIX TABLE A-3a. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all doctorates

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Characteristics		2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sci.	Mathematics	Computer sciences	PHYSICAL SCIENCES <sup>a</sup>	ENGINEERING	Biochemistry	Other biological sciences	Health sciences	Agricultural sciences	LIFE SCIENCES	Psychology	Economics
Number in field		40,710	1,247	2,037	819	994	866	5,963	5,265	772	4,922	1,633	1,042	8,369	3,275	932
Male	%	54.5	80.8	68.0	66.9	73.3	79.7	73.1	82.5	58.5	53.5	33.1	65.7	51.5	31.8	71.5
Female		45.2	18.8	31.8	33.0	26.5	20.2	26.6	17.0	41.3	46.3	66.4	33.9	48.2	68.1	28.1
Unknown <sup>b</sup>		0.3	0.4	0.2	0.1	0.2	0.1	0.2	0.4	0.1	0.2	0.4	0.4	0.3	0.1	0.4
U.S. citizenship	%	64.9	50.1	57.4	60.4	47.3	44.3	52.7	36.0	57.9	67.8	71.4	46.2	64.9	84.8	33.2
Non-U.S., permanent visa		4.0	4.6	4.6	4.8	4.6	6.5	4.9	5.0	6.0	4.4	3.6	3.9	4.4	2.1	5.6
Non-U.S., temporary visa		26.0	42.3	33.8	28.7	44.3	43.8	38.1	55.3	32.6	23.3	20.0	44.4	26.2	6.0	56.8
Unknown		5.1	3.0	4.2	6.1	3.8	5.4	4.3	3.7	3.5	4.4	5.0	5.5	4.6	7.1	4.5
Never married	%	26.4	38.6	35.7	28.2	38.3	31.3	35.1	31.9	32.5	32.2	22.7	23.6	29.3	26.3	34.7
Married		52.1	44.9	47.4	51.6	46.8	50.8	47.8	54.7	50.8	49.0	56.5	58.1	51.7	43.9	49.8
Separated, divorced		5.3	3.5	2.8	3.5	3.3	3.1	3.2	2.3	3.0	3.8	6.1	3.4	4.1	6.4	2.4
Marriage-like relationship		6.1	6.5	6.2	7.4	5.2	3.6	5.9	3.6	7.9	7.4	5.1	6.2	6.8	8.4	5.8
Widowed		0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.8	0.1	0.3	0.3	0.0
Unknown		9.9	6.5	7.9	9.2	6.3	11.2	8.0	7.5	5.7	7.5	8.8	8.6	7.8	14.7	7.4
Median age at doctorate	Yrs	33.3	30.3	29.6	32.7	30.3	32.5	30.6	31.4	29.9	30.9	37.2	33.4	31.8	32.2	31.7
Bachelor's in same field as doctorate	%	52.4	74.0	75.4	44.1	71.2	42.1	65.3	74.4	28.8	52.7	43.0	46.1	47.8	62.0	53.2
Percent with masters	%	72.9	65.8	39.5	71.6	72.9	78.9	60.7	82.5	32.3	39.5	80.5	83.6	52.3	74.5	74.7
Median time lapse from baccalaureate to doctorate																
Total time	Yrs	10.1	7.6	6.9	9.8	7.9	9.6	7.9	8.6	7.3	8.1	13.0	10.4	8.8	9.1	9.1
Registered time		7.5	7.0	6.0	7.5	6.8	7.8	6.8	6.9	6.5	6.9	8.0	7.3	7.0	7.3	7.2
Planned postdoctoral study	%	29.2	59.8	53.2	46.0	39.6	19.2	46.4	30.2	75.0	68.4	24.2	36.4	56.4	34.1	8.9
Fellowship		15.4	24.8	25.4	17.1	23.2	5.8	20.9	10.2	45.9	41.6	13.8	13.2	33.1	25.0	4.4
Research associateship		10.6	33.3	26.1	26.6	14.1	11.9	23.6	17.6	21.6	18.3	6.2	21.0	16.6	5.3	3.2
Traineeship		1.1	0.6	0.5	1.0	1.3	0.3	0.7	1.1	2.1	3.0	1.8	1.0	2.4	2.2	0.8
Other study		2.1	1.1	1.1	1.3	1.0	1.2	1.1	1.3	5.4	5.4	2.3	1.2	4.3	1.5	0.5
Planned employment after doctorate	%	60.6	33.6	39.2	45.1	52.8	68.9	45.4	61.6	19.2	24.3	66.5	53.9	35.7	51.2	83.4
Educational institution <sup>c</sup>		36.6	9.5	8.0	18.4	33.4	37.6	18.3	16.5	7.3	10.2	38.8	24.3	17.3	22.8	45.7
Industry/business		13.1	15.6	26.3	13.4	12.6	24.6	19.8	35.5	8.2	7.8	10.7	13.9	9.1	12.0	14.9
Government		4.4	4.5	2.3	8.8	3.1	4.2	4.1	6.2	1.2	3.1	7.2	9.8	4.6	5.2	12.7
Nonprofit		3.3	1.0	0.7	2.0	0.8	0.9	1.0	1.1	0.8	1.4	7.1	2.6	2.6	7.0	3.1
Other & unknown		3.2	3.0	2.0	2.4	2.9	1.6	2.3	2.3	1.8	1.7	2.8	3.4	2.2	4.2	7.0
Postdoctoral plans unknown	%	10.3	6.6	7.6	8.9	7.5	11.9	8.2	8.3	5.8	7.4	9.3	9.7	7.9	14.7	7.7
Definite postdoctoral study	%	21.0	45.0	41.5	33.6	32.0	13.6	35.5	18.8	54.9	52.0	17.3	22.7	41.9	26.5	6.4
Seeking postdoctoral study		8.2	14.8	11.6	12.5	7.6	5.5	10.9	11.4	20.1	16.4	6.9	13.6	14.5	7.6	2.5
Definite employment		43.1	20.5	27.8	33.0	37.3	50.5	31.9	40.5	12.2	15.1	49.5	39.5	24.6	36.3	70.0
Seeking employment		17.5	13.1	11.4	12.1	15.5	18.5	13.6	21.0	7.0	9.1	17.0	14.4	11.1	14.9	13.4

APPENDIX TABLE A-3a. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all doctorates

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Characteristics		Anthropology & sociology	Political sci./ Internat'l Rel.	Other social sciences	SOCIAL SCI. INCL. PSYCHOLOGY	TOTAL SCIENCES & ENGINEERING	History	American literature	English lang. & literature	Foreign lang. & literature	Other humanities	HUMANITIES	EDUCATION	Business & management	Other professional fields	PROFESSIONAL/OTHER FIELDS	TOTAL NONSCIENCES
Number in field		1,069	759	742	6,777	26,374	940	362	567	622	2,921	5,412	6,627	1,035	1,259	2,297	14,336
Male	%	40.1	63.1	54.2	44.5	60.8	59.9	41.7	39.0	39.2	50.6	49.1	33.8	65.5	46.1	54.9	42.9
Female		59.9	36.5	45.4	55.3	38.9	40.1	58.3	60.8	60.5	49.2	50.7	65.8	34.0	53.6	44.8	56.8
Unknown <sup>b</sup>		0.0	0.4	0.4	0.2	0.3	0.0	0.0	0.2	0.3	0.3	0.2	0.4	0.5	0.3	0.4	0.3
U.S. citizenship	%	78.6	70.6	65.5	73.0	58.5	85.7	90.9	82.2	62.2	73.3	76.3	83.0	53.7	64.3	59.5	76.7
Non-U.S., permanent visa		3.2	3.3	4.0	3.1	4.3	2.7	1.7	2.3	12.7	4.7	4.8	2.0	5.3	4.2	4.7	3.5
Non-U.S., temporary visa		12.9	20.9	24.1	17.7	32.5	8.4	6.9	9.5	22.5	16.5	14.4	8.8	34.3	23.3	28.2	14.0
Unknown		5.3	5.1	6.3	6.2	4.8	3.2	0.6	6.0	2.6	5.5	4.5	6.2	6.7	8.2	7.6	5.8
Never married	%	23.7	27.7	22.0	26.7	30.5	21.6	26.0	22.9	24.8	26.5	25.0	13.6	18.0	20.9	19.5	18.9
Married		49.3	50.5	52.6	47.3	50.3	57.0	54.1	46.7	52.6	47.5	50.1	59.7	57.0	53.2	54.9	55.3
Separated, divorced		7.3	5.4	6.9	5.9	4.0	5.6	8.0	7.8	8.4	6.1	6.6	9.0	5.4	7.5	6.5	7.7
Marriage-like relationship		10.9	7.4	7.4	8.2	6.3	8.4	9.9	8.6	8.5	9.4	9.1	3.1	3.2	5.2	4.3	5.6
Widowed		0.4	0.3	0.3	0.3	0.2	0.4	0.6	0.5	0.0	0.3	0.3	0.7	0.3	0.2	0.3	0.5
Unknown		8.4	8.8	10.9	11.6	8.7	6.9	1.4	13.4	5.8	10.2	8.9	13.8	16.1	12.9	14.5	12.0
Median age at doctorate	Yrs	35.1	33.6	35.6	33.1	31.8	34.9	33.9	34.2	34.9	34.7	34.6	43.5	36.6	38.2	37.5	38.2
Bachelor's in same field as doctorate	%	42.4	54.5	19.4	52.2	58.2	50.6	100.0	100.0	46.5	53.6	60.2	31.0	32.2	28.4	30.0	41.9
Percent with masters	%	82.6	78.5	84.2	77.3	66.7	84.8	87.6	78.5	87.0	82.9	83.5	85.8	76.3	86.3	81.7	84.3
Median time lapse from baccalaureate to doctorate																	
Total time	Yrs	11.4	10.9	12.0	10.0	8.8	11.9	11.0	11.0	11.0	11.3	11.3	18.2	12.7	14.4	13.8	14.0
Registered time		9.1	8.7	8.4	7.8	7.1	9.3	8.9	9.0	9.0	9.0	9.0	8.3	7.9	8.8	8.3	8.6
Planned postdoctoral study	%	21.2	17.7	13.7	24.5	40.7	14.3	9.1	10.6	8.4	9.8	10.4	6.4	4.5	8.8	6.9	8.0
Fellowship		13.3	11.3	6.6	16.8	21.6	10.0	6.6	7.2	4.2	5.6	6.5	2.5	1.6	3.4	2.6	4.0
Research associateship		5.3	4.2	5.4	4.9	15.4	1.3	0.6	0.5	1.3	1.4	1.2	2.1	1.8	3.5	2.7	1.9
Traineeship		0.3	0.7	0.4	1.3	1.5	0.6	0.3	0.9	0.5	0.3	0.5	0.4	0.1	0.7	0.4	0.4
Other study		2.3	1.4	1.3	1.5	2.3	2.3	1.7	1.9	2.4	2.4	2.3	1.4	1.0	1.2	1.1	1.7
Planned employment after doctorate	%	69.2	74.0	75.2	63.6	50.3	78.1	89.0	75.7	84.9	79.0	79.9	79.5	79.7	77.9	78.6	79.5
Educational institution <sup>c</sup>		48.9	51.5	45.6	35.8	22.1	59.5	78.2	62.8	73.0	59.9	62.9	65.4	65.1	52.8	58.3	63.3
Industry/business		5.6	6.5	9.7	10.5	17.2	4.7	4.4	5.6	3.2	7.1	5.9	4.3	10.5	8.2	9.2	5.7
Government		4.0	6.9	9.6	6.7	5.3	3.5	0.8	0.4	1.0	0.8	1.2	3.4	2.2	5.3	3.9	2.7
Nonprofit		5.6	5.0	7.0	6.0	2.8	4.0	2.2	1.2	1.0	6.2	4.5	3.6	0.8	8.2	4.8	4.1
Other & unknown		5.1	4.2	3.4	4.6	2.9	6.4	3.3	5.6	6.8	5.0	5.4	2.8	1.1	3.4	2.4	3.7
Postdoctoral plans unknown	%	9.5	8.3	11.1	11.8	9.0	7.7	1.9	13.8	6.8	11.2	9.7	14.1	15.7	13.3	14.5	12.5
Definite postdoctoral study	%	14.4	11.3	9.7	18.3	29.8	9.3	5.8	6.7	4.3	5.9	6.4	3.9	2.4	5.4	4.0	4.9
Seeking postdoctoral study		6.8	6.3	4.0	6.2	10.9	5.0	3.3	3.9	4.0	3.9	4.0	2.5	2.1	3.4	2.8	3.1
Definite employment		47.3	51.9	55.9	46.6	35.1	51.3	58.6	49.7	56.3	51.0	52.1	61.0	67.7	57.9	62.3	57.8
Seeking employment		21.9	22.1	19.3	17.1	15.2	26.8	30.4	25.9	28.6	28.0	27.8	18.5	12.0	20.0	16.4	21.7

APPENDIX TABLE A-3a. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all doctorates

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Characteristics	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sci.	Mathematics	Computer sciences	PHYSICAL SCIENCES <sup>a</sup>	ENGINEERING	Biochemistry	Other biological sciences	Health sciences	Agricultural sciences	LIFE SCIENCES	Psychology	Economics
Employment commitments after doctorate <sup>d</sup>	17,536	256	566	270	371	437	1,900	2,134	94	745	808	412	2,059	1,188	652
Primary activity <sup>e</sup>															
R & D	% 29.8	58.7	73.8	42.7	37.8	61.8	57.6	65.3	47.2	40.7	35.4	50.6	40.9	22.0	55.8
Teaching	41.2	21.9	16.1	28.6	53.0	30.1	29.1	17.2	34.8	32.3	37.5	24.3	32.9	23.3	25.7
Administration	13.3	1.2	2.2	5.9	1.1	2.1	2.3	2.6	2.2	4.6	10.3	4.8	6.8	5.6	3.0
Professional services	11.9	10.9	5.5	15.3	6.1	2.8	7.1	10.1	12.4	16.5	14.2	14.4	15.0	45.6	10.6
Other	3.8	7.3	2.4	7.5	1.9	3.3	3.9	4.8	3.4	5.8	2.5	5.8	4.4	3.5	4.9
Secondary activity <sup>e</sup>															
R & D	% 33.8	27.9	15.0	34.1	48.3	28.2	29.0	23.0	18.0	32.2	31.7	32.4	31.4	30.1	30.0
Teaching	20.8	9.3	7.7	16.9	17.4	31.2	16.6	16.6	12.4	17.2	25.4	23.8	21.6	21.3	37.1
Administration	12.9	14.6	28.9	11.8	7.2	9.6	15.8	16.1	14.6	15.0	14.5	11.6	14.1	15.0	10.4
Professional services	10.8	11.3	13.9	12.5	9.7	9.1	11.4	12.3	7.9	12.5	13.4	9.6	12.1	11.5	6.0
Other	5.3	4.9	3.8	5.5	3.0	4.7	4.2	5.8	13.5	5.4	5.1	4.8	5.5	6.3	4.7
No secondary activity	16.3	32.0	30.6	19.2	14.4	17.2	22.9	26.2	33.7	17.7	9.9	17.7	15.3	15.9	11.8
Activity(ies) unknown	% 3.5	3.5	3.5	5.6	2.4	1.8	3.2	3.4	5.3	5.8	2.7	4.1	4.2	3.4	2.8
Region of employment after doctorate															
New England	% 6.3	6.3	8.3	8.1	7.0	5.9	7.2	5.4	12.8	7.7	5.8	3.9	6.4	6.2	6.7
Middle Atlantic	13.7	14.8	20.7	7.4	16.2	18.1	16.5	11.9	8.5	13.6	10.6	4.4	10.3	18.7	11.2
East North Central	13.0	12.9	16.3	5.9	14.8	7.6	12.1	11.1	7.4	10.7	12.7	10.4	11.3	13.8	9.2
West North Central	6.0	5.9	3.4	3.7	4.9	6.4	4.7	3.2	2.1	5.8	6.4	8.5	6.4	7.3	3.2
South Atlantic	17.6	12.9	16.6	19.3	17.0	15.3	16.3	12.4	14.9	16.1	21.2	11.4	17.1	18.7	20.4
East South Central	4.6	3.5	1.9	2.2	3.8	3.4	2.9	2.9	2.1	3.8	6.1	4.9	4.8	3.5	1.2
West South Central	8.5	7.8	5.1	20.4	8.1	9.6	9.3	8.4	8.5	6.0	9.4	10.0	8.3	7.3	4.8
Mountain	5.7	9.8	4.8	6.7	3.8	3.7	5.3	7.2	8.5	7.0	5.2	5.8	6.1	6.0	1.5
Pacific & insular	13.2	18.0	17.1	13.7	12.1	20.6	16.6	18.8	19.1	16.6	9.5	8.5	12.3	15.1	9.0
Foreign	11.0	8.2	5.3	12.2	12.1	9.4	8.9	18.3	16.0	12.5	13.0	32.3	16.8	3.4	32.2
Region unknown	0.2	0.0	0.5	0.4	0.3	0.0	0.3	0.4	0.0	0.3	0.0	0.0	0.1	0.1	0.5

<sup>a</sup> Physical sciences includes mathematics and computer sciences.<sup>b</sup> Includes 120 respondents not reporting sex.<sup>c</sup> Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.<sup>d</sup> Includes only recipients with definite employment plans.<sup>e</sup> Percentages are based upon only those doctorate recipients who indicated their primary and secondary work activities

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

APPENDIX TABLE A-3a. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all doctorates

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Characteristics		Anthropology & sociology	Political sci./ Internat'l Rel.	Other social sciences	SOCIAL SCI. INCL. PSYCHOLOGY	TOTAL SCIENCES & ENGINEERING	History	American literature	English lang. & literature	Foreign lang. & literature	Other humanities	HUMANITIES	EDUCATION	Business & management	Other professional fields	PROFESSIONAL/OTHER FIELDS	TOTAL NONSCIENCES
Employment commitments after doctorate <sup>d</sup>		506	394	415	3,155	9,248	482	212	282	350	1,491	2,817	4,041	701	729	1,430	8,288
Primary activity <sup>e</sup>																	
R & D	%	28.6	26.6	33.8	32.2	47.0	9.4	3.9	7.0	8.0	8.3	8.0	6.3	41.3	15.3	28.1	10.7
Teaching		53.8	53.9	42.7	35.0	29.2	73.6	83.3	82.4	84.3	74.5	77.0	40.8	44.5	53.0	48.8	54.5
Administration		9.0	7.1	9.1	6.3	4.7	6.2	6.4	5.1	3.6	5.7	5.5	39.9	5.7	13.9	9.8	23.0
Professional services		6.1	6.3	11.1	22.6	14.8	5.1	1.5	2.6	2.4	6.2	4.8	10.7	5.4	14.0	9.8	8.6
Other		2.5	6.1	3.2	3.9	4.2	5.8	4.9	2.9	1.8	5.3	4.7	2.3	3.1	3.9	3.5	3.3
Secondary activity <sup>e</sup>																	
R & D	%	43.8	47.6	40.5	35.8	30.5	55.4	54.7	56.6	63.8	46.4	51.7	26.3	39.4	43.0	41.2	37.5
Teaching		21.7	22.4	21.2	24.8	20.5	10.9	8.9	11.0	9.8	13.0	11.7	23.5	44.8	22.9	33.7	21.2
Administration		10.0	8.9	11.6	12.0	14.2	10.4	12.3	10.3	8.3	13.0	11.7	12.3	4.3	13.0	8.7	11.5
Professional services		9.0	4.7	7.9	8.6	10.8	5.3	2.5	5.9	2.7	8.0	6.2	15.5	3.5	10.3	7.0	10.8
Other		5.1	2.9	4.2	5.1	5.2	3.4	6.9	3.7	2.4	9.1	6.6	5.3	3.4	3.4	3.4	5.4
No secondary activity		10.4	13.4	14.6	13.7	18.8	14.5	14.8	12.5	13.1	10.6	12.1	17.2	4.7	7.4	6.1	13.5
Activity(ies) unknown	%	3.4	3.6	2.4	3.1	3.5	2.7	4.2	3.5	3.7	3.1	3.2	3.9	2.9	4.0	3.4	3.6
Region of employment after doctorate																	
New England	%	5.9	6.1	8.7	6.6	6.4	4.8	9.4	8.5	11.4	7.4	7.7	5.1	7.3	4.9	6.1	6.2
Middle Atlantic		13.0	13.2	13.0	14.8	13.5	18.3	17.5	21.6	15.7	15.7	16.9	12.0	14.0	12.8	13.4	13.9
East North Central		12.1	12.4	11.8	12.1	11.7	11.0	11.8	14.9	16.9	13.5	13.5	14.7	15.1	15.2	15.2	14.4
West North Central		4.9	4.3	3.9	5.3	4.9	7.7	7.5	4.3	5.1	7.2	6.8	8.2	5.1	5.8	5.5	7.3
South Atlantic		16.6	20.3	22.2	19.4	16.6	18.7	17.5	15.6	15.7	14.2	15.5	21.8	14.7	17.1	15.9	18.7
East South Central		4.0	4.3	3.1	3.1	3.4	7.1	7.5	6.0	3.4	5.1	5.5	6.8	4.4	5.2	4.8	6.0
West South Central		9.9	6.6	8.2	7.2	8.1	6.8	9.0	7.1	7.7	8.9	8.2	9.4	9.1	9.3	9.2	8.9
Mountain		5.7	4.1	4.6	4.6	5.7	4.8	3.8	6.7	4.6	4.6	4.8	6.7	6.7	4.0	5.3	5.8
Pacific & insular		17.6	15.0	13.3	14.0	15.3	14.1	12.3	9.6	12.9	14.0	13.3	9.4	10.3	11.5	10.9	11.0
Foreign		10.1	13.5	11.1	12.7	14.1	5.8	3.8	5.7	6.3	9.2	7.5	5.6	13.0	13.9	13.4	7.6
Region unknown		0.2	0.3	0.2	0.2	0.2	1.0	0.0	0.0	0.3	0.1	0.2	0.2	0.3	0.3	0.3	0.2

APPENDIX TABLE A-3b. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all males

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Characteristics		2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sci.	Mathematics	Computer sciences	PHYSICAL SCIENCES <sup>a</sup>	ENGINEERING	Biochemistry	Other biological sciences	Health sciences	Agricultural sciences	LIFE SCIENCES	Psychology	Economics
Number in field		22,188	1,008	1,385	548	729	690	4,360	4,346	452	2,631	541	685	4,309	1,042	666
Males as percent of total doctorates	%	54.5	80.8	68.0	66.9	73.3	79.7	73.1	82.5	58.5	53.5	33.1	65.7	51.5	31.8	71.5
U.S. citizenship	%	58.8	49.4	58.0	57.8	46.5	44.3	51.9	35.2	58.8	66.7	60.8	47.9	62.1	83.5	33.8
Non-U.S., permanent visa		3.7	4.0	3.2	4.4	3.4	5.4	3.9	4.6	4.9	3.5	4.6	2.8	3.6	2.1	3.8
Non-U.S., temporary visa		32.7	43.8	35.2	31.4	46.0	45.1	40.1	56.7	33.0	24.9	30.3	45.0	29.6	7.2	58.6
Unknown		4.9	2.9	3.6	6.4	4.1	5.2	4.1	3.6	3.3	4.9	4.3	4.4	4.6	7.2	3.9
Never married	%	27.6	39.8	35.5	26.1	40.3	32.6	35.6	32.4	33.8	32.2	25.5	19.7	29.5	25.6	33.2
Married		54.4	44.9	49.0	56.2	45.1	51.6	48.7	55.1	49.1	49.8	57.7	64.1	53.0	46.5	51.2
Separated, divorced		3.4	3.1	2.7	2.7	2.1	1.9	2.5	2.0	2.2	3.2	2.2	3.8	3.1	4.4	2.6
Marriage-like relationship		5.3	6.1	5.8	5.7	5.3	3.3	5.4	3.3	8.4	6.7	4.4	5.4	6.4	8.0	5.9
Widowed		0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.1	0.2	0.0
Unknown		9.3	6.2	7.0	9.3	7.1	10.6	7.7	7.3	6.4	8.1	9.4	6.9	7.9	15.3	7.2
Median age at doctorate	Yrs	32.9	30.4	29.8	33.0	30.3	32.3	30.7	31.6	30.5	31.2	34.4	33.9	31.8	32.7	32.1
Bachelor's in same field as doctorate	%	55.0	74.8	76.3	47.6	70.1	42.9	66.0	75.6	28.8	50.8	31.4	49.6	45.9	61.9	52.9
Percent with masters	%	71.8	64.4	38.8	73.7	71.3	78.4	60.8	83.4	32.3	40.1	73.2	86.6	50.8	72.4	73.7
Median time lapse from baccalaureate to doctorate																
Total time	Yrs	9.7	7.6	7.0	9.7	7.9	9.3	7.9	8.8	7.5	8.3	10.9	10.6	8.7	9.3	9.3
Registered time		7.4	7.0	6.1	7.3	6.6	7.8	6.8	6.9	6.6	7.0	7.5	7.3	7.0	7.3	7.2
Planned postdoctoral study	%	31.7	60.0	55.2	44.9	41.3	20.3	47.2	29.8	75.4	70.6	24.2	37.2	60.0	31.9	8.3
Fellowship		15.5	24.8	25.8	15.7	24.4	5.7	20.9	10.2	45.6	40.7	13.5	13.1	33.4	22.7	4.1
Research associateship		12.9	33.7	27.9	27.2	14.5	12.8	24.5	17.2	21.2	19.5	6.3	21.3	18.3	6.2	2.7
Traineeship		1.2	0.6	0.6	0.7	1.6	0.4	0.8	1.2	2.4	3.5	2.4	1.2	2.9	1.3	0.9
Other study		2.1	0.9	0.9	1.3	0.7	1.4	1.0	1.2	6.2	6.8	2.0	1.6	5.3	1.5	0.6
Planned employment after doctorate	%	58.5	33.6	38.0	46.5	50.2	68.8	45.0	62.2	17.9	21.4	66.0	54.6	31.9	52.8	84.1
Educational institution <sup>b</sup>		32.2	8.9	6.5	18.4	30.9	35.5	17.2	15.7	7.3	9.8	34.9	23.9	14.9	22.3	46.2
Industry/business		16.4	16.7	27.1	14.6	13.4	27.0	20.8	37.1	8.0	6.7	14.6	15.5	9.2	14.2	15.0
Government		4.9	4.9	2.2	9.7	2.7	3.6	4.1	6.2	1.5	2.7	9.6	10.5	4.7	6.1	13.5
Nonprofit		2.7	0.6	0.6	2.2	0.8	1.0	0.9	1.2	0.4	1.2	5.0	2.5	1.8	8.0	2.4
Other & unknown		2.3	2.6	1.7	1.6	2.3	1.7	2.0	2.0	0.7	1.1	1.8	2.2	1.3	2.2	6.9
Postdoctoral plans unknown	%	9.8	6.3	6.8	8.6	8.5	10.9	7.8	8.0	6.6	8.0	9.8	8.2	8.1	15.4	7.7
Definite postdoctoral study	%	23.1	44.7	43.9	34.3	33.2	14.5	36.4	18.6	55.3	55.3	16.6	23.9	45.5	24.9	6.2
Seeking postdoctoral study		8.7	15.3	11.3	10.6	8.1	5.8	10.7	11.2	20.1	15.3	7.6	13.3	14.5	7.0	2.1
Definite employment		42.2	20.6	28.2	35.2	35.0	49.1	31.8	41.5	11.9	14.7	50.1	41.5	23.1	39.5	70.9
Seeking employment		16.3	13.0	9.7	11.3	15.2	19.7	13.2	20.7	6.0	6.7	15.9	13.1	8.8	13.2	13.2



APPENDIX TABLE A-3b. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all males

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Characteristics		Anthropology & sociology	Political sci./ Internat'l Rel.	Other social sciences	SOCIAL SCI INCL. PSYCHOLOGY	TOTAL SCIENCES & ENGINEERING	History	American literature	English lang. & literature	Foreign lang. & literature	Other humanities	HUMANITIES	EDUCATION	Business & management	Other professional fields	PROFESSIONAL/OTHER FIELDS	TOTAL NONSCIENCES
Number in field		429	479	402	3,018	16,033	563	151	221	244	1,477	2,656	2,239	678	580	1,260	6,155
Males as percent of total doctorates	%	40.1	63.1	54.2	44.5	60.8	59.9	41.7	39.0	39.2	50.6	49.1	33.8	65.5	46.1	54.9	42.9
U.S. citizenship	%	75.5	70.4	61.2	66.3	52.8	85.6	92.1	79.2	66.4	75.4	78.0	80.7	51.2	59.5	54.9	74.3
Non-U.S., permanent visa		2.6	2.7	3.7	2.8	3.8	2.3	1.3	2.7	9.8	3.8	3.8	2.1	4.4	4.3	4.4	3.3
Non-U.S., temporary visa		15.4	21.7	28.6	24.9	38.9	8.7	6.6	12.2	22.1	15.1	13.7	10.6	37.5	27.2	32.7	16.5
Unknown		6.5	5.2	6.5	6.0	4.5	3.4	0.0	5.9	1.6	5.7	4.5	6.6	6.9	9.0	8.0	6.0
Never married	%	20.7	26.7	17.7	25.7	31.2	18.3	23.2	23.1	29.1	24.3	23.3	12.1	17.0	16.7	16.8	17.9
Married		56.9	54.3	58.2	51.8	52.2	61.1	62.9	50.7	48.8	53.3	54.9	66.2	60.6	61.0	60.7	60.2
Separated, divorced		3.0	4.6	5.2	3.9	2.8	5.0	6.0	6.3	7.8	4.6	5.2	4.7	4.0	4.7	4.3	4.8
Marriage-like relationship		9.1	6.1	6.5	7.2	5.4	8.3	6.0	5.4	9.0	7.5	7.6	2.6	2.1	4.0	2.9	4.8
Widowed		0.2	0.0	0.0	0.1	0.1	0.4	0.7	0.0	0.0	0.1	0.2	0.2	0.0	0.2	0.1	0.2
Unknown		10.0	8.4	12.4	11.3	8.3	6.9	1.3	14.5	5.3	10.2	8.9	14.1	16.4	13.4	15.2	12.1
Median age at doctorate	Yrs	35.8	33.7	35.9	33.5	31.8	34.7	34.3	34.3	35.2	34.8	34.8	42.3	36.7	38.8	37.5	37.5
Bachelor's in same field as doctorate	%	41.7	55.7	22.4	50.8	60.3	53.3	100.0	100.0	39.8	54.9	59.5	25.5	30.1	28.3	29.2	40.9
Percent with masters	%	81.4	80.8	83.3	76.7	67.2	84.5	90.7	78.7	85.2	82.1	83.1	85.6	77.1	86.4	81.3	83.6
Median time lapse from baccalaureate to doctorate																	
Total time	Yrs	11.6	10.9	12.3	10.2	8.7	11.5	11.0	11.1	11.4	11.2	11.3	17.3	12.9	14.5	13.8	13.3
Registered time		9.0	8.5	8.5	7.9	7.0	9.1	8.9	9.2	8.9	9.0	9.0	8.3	8.1	9.0	8.5	8.6
Planned postdoctoral study	%	19.3	18.0	13.7	20.2	40.8	13.9	10.6	8.6	10.2	8.7	10.1	6.6	4.4	8.6	6.3	8.0
Fellowship		11.2	11.1	6.5	13.0	19.9	9.6	6.6	7.2	5.3	5.1	6.4	2.5	1.5	3.8	2.5	4.2
Research associateship		6.1	4.6	6.2	5.2	17.2	1.2	0.0	0.0	1.6	1.2	1.1	2.2	1.6	3.1	2.3	1.7
Traineeship		0.5	0.8	0.5	0.9	1.5	0.5	0.7	0.5	1.2	0.3	0.5	0.4	0.1	0.3	0.2	0.4
Other study		1.6	1.5	0.5	1.2	2.3	2.5	3.3	0.9	2.0	2.2	2.2	1.5	1.2	1.4	1.3	1.7
Planned employment after doctorate	%	69.2	74.1	74.1	68.3	50.5	78.3	89.4	75.1	83.6	80.2	80.2	78.8	79.4	77.1	78.2	79.3
Educational institution <sup>b</sup>		51.0	50.7	44.3	39.1	20.3	59.5	80.8	64.3	75.8	61.2	63.6	65.2	65.3	49.8	58.1	63.0
Industry/business		5.6	6.1	11.9	11.6	20.4	4.1	4.0	5.0	3.7	7.4	5.9	4.3	10.9	8.3	9.7	6.1
Government		5.4	8.1	9.7	8.4	5.6	4.1	1.3	0.9	1.2	0.7	1.5	4.2	1.8	6.2	3.8	3.0
Nonprofit		4.9	5.4	5.7	5.6	2.1	4.4	0.7	2.3	0.8	6.8	5.0	3.1	0.6	10.0	4.9	4.3
Other & unknown		2.3	3.8	2.5	3.5	2.1	6.2	2.6	2.7	2.0	4.0	4.1	2.1	0.7	2.8	1.7	2.9
Postdoctoral plans unknown	%	11.4	7.9	12.2	11.5	8.7	7.8	0.0	16.3	6.1	11.1	9.8	14.6	16.2	14.3	15.5	12.7
Definite postdoctoral study	%	12.6	11.1	10.9	14.9	30.0	10.1	6.0	4.5	6.1	5.3	6.4	4.1	2.7	5.5	4.0	5.1
Seeking postdoctoral study		6.8	6.9	2.7	5.3	10.8	3.7	4.6	4.1	4.1	3.4	3.7	2.5	1.8	3.1	2.4	3.0
Definite employment		50.1	52.4	56.0	52.2	35.9	48.8	59.6	48.4	62.7	53.4	53.2	62.9	67.4	56.6	62.3	58.6
Seeking employment		19.1	21.7	18.2	16.1	14.6	29.5	29.8	26.7	20.9	26.8	27.0	15.9	11.9	20.5	15.9	20.7

APPENDIX TABLE A-3b. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all males

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Characteristics	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sci.	Mathematics	Computer sciences	PHYSICAL SCIENCES <sup>a</sup>	ENGINEERING	Biochemistry	Other biological sciences	Health sciences	Agricultural sciences	LIFE SCIENCES	Psychology	Economics
Employment commitments after doctorate <sup>c</sup>	9,365	208	391	193	255	339	1,386	1,802	54	386	271	284	995	412	472
Primary activity <sup>d</sup>															
R & D	% 37.5	63.5	77.7	42.9	39.8	66.7	61.1	66.0	50.0	43.6	45.8	50.7	46.6	24.1	56.0
Teaching	36.9	19.5	13.5	27.2	50.0	24.9	25.8	16.1	30.8	30.7	29.4	23.2	28.2	24.1	24.9
Administration	11.1	0.5	1.9	6.0	1.6	2.1	2.2	2.6	1.9	3.6	9.5	4.3	5.4	6.8	3.9
Professional services	10.2	9.5	4.8	16.3	6.1	2.7	6.8	10.3	13.5	17.4	11.8	15.9	15.2	40.2	10.9
Other	4.3	7.0	2.1	7.6	2.4	3.6	4.0	4.9	3.8	4.7	3.4	5.8	4.6	4.8	4.2
Secondary activity <sup>d</sup>															
R & D	% 32.1	22.5	14.3	33.7	44.7	24.9	26.4	22.1	13.5	32.0	30.5	33.0	30.9	30.9	28.2
Teaching	21.4	9.0	7.2	16.8	18.3	33.0	17.2	16.4	9.6	17.7	27.9	23.9	21.8	20.6	38.5
Administration	13.7	15.5	32.4	10.9	8.1	10.8	17.1	17.2	11.5	14.1	13.4	12.3	13.2	15.3	11.6
Professional services	10.7	13.0	13.3	14.1	10.2	9.3	11.8	13.0	7.7	14.6	10.3	9.4	11.6	13.3	6.1
Other	5.3	5.0	3.4	6.5	4.1	4.8	4.6	5.9	13.5	5.5	6.5	4.0	5.8	6.3	4.4
No secondary activity	16.8	35.0	29.4	17.9	14.6	17.1	22.9	25.4	44.2	16.0	11.5	17.4	16.7	13.6	11.2
Activity(ies) unknown	% 3.7	3.8	3.6	4.7	3.5	1.8	3.3	3.7	3.7	6.2	3.3	2.8	4.3	3.4	3.2
Region of employment after doctorate															
New England	% 6.3	6.7	9.2	7.8	7.1	5.0	7.2	4.9	11.1	8.0	8.5	3.5	7.0	7.3	6.6
Middle Atlantic	13.0	13.9	22.3	6.2	15.3	17.4	16.3	11.3	9.3	12.7	10.3	3.9	9.3	18.7	11.0
East North Central	12.7	13.9	15.6	6.2	17.6	8.0	12.6	11.0	5.6	12.2	12.9	9.2	11.2	14.3	8.1
West North Central	5.6	5.8	2.0	4.1	5.5	7.1	4.8	3.3	3.7	6.0	4.8	9.2	6.4	6.1	3.2
South Atlantic	16.2	11.1	15.3	17.6	16.1	14.5	14.9	12.5	14.8	15.8	19.9	11.6	15.7	18.7	19.1
East South Central	4.2	3.4	2.0	2.6	3.9	3.5	3.0	3.1	0.0	3.6	4.1	4.9	3.9	4.1	0.8
West South Central	8.3	8.2	5.9	19.7	5.5	9.7	9.0	8.2	9.3	6.0	8.1	9.5	7.7	7.8	5.1
Mountain	6.0	10.6	5.6	7.3	5.1	3.8	6.1	7.4	13.0	7.8	5.5	5.6	6.8	5.6	1.7
Pacific & insular	13.8	17.3	16.6	15.0	11.8	21.8	16.9	19.0	18.5	15.5	8.9	8.5	11.9	12.6	9.5
Foreign	13.6	9.1	4.6	13.0	12.2	9.1	8.9	18.8	14.8	12.2	17.0	34.2	19.9	4.6	34.5
Region Unknown	0.3	0.0	0.8	0.5	0.0	0.0	0.3	0.4	0.0	0.3	0.0	0.0	0.1	0.2	0.4

<sup>a</sup> Physical sciences includes mathematics and computer sciences.<sup>b</sup> Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.<sup>c</sup> Includes only recipients with definite employment plans.<sup>d</sup> Percentages are based upon only those doctorate recipients who indicated their primary and secondary work activities

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

APPENDIX TABLE A-3b. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all males

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Characteristics		Anthropology & sociology	Political sci./ Internat'l Rel.	Other social sciences	SOCIAL SCI INCL. PSYCHOLOGY	TOTAL SCIENCES & ENGINEERING	History	American literature	English lang. & literature	Foreign lang. & literature	Other humanities	HUMANITIES	EDUCATION	Business & management	Other professional fields	PROFESSIONAL/OTHER FIELDS	TOTAL NONSCIENCES
Employment commitments after doctorate <sup>c</sup>		215	251	225	1,575	5,758	275	90	107	153	788	1,413	1,409	457	328	785	3,607
Primary activity <sup>d</sup>																	
R & D	%	34.3	25.3	33.0	36.5	53.4	9.7	3.5	10.8	8.2	7.7	8.1	6.4	40.9	11.4	28.6	11.9
Teaching		50.2	53.9	43.0	35.4	25.8	72.4	87.2	79.4	83.0	73.6	75.7	37.0	45.1	53.0	48.4	54.7
Administration		7.2	8.3	10.0	6.7	4.1	6.7	5.8	5.9	5.4	5.9	6.0	45.5	5.9	14.9	9.6	22.2
Professional services		5.3	6.6	11.3	17.2	12.2	6.3	1.2	2.0	1.4	6.3	5.1	8.1	4.7	14.9	9.0	7.1
Other		2.9	5.8	2.7	4.2	4.4	4.9	2.3	2.0	2.0	6.5	5.1	3.0	3.4	5.7	4.4	4.1
Secondary activity <sup>d</sup>																	
R & D	%	38.6	50.2	44.3	36.2	28.5	53.0	58.1	53.9	63.3	44.6	49.8	25.1	39.3	38.7	39.1	37.8
Teaching		26.6	19.5	17.6	26.2	20.2	11.6	8.1	16.7	10.2	14.6	13.3	26.3	44.7	23.2	35.8	23.3
Administration		9.2	8.7	11.3	11.7	15.0	12.3	12.8	10.8	8.2	13.1	12.2	12.9	4.7	14.9	9.0	11.8
Professional services		10.1	4.6	8.6	8.7	11.3	4.9	1.2	3.9	2.7	9.1	6.7	14.4	3.2	11.4	6.6	9.7
Other		3.4	2.9	3.2	4.3	5.1	4.5	8.1	4.9	1.4	9.0	6.9	4.8	4.1	4.1	4.1	5.5
No secondary activity		12.1	14.1	14.9	12.9	19.9	13.8	11.6	9.8	14.3	9.6	11.1	16.5	4.1	7.6	5.5	12.0
Activity(ies) unknown	%	3.7	4.0	1.8	3.2	3.6	2.5	4.4	4.7	3.9	3.8	3.7	4.0	3.1	4.0	3.4	3.8
Region of employment after doctorate																	
New England	%	3.7	5.2	7.6	6.3	6.2	2.5	10.0	10.3	15.7	8.1	8.1	4.8	7.7	5.2	6.6	6.5
Middle Atlantic		8.8	10.8	12.0	12.8	12.6	20.4	18.9	20.6	15.0	14.1	16.2	10.9	15.1	11.0	13.4	13.5
East North Central		13.0	12.7	11.1	11.6	11.6	9.1	7.8	15.0	15.7	13.6	12.7	16.8	13.1	15.2	14.0	14.6
West North Central		4.7	5.2	4.0	4.6	4.5	8.4	6.7	6.5	8.5	6.9	7.3	7.7	5.9	6.1	6.0	7.2
South Atlantic		17.7	20.3	20.9	19.2	15.5	21.5	22.2	16.8	13.1	14.2	16.2	20.0	13.8	16.2	14.8	17.4
East South Central		5.6	4.0	3.6	3.2	3.2	7.6	6.7	5.6	3.3	6.0	6.0	6.2	4.8	4.6	4.7	5.8
West South Central		9.3	8.0	8.4	7.3	8.1	7.3	7.8	7.5	3.9	10.7	8.8	8.9	8.1	8.5	8.3	8.8
Mountain		6.5	4.0	4.4	4.1	6.1	5.1	5.6	4.7	7.2	5.1	5.3	6.2	7.0	4.0	5.7	5.7
Pacific & Insular		19.1	14.7	14.7	13.2	15.7	11.3	10.0	7.5	13.7	12.1	11.6	10.4	9.2	10.7	9.8	10.8
Foreign		11.6	14.7	12.9	17.3	16.2	6.2	4.4	5.6	3.3	9.3	7.4	7.6	14.9	18.6	16.4	9.5
Region Unknown		0.0	0.4	0.4	0.3	0.3	0.7	0.0	0.0	0.7	0.1	0.3	0.2	0.4	0.0	0.3	0.2

APPENDIX TABLE A-3c. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all females

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Characteristics		2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sci.	Mathematics	Computer sciences	PHYSICAL SCIENCES <sup>a</sup>	ENGINEERING	Biochemistry	Other biological sciences	Health sciences	Agricultural sciences	LIFE SCIENCES	Psychology	Economics	Anthropology & sociology
Number in field		18,402	234	647	270	263	175	1,589	896	319	2,279	1,085	353	4,036	2,229	262	640
Females as percent of total doctorates	%	45.2	18.8	31.8	33.0	26.5	20.2	26.6	17.0	41.3	46.3	66.4	33.9	48.2	68.1	28.1	59.9
U.S. citizenship	%	72.6	54.3	56.6	65.9	49.8	44.6	55.4	41.3	56.7	69.3	77.1	43.3	68.1	85.5	32.1	80.6
Non-U.S., permanent visa		4.4	7.3	7.6	5.6	8.0	10.9	7.6	7.5	7.5	5.6	3.1	6.2	5.1	2.2	10.3	3.6
Non-U.S., temporary visa		18.0	36.8	30.9	23.3	39.5	38.9	32.8	49.3	32.0	21.5	14.8	43.9	22.5	5.5	53.1	11.3
Unknown		4.9	1.7	4.9	5.2	2.7	5.7	4.2	1.9	3.8	3.6	4.9	6.5	4.2	6.9	4.6	4.5
Never married	%	25.2	34.2	36.6	32.6	33.1	26.3	33.9	30.4	30.7	32.4	21.5	31.4	29.2	26.6	38.9	25.6
Married		49.5	45.7	44.2	42.6	51.3	48.0	45.8	53.8	53.0	48.2	56.2	47.0	50.6	42.8	46.9	44.2
Separated, divorced		7.7	5.6	3.1	5.2	6.8	8.0	5.0	4.2	4.1	4.5	8.1	2.5	5.3	7.3	1.9	10.2
Marriage-like relationship		7.1	8.5	7.1	11.1	4.9	4.6	7.4	5.4	7.2	8.2	5.4	7.9	7.4	8.7	5.7	12.2
Widowed		0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.8	0.0	0.4	0.4	0.0	0.5
Unknown		10.0	6.0	9.0	8.5	3.8	13.1	8.1	6.3	4.7	6.5	7.9	11.0	7.1	14.2	6.5	7.3
Median age at doctorate	Yrs	34.0	29.8	29.3	32.2	30.5	33.7	30.4	30.5	29.7	30.7	39.9	32.5	31.9	32.0	30.9	34.8
Bachelor's in same field as doctorate	%	49.7	72.2	73.9	37.0	74.5	39.4	63.7	70.3	28.8	55.2	49.1	39.7	50.1	62.2	55.0	42.8
Percent with masters	%	74.6	72.6	41.0	67.4	77.2	80.6	60.5	80.0	32.3	39.1	84.6	78.5	54.2	75.7	78.2	83.4
Median time lapse from baccalaureate to doctorate																	
Total time	Yrs	10.9	7.7	6.7	10.0	7.9	11.0	7.7	8.0	7.3	8.0	15.0	9.8	9.0	9.0	8.3	11.3
Registered time		7.7	7.0	6.0	7.6	7.0	7.7	6.8	6.7	6.3	6.7	8.0	7.0	7.0	7.3	7.0	9.1
Planned postdoctoral study	%	26.3	60.3	49.0	48.5	35.4	14.9	44.6	32.7	74.3	66.1	24.3	35.1	52.8	35.2	10.7	22.5
Fellowship		15.3	25.2	24.7	20.0	20.2	6.3	21.2	10.6	46.1	42.8	14.1	13.6	32.8	26.1	5.3	14.7
Research associateship		7.9	32.1	22.4	25.6	12.9	8.6	21.3	19.8	22.3	17.0	6.2	20.7	14.8	4.9	4.6	4.8
Traineeship		1.1	0.9	0.3	1.5	0.4	0.0	0.6	0.8	1.6	2.4	1.6	0.6	1.9	2.6	0.4	0.2
Other study		2.0	2.1	1.5	1.5	1.9	0.0	1.5	1.6	4.4	3.9	2.5	0.3	3.2	1.5	0.4	2.8
Planned employment after doctorate	%	63.4	34.2	42.2	42.2	60.1	69.7	47.0	60.2	21.0	27.6	67.2	53.3	40.0	50.5	82.8	69.2
Educational institution <sup>b</sup>		42.2	12.4	11.1	18.5	40.3	46.3	21.3	20.4	7.2	10.8	40.9	25.2	19.9	23.1	45.0	47.5
Industry/business		9.3	11.5	24.7	11.1	10.3	15.4	17.1	29.0	8.5	9.0	8.8	11.0	9.1	11.0	14.9	5.6
Government		3.8	3.0	2.6	7.0	4.2	6.3	4.1	6.0	0.6	3.6	6.0	8.5	4.4	4.7	10.7	3.1
Nonprofit		4.0	2.6	1.1	1.5	0.8	0.6	1.3	1.0	1.3	1.7	8.2	2.8	3.5	6.6	5.0	6.1
Other & unknown		4.2	4.7	2.6	4.1	4.6	1.1	3.3	3.7	3.4	2.5	3.3	5.7	3.1	5.1	7.3	6.9
Postdoctoral plans unknown	%	10.3	5.6	8.8	9.3	4.6	15.4	8.4	7.1	4.7	6.3	8.5	11.6	7.2	14.3	6.5	8.3
Definite postdoctoral study	%	18.6	47.0	36.6	32.2	28.9	10.3	33.2	20.0	54.2	48.4	17.8	20.7	38.2	27.3	7.3	15.6
Seeking postdoctoral study		7.7	13.2	12.4	16.3	6.5	4.6	11.3	12.7	20.1	17.7	6.5	14.4	14.6	7.9	3.4	6.9
Definite employment		44.4	20.5	27.0	28.5	43.7	56.0	32.3	36.9	12.5	15.7	49.5	36.3	26.3	34.8	68.7	45.5
Seeking employment		19.0	13.7	15.1	13.7	16.3	13.7	14.7	23.2	8.5	11.9	17.7	17.0	13.7	15.7	14.1	23.8

APPENDIX TABLE A-3c. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all females

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Characteristics		Political sci./ Internat'l Rel.	Other social sciences	SOCIAL SCI. INCL. PSYCHOLOGY	TOTAL SCIENCES & ENGINEERING	History	American literature	English lang. & literature	Foreign lang. & literature	Other humanities	HUMANITIES	EDUCATION	Business & management	Other professional fields	PROFESSIONAL/OTHER FIELDS	TOTAL NONSCIENCES
Number in field		277	337	3,745	10,266	377	211	345	376	1,436	2,745	4,363	352	675	1,028	8,136
Females as percent of total doctorates	%	36.5	45.4	55.3	38.9	40.1	58.3	60.8	60.5	49.2	50.7	65.8	34.0	53.6	44.8	56.8
U.S. citizenship	%	71.8	71.2	78.6	67.7	85.9	90.0	84.3	59.8	71.5	74.9	84.6	59.4	68.9	65.6	78.9
Non-U.S., permanent visa		4.3	4.5	3.3	5.1	3.2	1.9	2.0	14.6	5.7	5.8	1.9	7.1	4.1	5.2	3.7
Non-U.S., temporary visa		19.9	19.0	12.1	22.6	8.0	7.1	7.8	22.6	17.9	15.1	8.0	28.7	20.0	23.0	12.3
Unknown		4.0	5.3	6.0	4.6	2.9	0.9	5.8	2.9	4.9	4.2	5.5	4.8	7.0	6.3	5.1
Never married	%	29.6	27.3	27.6	29.5	26.5	28.0	22.9	22.1	28.9	26.8	14.5	20.2	24.6	23.1	19.7
Married		44.4	46.3	43.8	47.7	50.9	47.9	44.3	55.3	41.8	45.7	56.7	50.9	46.8	48.2	51.9
Separated, divorced		6.9	8.9	7.5	6.0	6.6	9.5	8.7	8.8	7.7	7.9	11.3	8.2	9.9	9.3	9.9
Marriage-like relationship		9.7	8.6	9.1	7.8	8.5	12.8	10.7	8.2	11.4	10.6	3.4	5.4	6.4	6.0	6.1
Widowed		0.7	0.6	0.4	0.3	0.5	0.5	0.9	0.0	0.6	0.5	1.0	0.9	0.3	0.5	0.8
Unknown		8.7	8.3	11.6	8.8	6.9	1.4	12.5	5.6	9.7	8.5	13.1	14.5	12.0	12.9	11.5
Median age at doctorate	Yrs	33.2	34.9	32.7	31.8	35.3	33.7	34.1	34.6	34.4	34.4	44.5	36.1	37.9	37.4	39.1
Bachelor's in same field as doctorate	%	53.1	16.0	53.5	55.2	46.7	100.0	100.0	51.1	52.5	61.1	34.0	36.6	28.6	31.3	42.8
Percent with masters	%	75.1	86.1	78.1	66.2	85.1	85.3	78.6	88.6	84.1	84.3	86.4	75.6	86.7	82.8	85.2
Median time lapse from baccalaureate to doctorate																
Total time	Yrs	10.8	11.5	9.8	9.0	12.0	10.8	11.0	10.9	11.3	11.3	18.6	12.3	14.1	13.8	14.4
Registered time		8.8	8.3	7.7	7.2	9.6	8.8	9.0	9.0	9.1	9.0	8.3	7.3	8.6	8.0	8.6
Planned postdoctoral study	%	17.3	13.9	28.1	40.8	14.9	8.1	11.9	7.2	10.9	10.9	6.4	4.8	9.0	7.6	8.1
Fellowship		11.9	6.8	19.9	24.4	10.6	6.6	7.2	3.5	6.2	6.6	2.5	2.0	3.1	2.7	3.9
Research associateship		3.6	4.5	4.8	12.6	1.3	0.9	0.9	1.1	1.6	1.3	2.1	2.3	3.9	3.3	2.0
Traineeship		0.4	0.3	1.7	1.5	0.8	0.0	1.2	0.0	0.4	0.5	0.4	0.0	1.0	0.7	0.5
Other study		1.4	2.4	1.7	2.3	2.1	0.5	2.6	2.7	2.7	2.4	1.4	0.6	1.0	0.9	1.7
Planned employment after doctorate	%	74.7	77.2	60.2	50.2	77.7	88.6	76.2	86.2	78.3	79.9	80.3	81.5	79.1	79.9	80.1
Educational institution <sup>b</sup>		53.4	47.5	33.2	25.0	59.4	76.3	62.0	71.5	59.0	62.5	65.9	65.6	55.7	59.0	63.9
Industry/business		7.2	7.1	9.7	12.3	5.6	4.7	6.1	2.9	6.9	5.9	4.4	9.9	8.1	8.8	5.4
Government		4.7	9.5	5.3	4.8	2.7	0.5	0.0	0.8	0.8	0.9	3.0	3.1	4.6	4.1	2.4
Nonprofit		4.3	8.6	6.4	4.0	3.4	3.3	0.6	1.1	5.6	3.9	3.8	1.1	6.7	4.8	4.0
Other & unknown		5.1	4.5	5.5	4.0	6.6	3.8	7.5	9.8	6.1	6.7	3.2	1.7	4.0	3.2	4.4
Postdoctoral plans unknown	%	7.9	8.9	11.7	9.0	7.4	3.3	11.9	6.6	10.7	9.3	13.3	13.6	11.9	12.5	11.9
Definite postdoctoral study	%	11.9	8.3	21.1	29.6	8.0	5.7	8.1	3.2	6.5	6.4	3.9	2.0	5.3	4.2	4.8
Seeking postdoctoral study		5.4	5.6	7.0	11.2	6.9	2.4	3.8	4.0	4.4	4.4	2.5	2.8	3.7	3.4	3.3
Definite employment		51.6	56.4	42.2	34.0	54.9	57.8	50.7	52.4	49.0	51.1	60.3	69.3	59.4	62.7	57.5
Seeking employment		23.1	20.8	18.0	16.2	22.8	30.8	25.5	33.8	29.4	28.7	20.0	12.2	19.7	17.1	22.6

APPENDIX TABLE A-3c. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all females

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Characteristics	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sci.	Mathematics	Computer sciences	PHYSICAL SCIENCES <sup>a</sup>	ENGINEERING	Biochemistry	Other biological sciences	Health sciences	Agricultural sciences	LIFE SCIENCES	Psychology	Economics	Anthropology & sociology	
Employment commitments after doctorate <sup>c</sup>	8,168	48	175	77	115	98	513	331	40	358	537	128	1,063	776	180	291	
Primary activity <sup>d</sup>																	
R & D	%	21.1	38.3	65.1	42.3	33.9	44.8	48.2	61.1	43.2	37.8	30.2	50.4	35.5	20.9	55.4	24.5
Teaching		46.1	31.9	21.9	32.4	59.1	47.9	38.0	22.8	40.5	34.2	41.6	26.9	37.4	22.8	27.7	56.4
Administration		16.0	4.3	3.0	5.6	0.0	2.1	2.6	2.5	2.7	5.6	10.7	5.9	8.1	4.9	0.6	10.3
Professional services		13.7	17.0	7.1	12.7	6.1	3.1	7.8	9.3	10.8	15.3	15.5	10.9	14.7	48.5	9.6	6.7
Other		3.2	8.5	3.0	7.0	0.9	2.1	3.4	4.3	2.7	7.1	2.1	5.9	4.2	2.8	6.8	2.1
Secondary activity <sup>d</sup>																	
R & D	%	35.8	51.1	16.6	35.2	55.7	39.6	35.9	27.8	24.3	32.4	32.3	31.1	31.9	29.6	34.5	47.5
Teaching		20.2	10.6	8.9	16.9	15.7	25.0	14.9	17.6	16.2	16.8	24.2	23.5	21.4	21.7	33.3	18.1
Administration		12.0	10.6	21.3	14.1	5.2	5.2	12.4	10.5	18.9	15.6	15.1	10.1	14.8	14.8	7.3	10.6
Professional services		11.0	4.3	15.4	8.5	8.7	8.3	10.4	8.3	8.1	10.3	14.9	10.1	12.6	10.5	5.6	8.2
Other		5.3	4.3	4.7	2.8	0.9	4.2	3.4	5.2	13.5	5.3	4.4	6.7	5.3	6.3	5.6	6.4
No secondary activity		15.7	19.1	33.1	22.5	13.9	17.7	22.9	30.6	18.9	19.5	9.2	18.5	14.0	17.1	13.6	9.2
Activity(ies) unknown	%	3.4	2.1	3.4	7.8	0.0	2.0	2.9	2.1	7.5	5.3	2.4	7.0	4.1	3.4	1.7	3.1
Region of employment after doctorate																	
New England	%	6.3	4.2	6.3	9.1	7.0	9.2	7.2	8.5	15.0	7.3	4.5	4.7	5.8	5.7	7.2	7.6
Middle Atlantic		14.5	18.8	17.1	10.4	18.3	20.4	17.2	15.1	7.5	14.5	10.8	5.5	11.3	18.7	11.7	16.2
East North Central		13.3	8.3	17.7	5.2	8.7	6.1	10.7	11.5	10.0	9.2	12.7	13.3	11.5	13.5	12.2	11.3
West North Central		6.6	6.3	6.3	2.6	3.5	4.1	4.7	2.7	0.0	5.6	7.3	7.0	6.4	8.0	3.3	5.2
South Atlantic		19.2	20.8	19.4	23.4	19.1	18.4	19.9	11.8	15.0	16.5	21.8	10.9	18.4	18.7	23.9	15.8
East South Central		5.1	4.2	1.7	1.3	3.5	3.1	2.5	1.8	5.0	3.9	7.1	4.7	5.6	3.1	2.2	2.7
West South Central		8.7	6.3	3.4	22.1	13.9	9.2	9.9	9.4	7.5	6.1	10.1	10.9	8.7	7.1	3.9	10.3
Mountain		5.5	6.3	2.9	5.2	0.9	3.1	3.1	5.7	2.5	6.1	5.0	6.3	5.5	6.2	1.1	5.2
Pacific & Insular		12.6	20.8	18.3	10.4	13.0	16.3	15.8	18.1	20.0	17.6	9.9	8.6	12.7	16.4	7.8	16.5
Foreign		8.1	4.2	6.9	10.4	11.3	10.2	8.8	15.1	17.5	12.8	11.0	28.1	13.9	2.7	26.1	8.9
Region Unknown		0.2	0.0	0.0	0.0	0.9	0.0	0.2	0.3	0.0	0.3	0.0	0.0	0.1	0.0	0.6	0.3

<sup>a</sup> Physical sciences includes mathematics and computer sciences.<sup>b</sup> Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.<sup>c</sup> Includes only recipients with definite employment plans.<sup>d</sup> Percentages are based upon only those doctorate recipients who indicated their primary and secondary work activities

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

APPENDIX TABLE A-3c. Statistical profile of doctorate recipients, by major field of study, 2003 - Total all females

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Characteristics		Political sci./ Internat'l Rel.	Other social sciences	SOCIAL SCI. INCL. PSYCHOLOGY	TOTAL SCIENCES & ENGINEERING	History	American literature	English lang. & literature	Foreign lang. & literature	Other humanities	HUMANITIES	EDUCATION	Business & management	Other professional fields	PROFESSIONAL/OTHER FIELDS	TOTAL NONSCIENCES
Employment commitments after doctorate <sup>d</sup>		143	190	1,580	3,487	207	122	175	197	703	1,404	2,632	244	401	645	4,681
Primary activity <sup>d</sup>																
R & D	%	28.8	34.8	27.9	36.4	9.0	4.3	4.7	7.9	9.0	7.9	6.3	42.0	18.4	27.4	9.7
Teaching		54.0	42.4	34.7	34.9	75.1	80.3	84.1	85.3	75.4	78.2	42.8	43.3	53.0	49.3	54.4
Administration		5.0	8.2	5.8	5.7	5.5	6.8	4.7	2.1	5.5	5.1	36.9	5.5	13.0	10.1	23.6
Professional services		5.8	10.9	27.9	19.2	3.5	1.7	2.9	3.2	6.1	4.5	12.2	6.7	13.2	10.8	9.7
Other		6.5	3.8	3.6	3.8	7.0	6.8	3.5	1.6	3.9	4.2	1.9	2.5	2.3	2.4	2.7
Secondary activity <sup>d</sup>																
R & D	%	43.2	35.9	35.4	33.7	58.7	52.1	58.2	64.2	48.3	53.6	26.9	39.5	46.5	43.8	37.3
Teaching		27.3	25.5	23.4	21.0	10.0	9.4	7.6	9.5	11.2	10.2	21.9	45.0	22.6	31.1	19.6
Administration		9.4	12.0	12.3	12.9	8.0	12.0	10.0	8.4	13.0	11.1	12.0	3.4	11.4	8.3	11.3
Professional services		5.0	7.1	8.6	10.1	6.0	3.4	7.1	2.6	6.7	5.8	16.0	4.2	9.4	7.4	11.7
Other		2.9	5.4	5.8	5.2	2.0	6.0	2.9	3.2	9.2	6.2	5.5	2.1	2.9	2.6	5.3
No secondary activity		12.2	14.1	14.4	17.1	15.4	17.1	14.1	12.1	11.6	13.0	17.6	5.9	7.3	6.7	14.7
Activity(ies) unknown	%	2.8	3.2	3.0	3.3	2.9	4.1	2.9	3.6	2.3	2.8	3.8	2.5	4.0	3.4	3.4
Region of employment after doctorate																
New England	%	7.7	10.0	6.9	6.8	7.7	9.0	7.4	8.1	6.7	7.3	5.3	6.6	4.7	5.4	5.9
Middle Atlantic		17.5	14.2	16.8	15.0	15.5	16.4	22.3	16.2	17.5	17.5	12.6	11.9	14.2	13.3	14.2
East North Central		11.9	12.6	12.7	11.9	13.5	14.8	14.9	17.8	13.5	14.4	13.6	18.9	15.2	16.6	14.3
West North Central		2.8	3.7	5.9	5.6	6.8	8.2	2.9	2.5	7.7	6.3	8.5	3.7	5.5	4.8	7.3
South Atlantic		20.3	23.7	19.5	18.5	15.0	13.9	14.9	17.8	14.2	14.9	22.8	16.4	18.0	17.4	19.7
East South Central		4.9	2.6	3.0	3.6	6.3	8.2	6.3	3.6	4.1	5.0	7.1	3.7	5.7	5.0	6.2
West South Central		4.2	7.9	7.2	8.3	6.3	9.8	6.9	10.7	6.8	7.5	9.6	11.1	10.0	10.4	9.1
Mountain		4.2	4.7	5.1	5.0	4.3	2.5	8.0	2.5	4.1	4.3	7.0	6.1	4.0	4.8	5.9
Pacific & Insular		15.4	11.6	14.7	14.6	17.9	13.9	10.9	12.2	16.2	15.0	8.8	12.3	12.2	12.2	11.2
Foreign		11.2	8.9	8.0	10.6	5.3	3.3	5.7	8.6	9.1	7.5	4.5	9.4	10.0	9.8	6.2
Region Unknown		0.0	0.0	0.1	0.1	1.4	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.5	0.3	0.2

APPENDIX TABLE A-4. Statistical profile of doctorate recipients by race/ethnicity and citizenship, 2003

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Characteristics	Total <sup>a</sup>				American Indian <sup>b</sup>				Asian <sup>c</sup>				Black/African-American			
	U.S.		Non-U.S.		U.S.		Non-U.S.		U.S.		Non-U.S.		U.S.		Non-U.S.	
	Total	Temp.	Perm.	Temp.	Total	Temp.	Perm.	Temp.	Total	Temp.	Perm.	Temp.	Total	Temp.	Perm.	Temp.
Total number	40,710	26,413	1,631	10,585	141	133	3	5	8,251	1,350	668	6,209	2,097	1,708	88	266
Male	54.7	49.4	49.9	68.6	39.7	39.1	33.3	60.0	65.8	54.2	49.5	70.1	39.9	34.9	62.5	67.2
Female	45.3	50.6	50.1	31.4	60.3	60.9	66.7	40.0	34.2	45.8	50.5	29.9	60.1	65.1	37.5	32.8
Field of study																
Physical sciences <sup>e</sup>	14.6	11.9	17.8	21.5	6.4	6.0	0.0	20.0	19.5	14.7	20.7	20.4	6.7	5.6	12.5	12.0
Engineering	12.9	7.2	16.2	27.5	7.8	7.5	33.3	0.0	28.9	15.1	20.2	32.9	4.9	4.0	6.8	9.4
Life sciences	20.6	20.6	22.4	20.7	12.1	12.8	0.0	0.0	24.0	33.3	27.7	21.6	13.2	11.1	18.2	25.6
Social sciences	16.6	18.7	12.9	11.4	24.8	25.6	0.0	20.0	9.7	14.3	9.9	8.7	17.6	18.0	20.5	14.7
Humanities	13.3	15.6	16.0	7.4	12.8	12.8	0.0	20.0	5.9	10.1	9.3	4.6	9.1	8.8	14.8	9.8
Education	16.3	20.8	8.0	5.5	29.8	29.3	33.3	40.0	5.8	8.0	6.3	5.3	39.7	43.5	17.0	19.5
Professional/other	5.6	5.2	6.6	6.1	6.4	6.0	33.3	0.0	6.2	4.5	6.0	6.5	8.9	8.9	10.2	9.0
Median age at doctorate	33.3	33.9	34.5	32.2	39.9	40.0	38.7	38.7	32.2	31.4	34.0	32.2	37.7	37.4	37.2	38.4
Median time lapse from baccalaureate to doctorate																
Total time	10.1	10.6	10.9	9.3	14.4	14.4	11.4	14.8	9.5	8.7	11.2	9.5	12.7	12.7	12.6	12.7
Registered time	7.5	7.7	8.2	7.2	9.0	9.0	14.0	5.5	7.4	7.3	8.5	7.4	8.0	8.2	8.3	7.5
Doctoral program support <sup>f</sup>																
Teaching assistantships	17.3	16.7	19.8	18.2	8.1	7.6	50.0	0.0	16.0	13.2	17.3	16.4	10.8	8.5	23.5	21.3
Research assistantships/traineeships	27.0	19.5	32.9	45.1	10.5	10.2	0.0	25.0	47.2	27.5	44.1	52.0	11.5	8.3	21.0	28.5
Fellowships/dissertation grants	21.9	23.3	20.8	18.7	29.0	29.7	50.0	0.0	18.9	34.9	17.3	15.5	30.1	30.2	22.2	32.6
Own resources	27.8	35.5	21.7	9.2	45.2	46.6	0.0	25.0	12.4	20.9	17.1	10.1	41.7	47.0	28.4	11.8
Foreign government	2.3	0.1	1.9	7.9	0.8	0.0	0.0	25.0	4.1	0.3	1.1	5.2	0.7	0.1	1.2	5.0
Employer	3.6	4.7	2.9	0.7	5.6	5.1	0.0	25.0	1.3	2.9	3.1	0.7	4.9	5.7	3.7	0.5
Other	0.2	0.2	0.1	0.1	0.8	0.8	0.0	0.0	0.1	0.2	0.0	0.1	0.3	0.3	0.0	0.5
Postdoctoral Plans																
Postdoc study plans	29.2	26.6	30.6	40.9	17.0	17.3	0.0	20.0	41.3	38.4	34.7	42.7	21.6	19.7	34.1	32.0
Postdoc employment plans	60.6	68.0	65.2	52.9	73.0	72.2	100.0	80.0	54.4	58.0	61.8	53.0	66.1	69.6	58.0	54.5
Educational institution <sup>g</sup>	36.6	42.7	32.8	29.1	43.3	42.9	66.7	40.0	26.3	27.2	24.4	26.3	46.8	50.1	35.2	35.7
Industry/business	13.1	12.1	21.9	16.9	14.2	13.5	33.3	20.0	20.6	17.9	28.0	20.4	7.3	7.3	10.2	7.5
Government	4.4	5.3	2.3	3.3	8.5	8.3	0.0	20.0	3.7	5.8	2.5	3.4	5.6	5.8	3.4	5.6
Nonprofit	3.3	4.2	3.6	1.5	2.8	3.0	0.0	0.0	2.1	4.1	3.4	1.5	4.0	3.9	5.7	3.8
Other/unknown	3.2	3.7	4.6	2.0	4.3	4.5	0.0	0.0	1.8	3.0	3.4	1.4	2.5	2.6	3.4	1.9
Postdoc plans unknown	10.3	5.4	4.2	6.2	9.9	10.5	0.0	0.0	4.3	3.6	3.4	4.3	12.4	10.7	8.0	13.5



APPENDIX TABLE A-4. Statistical profile of doctorate recipients by race/ethnicity and citizenship, 2003

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Characteristics	Total <sup>a</sup>				American Indian <sup>b</sup>				Asian <sup>c</sup>				Black/African-American			
	Total		Non-U.S.		Total		Non-U.S.		Total		Non-U.S.		Total		Non-U.S.	
	U.S.	Perm.	Temp.	Temp.	U.S.	Perm.	Temp.	Temp.	U.S.	Perm.	Temp.	Temp.	U.S.	Perm.	Temp.	Temp.
Definite postdoctoral study	21.0	20.0	19.3	27.7	10.6	11.3	0.0	0.0	27.4	27.6	22.0	28.1	14.3	13.5	21.6	19.2
Seeking postdoctoral study	8.2	6.6	11.3	13.3	6.4	6.0	0.0	20.0	13.9	10.8	12.7	14.7	7.2	6.2	12.5	12.8
Definite employment	43.1	49.2	42.2	36.1	48.9	48.9	0.0	80.0	35.4	36.7	40.0	34.7	45.1	48.4	34.1	33.8
Seeking employment	17.5	18.8	23.1	16.8	24.1	23.3	100.0	0.0	19.1	21.3	21.9	18.3	21.0	21.3	23.9	20.7
Employment location after doctorate <sup>h</sup>																
U.S.	88.7	97.9	92.6	57.0	94.2	98.5	0.0	25.0	69.2	95.6	89.5	60.6	94.8	99.0	93.3	56.7
Foreign	11.0	1.9	6.8	42.7	4.3	0.0	0.0	75.0	30.4	4.2	9.4	39.0	4.8	0.5	6.7	43.3
Unknown	0.2	0.2	0.6	0.3	1.4	1.5	0.0	0.0	0.4	0.2	1.1	0.4	0.4	0.5	0.0	0.0

NOTE: Field groupings may differ from those in reports published by, federal sponsors of the Survey of Earned Doctorates.

<sup>a</sup> Totals include 120 individuals who did not report their sex and 2,075 individuals who did not report their citizenship at time of doctorate.

<sup>b</sup> Includes Alaskan Native.

<sup>c</sup> Does not include Native Hawaiians and other Pacific Islanders.

<sup>d</sup> Includes Native Hawaiians and other Pacific Islanders, respondents choosing multiple races (excluding those selecting an Hispanic ethnicity), and respondents with unknown race/ethnicity.

<sup>e</sup> Includes mathematics and computer sciences.

<sup>f</sup> In this table a recipient counts once in each source category from which he or she received support. Because students indicate multiple sources of support, the vertical percentages can sum to more than 100 percent. (Data on the "primary" source of support for doctorate recipients are presented in this report.)

<sup>g</sup> Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.

<sup>h</sup> Includes only recipients with definite employment plans.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

APPENDIX TABLE A-4. Statistical profile of doctorate recipients by race/ethnicity and citizenship, 2003

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Characteristics	White						Puerto Rican			Mexican American			Other Hispanic			Other/unknown race <sup>d</sup>								
	Total			Non-U.S.			Total			Non-U.S.			Total			Non-U.S.			Total			Non-U.S.		
	U.S.	Perm.	Temp.	U.S.	Perm.	Temp.	U.S.	Perm.	Temp.	U.S.	Perm.	Temp.	U.S.	Perm.	Temp.	U.S.	Perm.	Temp.	U.S.	Perm.	Temp.	U.S.	Perm.	Temp.
Total number	24,405	20,818	668	2,814	259	533	437	11	83	533	437	11	83	1,414	574	138	697	3,610	1,134	55	511			
Male	52.2	50.3	48.8	67.3	48.6	50.5	44.9	45.5	79.5	54.4	46.7	48.6	62.1	56.4	53.7	52.7	64.7	35.3						
Female	47.8	49.7	51.2	32.7	51.4	49.5	55.1	54.5	20.5	45.6	53.3	51.4	37.9	43.6	46.3	47.3	35.3							
Field of study																								
Physical sciences <sup>e</sup>	14.2	12.4	16.8	26.9	10.0	8.4	7.1	18.2	14.5	11.7	6.8	13.0	15.6	14.1	14.6	18.2	18.8							
Engineering	8.8	7.0	15.4	20.5	7.3	9.2	3.2	18.2	38.6	12.8	9.9	8.0	16.2	10.3	6.3	12.7	23.5							
Life sciences	20.2	20.8	18.7	17.3	16.2	16.5	16.0	0.0	21.7	23.6	17.6	23.2	28.7	19.2	20.8	12.7	14.9							
Social sciences	18.3	18.8	14.8	15.1	24.7	19.5	20.8	9.1	13.3	18.0	21.1	13.8	16.1	18.7	19.8	14.5	14.9							
Humanities	15.8	16.4	18.9	10.9	15.8	13.1	14.6	27.3	3.6	17.7	19.3	32.6	13.3	14.1	17.1	21.8	12.7							
Education	17.5	19.7	8.5	3.9	20.1	29.5	34.1	27.3	6.0	12.7	22.0	5.1	6.6	16.6	17.0	9.1	7.8							
Professional/other	5.1	5.0	6.9	5.5	5.8	3.8	4.1	0.0	2.4	3.5	3.3	4.3	3.4	7.0	4.3	10.9	7.4							
Median age at doctorate	Yrs	33.4	33.8	31.4	33.7	35.0	34.7	36.8	35.7	34.3	34.4	36.1	34.0	33.8	34.2	37.8	32.4							
Median time lapse from baccalaureate to doctorate																								
Total time	Yrs	10.2	10.6	9.9	8.2	10.6	10.6	10.1	11.9	10.3	10.4	11.3	9.8	10.4	10.6	14.3	9.6							
Registered time		7.5	7.6	7.8	6.9	8.0	8.1	9.4	8.2	7.4	7.7	8.2	7.0	7.7	8.0	8.9	7.1							
Doctoral program support <sup>f</sup>																								
Teaching assistantships	%	18.5	17.9	20.9	22.2	14.9	12.2	12.6	22.2	8.6	17.2	13.1	22.5	19.4	15.3	23.3	15.5							
Research assistantships/traineeships		22.6	20.2	27.0	38.8	11.0	14.1	12.6	33.3	19.8	19.7	14.1	20.2	23.8	20.6	18.6	31.6							
Fellowships/dissertation grants		21.3	21.2	23.5	21.5	35.5	32.2	33.2	22.2	28.4	29.4	34.0	25.6	24.8	25.3	14.0	27.3							
Own resources		32.0	35.6	23.5	7.7	30.3	32.0	38.2	11.1	2.5	18.7	33.0	25.6	30.4	35.7	39.5	13.8							
Foreign government		1.2	0.0	2.1	9.2	0.4	6.9	0.5	11.1	39.5	12.1	0.6	4.7	2.6	0.0	0.0	11.4							
Employer		4.3	4.9	3.1	0.7	7.0	2.4	2.6	0.0	1.2	2.6	5.0	0.8	2.1	2.8	4.7	0.3							
Other		0.2	0.2	0.0	0.0	0.9	0.2	0.2	0.0	0.0	0.2	0.2	0.8	0.2	0.2	0.0	0.0							
Postdoctoral Plans																								
Postdoc study plans	%	28.3	26.5	27.1	42.9	21.6	25.0	25.2	36.4	22.9	29.8	25.8	30.4	33.1	28.7	18.2	26.8							
Postdoc employment plans	%	66.9	69.1	69.6	52.9	70.3	72.6	72.8	63.6	74.7	64.1	66.4	65.9	62.4	54.9	61.8	34.1							
Educational Institution <sup>g</sup>		41.8	43.3	38.3	32.4	46.3	49.3	49.9	45.5	48.2	43.2	43.6	45.7	42.8	33.7	27.3	19.0							
Industry/business		12.7	12.4	20.5	13.5	9.3	9.4	8.9	9.1	12.0	10.3	10.5	12.3	9.9	9.6	9.1	9.4							
Government		4.8	5.2	1.8	2.7	5.0	6.2	6.2	0.0	7.2	4.5	4.9	1.4	4.9	4.1	7.3	2.3							
Nonprofit		3.9	4.3	3.4	1.3	6.2	4.3	4.8	0.0	2.4	3.2	4.5	2.9	2.2	2.2	7.3	0.4							
Other/unknown		3.8	3.8	5.5	3.0	3.5	3.4	3.0	9.1	4.8	2.9	3.0	3.6	2.7	5.3	10.9	2.9							
Postdoc plans unknown	%	4.8	4.4	3.3	4.2	8.1	2.4	2.1	0.0	2.4	6.1	7.8	3.6	4.4	16.3	20.0	39.1							

APPENDIX TABLE A-4. Statistical profile of doctorate recipients by race/ethnicity and citizenship, 2003

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Characteristics	Puerto Rican												Other/unknown race <sup>d</sup>					
	White						Mexican American						Other Hispanic			Other/unknown race <sup>d</sup>		
	Non-U.S.			Non-U.S.			Non-U.S.			Non-U.S.			Non-U.S.			Non-U.S.		
	Total	U.S.	Perm.	Total	U.S.	Perm.	Total	U.S.	Perm.	Total	U.S.	Perm.	Total	U.S.	Perm.	Total	U.S.	Perm.
Definite postdoctoral study	21.3	20.2	17.4	30.9	16.2	17.8	19.2	18.2	10.8	20.9	18.1	18.8	23.7	9.6	21.0	7.3	18.0	
Seeking postdoctoral study	7.0	6.3	9.7	12.0	5.4	7.1	5.9	18.2	12.0	8.9	7.7	11.6	9.5	3.9	7.8	10.9	8.8	
Definite employment	49.0	50.7	47.0	38.2	50.6	53.3	53.8	36.4	54.2	45.7	46.2	39.1	46.9	16.1	36.8	34.5	25.2	
Seeking employment	17.9	18.3	22.6	14.7	19.7	19.3	19.0	27.3	20.5	18.5	20.2	26.8	15.5	7.5	18.2	27.3	8.8	
Employment location after doctorate <sup>h</sup>																		
U.S.	94.1	97.9	93.9	56.6	99.2	87.7	97.9	75.0	35.6	69.0	97.7	98.1	41.0	85.8	96.9	100.0	48.8	
Foreign	5.8	1.9	6.1	43.3	0.0	11.6	1.7	0.0	64.4	31.0	2.3	1.9	59.0	13.4	2.4	0.0	49.6	
Unknown	0.1	0.2	0.0	0.1	0.8	0.7	0.4	25.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.0	1.6	

APPENDIX TABLE A-5. Doctorate recipients' financial resources in support of doctoral programs, by broad field of study and sex, 2003

Page 1 of 2

Financial Resource		Total		Physical sciences <sup>a</sup>		Engineering		Life sciences	
		Men	Women	Men	Women	Men	Women	Men	Women
Unduplicated total <sup>b</sup>	N	20,242	16,690	4,055	1,472	4,056	846	3,979	3,768
Loans	N	5,978	6,248	790	308	496	104	1,044	996
(from any	V <sup>c</sup>	29.5%	37.4%	19.5%	20.9%	12.2%	12.3%	26.2%	26.4%
source)	H <sup>c</sup>	100.0%	100.0%	13.2%	4.9%	8.3%	1.7%	17.5%	15.9%
Foreign	N	1,895	1,007	256	89	513	81	312	221
(non-U.S.)	V	9.4%	6.0%	6.3%	6.0%	12.6%	9.6%	7.8%	5.9%
Support	H	100.0%	100.0%	13.5%	8.8%	27.1%	8.0%	16.5%	21.9%
Fellowship,	N	11,292	9,514	2,288	873	1,845	497	2,473	2,402
scholarship	V	55.8%	57.0%	56.4%	59.3%	45.5%	58.7%	62.2%	63.7%
	H	100.0%	100.0%	20.3%	9.2%	16.3%	5.2%	21.9%	25.2%
Dissertation grant	N	2,906	3,431	298	138	178	61	603	681
	V	14.4%	20.6%	7.3%	9.4%	4.4%	7.2%	15.2%	18.1%
	H	100.0%	100.0%	10.3%	4.0%	6.1%	1.8%	20.8%	19.8%
Teaching	N	12,265	9,396	3,247	1,191	2,090	453	1,763	1,657
assistantship	V	60.6%	56.3%	80.1%	80.9%	51.5%	53.5%	44.3%	44.0%
	H	100.0%	100.0%	26.5%	12.7%	17.0%	4.8%	14.4%	17.6%
Research	N	12,467	8,340	3,296	1,206	3,387	694	2,558	2,219
assistantship	V	61.6%	50.0%	81.3%	81.9%	83.5%	82.0%	64.3%	58.9%
	H	100.0%	100.0%	26.4%	14.5%	27.2%	8.3%	20.5%	26.6%
Traineeship	N	884	1,077	112	58	73	32	464	546
	V	4.4%	6.5%	2.8%	3.9%	1.8%	3.8%	11.7%	14.5%
	H	100.0%	100.0%	12.7%	5.4%	8.3%	3.0%	52.5%	50.7%
Internship or	N	1,395	1,686	266	104	368	107	86	89
residency	V	6.9%	10.1%	6.6%	7.1%	9.1%	12.6%	2.2%	2.4%
	H	100.0%	100.0%	19.1%	6.2%	26.4%	6.3%	6.2%	5.3%
Personal savings	N	9,568	8,965	1,323	468	1,490	280	1,546	1,608
	V	47.3%	53.7%	32.6%	31.8%	36.7%	33.1%	38.9%	42.7%
	H	100.0%	100.0%	13.8%	5.2%	15.6%	3.1%	16.2%	17.9%
Other personal	N	7,532	8,124	827	277	790	159	963	1,123
earnings during	V	37.2%	48.7%	20.4%	18.8%	19.5%	18.8%	24.2%	29.8%
graduate school	H	100.0%	100.0%	11.0%	3.4%	10.5%	2.0%	12.8%	13.8%
Family earnings	N	7,060	7,955	1,021	450	953	248	1,262	1,474
or savings <sup>d</sup>	V	34.9%	47.7%	25.2%	30.6%	23.5%	29.3%	31.7%	39.1%
	H	100.0%	100.0%	14.5%	5.7%	13.5%	3.1%	17.9%	18.5%
Employer	N	2,254	2,217	292	106	399	67	296	408
reimbursement/	V	11.1%	13.3%	7.2%	7.2%	9.8%	7.9%	7.4%	10.8%
assistance	H	100.0%	100.0%	13.0%	4.8%	17.7%	3.0%	13.1%	18.4%
Other	N	113	120	17	6	17	5	13	31
	V	0.6%	0.7%	0.4%	0.4%	0.4%	0.6%	0.3%	0.8%
	H	100.0%	100.0%	15.0%	5.0%	15.0%	4.2%	11.5%	25.8%

NOTE: In this table a recipient counts once in each source category from which he or she received support. Because students indicate multiple sources of support, the vertical percentages sum to more than 100 percent. (Data on the "primary" source of support for doctorate recipients are presented in the body of this report.) Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. The table excludes 120 individuals for whom sex was not reported.

APPENDIX TABLE A-5. Doctorate recipients' financial resources in support of doctoral programs, by broad field of study and sex, 2003

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Financial Resource		Social sciences		Humanities		Education		Professional/other fields	
		Men	Women	Men	Women	Men	Women	Men	Women
Unduplicated total <sup>b</sup>	N	2,704	3,338	2,433	2,542	1,928	3,813	1,087	911
Loans	N	1,308	1,790	1,197	1,258	795	1,445	348	347
(from any	V <sup>c</sup>	48.4%	53.6%	49.2%	49.5%	41.2%	37.9%	32.0%	38.1%
source)	H <sup>c</sup>	21.9%	28.6%	20.0%	20.1%	13.3%	23.1%	5.8%	5.6%
Foreign	N	341	174	242	257	89	111	142	74
(non-U.S.)	V	12.6%	5.2%	9.9%	10.1%	4.6%	2.9%	13.1%	8.1%
Support	H	18.0%	17.3%	12.8%	25.5%	4.7%	11.0%	7.5%	7.3%
Fellowship,	N	1,710	2,043	1,787	1,877	594	1,273	595	549
scholarship	V	63.2%	61.2%	73.4%	73.8%	30.8%	33.4%	54.7%	60.3%
	H	15.1%	21.5%	15.8%	19.7%	5.3%	13.4%	5.3%	5.8%
Dissertation grant	N	713	1,031	778	946	160	387	176	187
	V	26.4%	30.9%	32.0%	37.2%	8.3%	10.1%	16.2%	20.5%
	H	24.5%	30.0%	26.8%	27.6%	5.5%	11.3%	6.1%	5.5%
Teaching	N	1,996	2,364	1,999	2,086	510	1,076	660	569
assistantship	V	73.8%	70.8%	82.2%	82.1%	26.5%	28.2%	60.7%	62.5%
	H	16.3%	25.2%	16.3%	22.2%	4.2%	11.5%	5.4%	6.1%
Research	N	1,607	2,009	653	808	421	924	545	480
assistantship	V	59.4%	60.2%	26.8%	31.8%	21.8%	24.2%	50.1%	52.7%
	H	12.9%	24.1%	5.2%	9.7%	3.4%	11.1%	4.4%	5.8%
Traineeship	N	167	355	20	27	32	47	16	12
	V	6.2%	10.6%	0.8%	1.1%	1.7%	1.2%	1.5%	1.3%
	H	18.9%	33.0%	2.3%	2.5%	3.6%	4.4%	1.8%	1.1%
Internship or	N	449	967	69	85	120	296	37	38
residency	V	16.6%	29.0%	2.8%	3.3%	6.2%	7.8%	3.4%	4.2%
	H	32.2%	57.4%	4.9%	5.0%	8.6%	17.6%	2.7%	2.3%
Personal savings	N	1,608	1,918	1,510	1,493	1,383	2,594	708	604
	V	59.5%	57.5%	62.1%	58.7%	71.7%	68.0%	65.1%	66.3%
	H	16.8%	21.4%	15.8%	16.7%	14.5%	28.9%	7.4%	6.7%
Other personal	N	1,470	1,860	1,624	1,632	1,299	2,592	559	481
earnings during	V	54.4%	55.7%	66.7%	64.2%	67.4%	68.0%	51.4%	52.8%
graduate school	H	19.5%	22.9%	21.6%	20.1%	17.2%	31.9%	7.4%	5.9%
Family earnings	N	1,224	1,826	1,258	1,448	867	2,036	475	473
or savings <sup>d</sup>	V	45.3%	54.7%	51.7%	57.0%	45.0%	53.4%	43.7%	51.9%
	H	17.3%	23.0%	17.8%	18.2%	12.3%	25.6%	6.7%	5.9%
Employer	N	246	280	203	165	620	1,056	198	135
reimbursement/	V	9.1%	8.4%	8.3%	6.5%	32.2%	27.7%	18.2%	14.8%
assistance	H	10.9%	12.6%	9.0%	7.4%	27.5%	47.6%	8.8%	6.1%
Other	N	11	21	26	11	18	37	11	9
	V	0.4%	0.6%	1.1%	0.4%	0.9%	1.0%	1.0%	1.0%
	H	9.7%	17.5%	23.0%	9.2%	15.9%	30.8%	9.7%	7.5%

<sup>a</sup> Includes mathematics and computer sciences.<sup>b</sup> The 3,658 doctorate recipients who did not report sources of support are omitted from this total. Percentages are based only on known responses.<sup>c</sup> V denotes vertical percentage; H denotes horizontal percentage.<sup>d</sup> This category includes spouses and significant others.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

APPENDIX TABLE A-6. State of doctoral institution of doctorate recipients, by broad field of study and sex, 2003

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State	Total <sup>a</sup>		Physical sciences <sup>b</sup>		Engineering		Life sciences		Social sciences		Humanities		Education		Professional/ other fields	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
U.S. total <sup>c</sup>	22,188	18,402	4,360	1,589	4,346	896	4,309	4,036	3,018	3,745	2,656	2,745	2,239	4,363	1,260	1,028
Alabama	298	236	38	18	69	11	89	70	30	29	16	11	40	74	16	23
Alaska	19	17	10	11	2	1	6	4	1	1	0	0	0	0	0	0
Arizona	378	341	87	37	72	25	53	56	53	65	61	60	35	81	17	17
Arkansas	90	78	10	6	8	2	36	21	3	9	6	3	24	36	3	1
California	2,655	2,102	662	213	609	142	456	462	406	534	269	344	155	314	98	93
Colorado	433	331	116	38	105	23	79	75	55	70	28	39	28	66	22	20
Connecticut	311	265	59	25	30	4	74	78	60	60	63	53	12	40	13	5
Delaware	93	74	17	12	24	6	5	4	15	17	11	6	20	29	1	0
District of Columbia	218	300	18	18	26	11	25	44	71	97	38	51	16	50	24	29
Florida	1,053	1,098	151	67	144	23	123	125	90	154	89	62	322	601	134	66
Georgia	536	451	87	32	144	28	114	95	53	81	47	61	52	127	39	27
Hawaii	65	62	14	6	1	1	17	20	15	18	12	8	5	5	1	4
Idaho	83	40	17	1	13	3	20	6	7	4	2	2	24	24	0	0
Illinois	1,189	922	217	79	218	58	183	169	201	175	160	145	123	222	87	74
Indiana	659	422	131	48	153	23	97	64	66	76	120	98	61	93	31	20
Iowa	282	219	51	13	54	10	82	53	33	28	28	23	26	73	8	19
Kansas	209	205	28	17	25	4	64	45	41	52	26	27	19	49	6	11
Kentucky	216	155	22	9	22	0	52	32	27	33	29	16	40	52	24	13
Louisiana	269	246	44	24	40	8	61	61	41	38	35	41	18	65	30	9
Maine	26	19	9	2	6	1	6	3	3	7	1	3	1	3	0	0
Maryland	491	462	99	44	111	28	124	173	67	94	58	69	17	37	15	17
Massachusetts	1,130	896	270	97	236	53	201	213	166	175	127	166	63	146	67	46
Michigan	805	612	153	50	203	44	139	126	113	159	92	92	69	102	36	39
Minnesota	386	343	74	18	66	13	83	91	50	68	34	44	43	86	36	23
Mississippi	158	178	29	9	14	2	29	24	25	23	14	14	34	89	13	17
Missouri	406	327	57	18	69	17	91	74	58	74	47	35	58	88	26	21
Montana	43	31	15	2	1	2	16	7	0	8	0	0	11	12	0	0
Nebraska	155	147	16	7	17	0	51	46	22	33	12	19	28	34	9	8

APPENDIX TABLE A-6. State of doctoral institution of doctorate recipients, by broad field of study and sex, 2003

Page 2 of 2

State	Total <sup>a</sup>		Physical sciences <sup>b</sup>		Engineering		Life sciences		Social sciences		Humanities		Education		Professional/ other fields	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Nevada	69	63	16	2	11	2	11	9	12	12	7	7	12	31	0	0
New Hampshire	75	51	30	8	10	1	23	26	5	4	5	4	2	7	0	1
New Jersey	508	389	122	40	109	26	68	60	71	83	93	97	26	59	19	24
New Mexico	138	115	39	10	23	6	27	19	13	20	9	16	24	40	3	4
New York	1,806	1,598	362	113	257	41	353	333	314	399	330	397	101	243	89	72
North Carolina	599	507	128	51	110	35	152	180	54	66	73	65	54	81	28	29
North Dakota	43	47	17	7	5	0	8	14	4	11	0	1	9	14	0	0
Ohio	865	717	168	58	196	41	195	153	87	148	87	101	86	171	46	45
Oklahoma	201	156	33	12	35	4	34	21	28	32	21	21	37	57	13	9
Oregon	206	170	40	13	24	6	59	54	30	31	26	23	19	29	8	14
Pennsylvania	1,137	869	192	77	299	55	179	185	119	158	140	136	128	197	80	61
Puerto Rico	41	52	11	4	2	1	11	6	11	34	4	1	2	6	0	0
Rhode Island	136	79	38	13	17	1	23	16	20	18	27	28	2	3	9	0
South Carolina	205	170	36	17	27	9	40	41	23	21	35	11	28	63	16	8
South Dakota	33	41	3	1	4	1	9	4	5	6	0	2	12	27	0	0
Tennessee	320	328	41	15	57	7	58	90	53	53	28	25	59	116	24	22
Texas	1,419	1,140	236	87	319	50	290	268	168	210	183	169	128	295	95	61
Utah	213	121	45	14	39	9	52	31	27	32	11	2	27	24	12	9
Vermont	23	24	3	0	0	1	12	3	2	7	4	7	2	6	0	0
Virginia	556	450	120	52	135	22	88	67	75	91	40	42	66	149	32	27
Washington	333	313	76	36	65	20	77	92	47	54	30	41	25	49	13	21
West Virginia	88	68	10	2	19	3	29	16	11	16	3	4	16	26	0	1
Wisconsin	485	332	81	30	97	12	122	103	65	55	75	53	28	61	17	18
Wyoming	33	23	12	6	4	0	13	4	2	2	0	0	2	11	0	0

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

<sup>a</sup> Totals exclude doctorate recipients whose gender was unknown (total is 120).

<sup>b</sup> Includes mathematics and computer sciences.

<sup>c</sup> Includes the 50 states, District of Columbia, and Puerto Rico.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
All U.S. institutions	40,710	1,247	2,037	819	1,860	5,265	5,694	1,633	1,042	3,275	3,502	940	362	567	3,543	6,627	2,297
ALABAMA	537	11	18	7	20	82	80	50	30	41	18	10	1	6	10	114	39
AL Agriculture & Mechanical U.	5	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Auburn U.	159	0	8	1	8	30	12	3	26	21	8	3	0	3	0	27	9
U.S. Sports Academy	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2
U. AL	178	2	8	3	9	25	3	4	0	12	7	7	1	3	10	58	26
U. AL Birmingham	155	5	2	0	2	12	62	39	0	8	3	0	0	0	0	20	2
U. AL Huntsville	21	3	0	2	1	15	0	0	0	0	0	0	0	0	0	0	0
U. South AL	11	0	0	1	0	0	3	4	0	0	0	0	0	0	0	3	0
ALASKA	36	4	0	17	0	3	7	0	3	1	1	0	0	0	0	0	0
U. AK	36	4	0	17	0	3	7	0	3	1	1	0	0	0	0	0	0
ARIZONA	719	37	29	31	27	97	83	19	7	53	65	20	4	15	82	116	34
AZ State U.	302	5	18	5	15	58	19	5	0	25	27	10	1	13	29	50	22
Northern AZ U.	38	0	0	0	0	0	6	0	3	0	1	1	0	0	3	24	0
U. AZ	379	32	11	26	12	39	58	14	4	28	37	9	3	2	50	42	12
ARKANSAS	168	3	8	4	1	10	22	13	22	9	3	2	1	1	5	60	4
AR State U.	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
U. AR Fayetteville	121	3	8	2	1	10	7	11	22	9	3	2	1	1	5	32	4
U. AR for Medical Sciences	17	0	0	0	0	0	15	2	0	0	0	0	0	0	0	0	0
U. AR Little Rock	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0
CALIFORNIA	4,763	174	283	124	295	754	740	129	50	479	461	118	36	50	409	470	191
Azusa Pacific U.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Biola U.	16	0	0	0	0	0	0	0	0	4	1	1	0	0	0	7	3
CA School of Professional Psychology Alameda	34	0	0	0	0	0	0	0	0	33	0	0	0	0	0	0	1
CA School of Professional Psychology Alhambra	37	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0
CA School of Professional Psychology Fresno	25	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0
CA School of Professional Psychology San Diego	61	0	0	0	0	0	0	0	0	56	0	0	0	0	0	0	5
CA Institute of Integral Studies	33	0	0	0	0	0	0	0	0	7	2	0	0	0	22	2	0
CA Institute of Technology	135	25	25	11	12	41	15	0	0	0	6	0	0	0	0	0	0
Claremont Graduate School	114	0	0	0	8	0	0	0	0	20	24	2	4	4	24	21	7
Claremont School of Theology	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Fielding Institute	86	0	0	0	0	2	0	0	0	45	6	0	0	0	0	24	9
Fuller Theological Seminary	48	0	0	0	0	0	0	0	0	17	3	1	0	0	10	0	17



APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
Graduate Theological Union	23	0	0	0	0	0	0	0	0	0	0	2	0	0	16	0	5
Hebrew Union C.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
La Sierra U.	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Loma Linda U.	28	0	0	0	1	0	10	8	0	8	0	0	0	0	0	1	0
Naval Postgraduate School	18	0	0	0	3	4	10	0	0	0	0	0	0	0	0	0	1
Pacific Graduate School of Psychology	27	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0
Rand Graduate School of Policy Studies	9	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	1
San Diego State U.	40	0	2	0	1	0	7	8	0	9	2	0	0	0	0	11	0
Santa Clara U.	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Saybrook Institute	44	0	0	0	0	0	0	1	0	35	4	0	0	0	1	1	2
Scripps Research Institute	27	0	10	0	1	0	16	0	0	0	0	0	0	0	0	0	0
Stanford U.	578	35	36	21	52	193	65	5	0	18	39	15	5	4	34	30	26
Wright Institute Berkeley, The	3	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
U. CA, Berkeley	767	34	58	17	59	149	122	22	20	17	96	28	7	11	61	39	27
U. CA, Davis	374	10	27	12	17	44	138	10	25	7	29	6	4	1	21	22	1
U. CA, Irvine	188	4	20	4	19	32	29	3	0	8	27	3	2	3	23	1	10
U. CA, Los Angeles	593	21	25	13	31	69	97	27	0	38	82	27	5	11	71	58	18
U. CA, Riverside	121	5	12	3	6	3	31	0	4	11	15	6	2	4	7	12	0
U. CA, San Diego	263	14	10	19	20	52	74	3	0	11	18	9	2	2	23	0	6
U. CA, San Francisco	80	0	8	0	1	2	44	18	0	0	6	1	0	0	0	0	0
U. CA, Santa Barbara	250	11	16	9	28	51	21	0	1	10	34	9	1	5	29	21	4
U. CA, Santa Cruz	103	13	12	9	11	10	12	0	0	6	13	4	2	1	9	1	0
U. La Verne	44	0	0	0	0	0	0	0	0	1	2	0	0	1	4	36	0
U. San Diego	34	0	0	0	0	0	0	9	0	0	0	0	0	0	0	25	0
U. San Francisco	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	1
U. Southern CA	468	2	17	2	25	92	59	14	0	26	44	4	2	3	54	79	45
U. of the Pacific	22	0	5	0	0	0	0	1	0	0	0	0	0	0	0	16	0
COLORADO	764	46	45	31	32	128	96	34	24	54	71	6	3	9	49	94	42
CO School of Mines	54	3	1	10	3	34	0	0	0	0	3	0	0	0	0	0	0
CO State U.	181	10	19	10	6	23	36	8	23	16	14	0	0	0	0	13	3
CO Technical U.	12	0	0	0	5	0	0	0	0	0	0	0	0	0	0	1	6
U. CO	299	33	22	11	11	65	31	4	0	17	38	6	2	3	31	9	16
U. CO Colorado Springs	3	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0
U. CO Denver	27	0	0	0	2	3	0	3	1	0	3	0	0	0	0	11	4
U. CO Health Sciences Ctr.	41	0	1	0	1	0	29	10	0	0	0	0	0	0	0	0	0

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
U. Denver	78	0	2	0	0	2	0	0	0	17	12	0	1	6	9	17	12
U. Northern CO	69	0	0	0	2	0	0	9	0	4	1	0	0	0	9	43	1
CONNECTICUT																	
U. CT	578	25	32	6	22	34	120	20	12	41	79	20	4	11	82	52	18
U. Hartford	237	6	10	3	5	30	37	16	10	25	27	2	0	5	16	34	11
U. Hartford	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0
Wesleyan U.	12	2	2	0	4	0	4	0	0	0	0	0	0	0	0	0	0
Yale U.	311	17	20	3	13	4	79	4	2	16	52	18	4	6	66	0	7
DELAWARE																	
U. DE	167	7	9	9	4	30	3	2	4	15	17	5	2	2	8	49	1
Wilmington C.	135	7	9	9	4	30	3	2	4	15	17	5	2	2	8	17	1
	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0
DISTRICT OF COLUMBIA																	
American U.	519	5	15	1	15	37	51	18	0	51	118	22	1	6	60	66	53
Catholic U. America	60	2	1	0	2	0	2	0	0	5	40	3	0	0	0	5	0
Gallaudet U.	96	1	0	0	0	7	1	5	0	13	15	4	0	3	22	3	22
	6	0	0	0	0	0	0	0	0	4	0	0	0	0	0	2	0
George Washington U.	189	2	2	1	11	28	12	11	0	15	26	3	1	3	10	52	12
Georgetown U.	88	0	9	0	1	0	22	1	0	0	19	10	0	0	24	0	2
Howard U.	80	0	3	0	1	2	14	1	0	14	18	2	0	0	4	4	17
FLORIDA																	
Barry U.	2,157	38	70	41	69	167	130	80	38	156	88	17	16	14	104	927	202
FL Agricultural & Mechanical U.	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	2
FL Atlantic U.	4	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0
FL Institute of Technology	51	7	1	1	3	5	1	0	0	6	1	0	0	0	3	18	5
FL International U.	33	2	2	3	8	12	5	0	0	0	0	0	0	0	0	1	0
FL State U.	60	0	1	0	1	6	4	0	0	11	8	1	0	0	5	20	3
Lynn U.	290	11	14	14	9	7	16	4	0	20	21	8	6	6	58	70	26
Nova Southeastern U.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1
U. Central FL	675	0	0	1	28	1	0	9	0	51	3	0	0	0	3	482	97
U. FL	111	7	0	0	6	30	0	1	0	0	1	0	0	0	0	65	1
U. Miami	437	6	39	2	6	87	65	33	37	29	41	5	6	3	13	47	18
U. Sarasota	119	3	6	11	1	6	22	13	0	17	7	3	1	3	19	7	0
U. South FL	179	0	0	0	2	0	0	0	1	0	0	0	0	0	0	135	41
U. West FL	146	2	6	9	5	13	14	20	0	22	6	0	3	2	3	33	8
	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	0

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
GEORGIA	990	11	60	14	34	172	147	29	34	76	58	13	10	19	67	180	66
Clark Atlanta U.	23	0	1	0	0	0	0	0	0	0	3	1	0	0	0	14	4
Emory U.	155	0	7	0	1	1	53	5	0	9	13	9	4	4	43	2	4
GA Institute of Technology	225	4	14	3	23	163	9	0	0	4	1	1	0	0	0	0	3
GA Southern U.	22	0	0	0	0	0	0	1	0	0	0	0	0	0	0	21	0
GA State U.	122	5	10	1	2	0	6	3	0	24	13	0	3	2	5	30	18
Institute of Paper Science & Technology	9	0	1	0	0	7	0	0	1	0	0	0	0	0	0	0	0
Medical C. GA	15	0	0	0	0	0	12	3	0	0	0	0	0	0	0	0	0
Mercer U. Southern School of Pharmacy	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morehouse School of Medicine	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
U. GA	408	2	25	10	8	1	64	17	33	39	28	2	3	13	19	107	37
Valdosta State U.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
HAWAII	128	5	0	11	4	2	29	4	4	5	29	3	0	1	16	10	5
U. HI Manoa	128	5	0	11	4	2	29	4	4	5	29	3	0	1	16	10	5
IDAHO	124	2	7	3	6	17	13	2	11	3	8	3	1	0	0	48	0
ID State U.	35	1	0	0	1	1	5	1	0	3	2	0	1	0	0	20	0
U. ID	89	1	7	3	5	16	8	1	11	0	6	3	0	0	0	28	0
ILLINOIS	2,113	62	116	11	107	276	255	61	37	160	216	68	15	20	203	345	161
Benedictine U.	16	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	12
Chicago Theological Seminary	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
DePaul U.	25	0	0	0	2	0	0	0	0	15	0	0	0	0	4	4	0
Finch U. of Health Sciences/Chicago Medical School	13	1	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0
Garrett Evangelical Theological Seminary	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3
IL Institute of Technology	74	4	1	0	11	23	8	0	0	10	0	0	0	0	0	0	17
IL State U. Normal	55	0	0	0	1	0	2	0	0	4	0	2	0	1	0	45	0
Institute for Clinical Social Work	9	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	8
Loyola U. Chicago	157	0	4	0	0	0	15	4	0	25	7	2	2	2	9	84	3
Lutheran School of Theology	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3
National-Louis U.	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Northern IL U.	100	0	4	0	2	0	3	0	0	20	9	0	3	1	0	58	0
Northwestern U.	301	13	20	2	16	71	34	2	0	15	31	14	2	1	49	10	21
Roosevelt U.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Rush U.	31	1	0	0	0	0	10	17	0	0	0	0	0	0	0	1	2
Southern IL U.	126	1	2	0	0	5	10	4	1	21	17	2	0	3	9	30	21

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
U. Chicago, The	332	13	22	3	11	0	43	0	0	8	99	25	4	9	68	11	16
U. IL Chicago	225	8	19	0	20	31	41	21	0	13	16	6	1	2	12	19	16
U. IL Springfield	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
U. IL Urbana-Champaign	618	21	44	6	44	146	83	12	36	21	34	17	3	1	48	68	34
INDIANA	1,082	31	85	10	53	176	97	27	37	61	81	29	9	25	155	155	51
Ball State U.	49	0	0	0	0	0	0	2	0	6	0	1	0	4	17	19	0
IN State U.	50	0	0	1	2	3	4	1	0	7	0	0	0	0	0	31	1
IN U. Bloomington	381	9	22	4	23	1	31	10	0	23	42	19	5	5	90	71	26
IN U. School of Medicine	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Purdue U.	464	13	50	4	24	136	45	11	37	18	24	0	4	12	29	33	24
U. Notre Dame	135	9	13	1	4	36	17	0	0	7	15	9	0	4	19	1	0
IOWA	503	5	30	1	28	64	76	27	32	26	35	12	4	7	28	100	28
Drake U.	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
IA State U.	228	4	17	1	13	44	41	3	32	11	19	3	0	2	3	32	3
Maharishi U. of Management	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
St. Ambrose U.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
U. IA	249	1	13	0	15	20	35	24	0	15	16	9	4	5	25	45	22
U. Northern IA	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0
KANSAS	414	10	23	5	7	29	51	14	44	61	32	8	3	1	41	68	17
KS State U.	145	4	6	1	2	11	26	0	44	13	9	0	0	0	1	26	2
U. KS	243	6	17	4	4	11	25	10	0	37	23	8	3	1	40	39	15
Wichita State U.	26	0	0	0	1	7	0	4	0	11	0	0	0	0	0	3	0
KENTUCKY	372	3	12	1	15	22	62	13	9	32	28	6	2	3	35	92	37
Asbury Theological Seminary	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Southern Baptist Theological Seminary	50	0	0	0	0	0	0	0	0	0	0	0	0	0	19	17	14
Spalding U.	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	0
U. Kentucky	209	3	8	1	10	15	45	12	9	15	24	6	2	2	11	26	20
U. Louisville	82	0	4	0	5	7	17	1	0	17	4	0	0	1	3	20	3
LOUISIANA	517	9	29	8	22	49	73	32	18	41	38	8	10	11	47	83	39
Grambling State U.	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
LA State U. & A&M C.	211	3	15	7	10	26	19	9	18	23	13	4	5	6	21	27	5
LA State U. School Medicine	17	0	0	0	0	0	10	7	0	0	0	0	0	0	0	0	0
LA State U. School of Medicine Shreveport	11	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
LA Tech U.	36	0	0	0	1	10	0	0	0	3	0	0	0	0	0	12	10
New Orleans Baptist Theological Seminary	18	0	0	0	0	0	0	0	0	4	0	1	0	0	2	1	10
Northwestern State U. LA	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Southern U. & A&M C.	6	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0
Tulane U. LA	106	5	7	1	5	6	23	13	0	2	12	3	1	3	13	0	12
U. LA Lafayette	31	0	0	0	6	2	6	0	0	0	0	0	4	2	11	0	0
U. LA Monroe	15	0	0	0	0	0	3	3	0	6	0	0	0	0	0	3	0
U. New Orleans	56	1	7	0	0	5	1	0	0	3	8	0	0	0	0	29	2
MAINE	45	1	5	4	1	7	4	0	5	9	1	4	0	0	0	4	0
U. ME Orono	45	1	5	4	1	7	4	0	5	9	1	4	0	0	0	4	0
MARYLAND	953	40	30	21	52	139	173	114	10	60	101	26	12	13	76	54	32
Johns Hopkins U.	361	16	13	5	14	43	89	83	0	5	35	18	0	3	37	0	0
Loyola C. MD	8	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	1
Morgan State U.	23	0	0	0	0	5	0	5	0	0	0	0	0	0	0	13	0
Uniformed Services U. of the Health Sciences	19	0	0	1	0	0	11	3	0	4	0	0	0	0	0	0	0
U. MD	410	22	14	15	30	77	32	8	9	29	45	8	12	9	38	38	24
U. MD Baltimore County	69	2	1	0	8	14	3	0	0	15	21	0	0	1	1	3	0
U. MD Eastern Shore	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
U. MD School of Medicine	61	0	2	0	0	0	37	15	0	0	0	0	0	0	0	0	7
MASSACHUSETTS	2,029	95	121	44	108	289	313	92	9	82	259	63	15	24	192	209	114
American International C.	7	0	0	0	0	0	0	0	0	3	0	0	0	0	0	4	0
Boston C.	132	2	14	1	0	1	6	5	0	14	15	9	3	0	9	45	8
Boston U.	255	8	5	6	14	18	54	15	0	15	28	5	1	1	47	23	15
Brandeis U.	91	3	5	0	8	0	17	1	0	0	26	10	2	6	11	1	1
Clark U.	21	1	1	0	0	0	2	0	0	3	12	0	0	0	1	1	0
Harvard U.	550	28	26	12	20	8	108	47	0	10	84	31	4	5	73	60	34
MA C. of Pharmacy & Health Sciences	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
MA Institute of Technology	440	36	24	22	44	181	38	2	0	0	41	1	0	1	21	0	29
New England Conservatory of Music	5	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0
Northeastern U.	84	2	9	0	7	27	10	1	0	3	15	2	1	4	0	0	3
Simmons C.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Smith C.	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Springfield C.	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0
Suffolk U.	6	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
Tufts U.	85	3	7	0	2	6	30	1	0	3	16	2	1	6	4	1	3
U. MA Amherst	214	7	21	1	9	26	19	10	9	14	18	3	3	1	22	41	10
U. MA Dartmouth	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
U. MA Harbor Campus	30	0	0	2	0	0	4	1	0	10	3	0	0	0	0	10	0
U. MA Lowell	53	5	6	0	1	11	2	7	0	0	0	0	0	0	0	17	4
U. MA Worcester	22	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0
Worcester Polytechnic Institute	17	0	2	0	3	10	1	0	0	1	0	0	0	0	0	0	0
MICHIGAN	1,422	48	74	16	67	248	161	61	44	128	145	31	6	18	129	171	75
Andrews U.	34	0	0	0	0	0	0	0	0	4	0	0	0	0	2	23	5
Calvin C.	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
Central MI U.	18	0	0	0	3	0	0	0	0	12	0	1	0	0	0	2	0
Eastern MI U.	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
MI State U.	385	11	22	3	19	33	49	8	39	29	39	13	2	5	38	46	29
MI Technological U.	38	2	2	1	4	25	1	0	2	0	0	0	0	0	0	0	1
Oakland U.	20	1	0	0	0	10	0	0	0	0	0	0	0	0	0	9	0
U. Detroit Mercy	13	0	0	0	0	1	0	0	0	11	1	0	0	0	0	0	0
U. MI	615	24	34	10	30	146	72	47	2	26	72	13	3	9	75	27	25
Wayne State U.	193	8	16	0	4	30	36	6	1	22	15	2	1	3	11	31	7
Western MI U.	86	2	0	2	7	3	3	0	0	24	18	2	0	1	1	18	5
MINNESOTA	741	22	29	9	33	82	88	66	23	79	40	15	3	4	59	129	60
Hamline U.	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
Luther Seminary	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
Mayo Graduate School	24	0	0	0	0	2	22	0	0	0	0	0	0	0	0	0	0
St. Mary's U. MN	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
U. MN Twin Cities	561	22	29	9	32	77	66	44	23	40	39	15	3	4	58	76	24
U. of St. Thomas	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
Walden U.	117	0	0	0	1	3	0	22	0	39	1	0	0	0	0	23	28
MISSISSIPPI	339	1	20	4	13	16	25	17	12	29	19	8	5	2	13	125	30
Delta State U.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Jackson State U.	31	0	2	1	0	0	0	1	0	0	0	0	0	0	0	22	5
MS State U.	92	0	3	1	4	10	6	1	12	0	10	5	0	0	0	31	9
U. MS	83	1	2	1	5	4	5	8	0	12	5	1	3	1	2	27	6
U. MS Medical Ctr.	15	0	0	0	0	0	8	7	0	0	0	0	0	0	0	0	0
U. Southern MS	117	0	13	1	4	2	6	0	0	17	4	2	2	1	11	44	10

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MISSOURI	734	14	29	11	21	87	116	28	21	64	68	13	10	8	51	146	47
Concordia Seminary	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
St. Louis U.	107	0	0	0	2	0	5	9	0	12	2	0	4	2	10	58	3
U. MO Columbia	275	6	10	4	6	26	30	8	21	25	38	11	2	1	11	55	21
U. MO Kansas City	62	1	1	1	2	3	3	5	0	9	5	1	0	1	13	13	4
U. MO Rolla	51	1	2	4	3	40	1	0	0	0	0	0	0	0	0	0	0
U. MO St. Louis	45	1	5	0	0	0	2	4	0	7	6	0	0	0	0	20	0
Washington U.	191	5	11	2	8	18	75	2	0	11	17	1	4	4	16	0	17
MONTANA	74	4	6	0	7	3	14	0	9	8	0	0	0	0	0	23	0
MT State U.	41	4	2	0	7	3	8	0	4	0	0	0	0	0	0	13	0
U. MT	33	0	4	0	0	0	6	0	5	8	0	0	0	0	0	10	0
NEBRASKA	303	7	7	3	6	17	56	11	31	34	21	11	6	3	11	62	17
Creighton U.	12	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0
U. NE Lincoln	255	7	6	3	6	17	28	5	31	34	16	11	6	3	11	56	15
U. NE Medical Ctr.	23	0	1	0	0	0	16	6	0	0	0	0	0	0	0	0	0
U. NE Omaha	13	0	0	0	0	0	0	0	0	0	5	0	0	0	0	6	2
NEVADA	133	4	6	9	0	13	20	0	0	17	7	1	4	5	4	43	0
U. NV	95	3	6	8	0	10	18	0	0	17	6	1	4	4	2	16	0
U. NV Las Vegas	38	1	0	1	0	3	2	0	0	0	1	0	0	1	2	27	0
NEW HAMPSHIRE	126	7	10	13	8	11	46	3	0	7	2	6	1	2	0	9	1
Antioch New England Graduate School (NH)	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Dartmouth C.	67	5	6	5	7	8	31	3	0	2	0	0	0	0	0	0	0
Southern NH U.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
U. NH	54	2	4	4	1	3	15	0	0	5	2	6	1	2	0	9	0
NEW JERSEY	899	36	47	19	61	135	106	10	13	55	99	44	9	16	121	85	43
Drew U.	50	0	0	0	0	0	0	2	0	1	3	5	1	2	29	1	6
Fairleigh Dickinson U.	11	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0
NJ Institute of Technology	42	4	3	4	7	24	0	0	0	0	0	0	0	0	0	0	0
Princeton Theological Seminary	12	0	0	0	0	0	0	0	0	0	0	3	0	0	5	0	4
Princeton U.	258	17	17	4	28	44	26	0	0	5	36	21	2	5	51	0	2
Rutgers State U. Newark	49	0	4	0	2	1	8	3	0	3	15	0	0	0	0	0	13
Rutgers U.	338	11	17	11	18	47	38	5	13	23	45	15	6	9	36	29	15
Seton Hall U.	72	0	5	0	0	0	0	0	0	12	0	0	0	0	0	55	0

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Sievens Institute of Technology	32	4	0	0	6	19	0	0	0	0	0	0	0	0	0	0	3
U. Medicine & Dentistry of NJ Newark	35	0	1	0	0	0	34	0	0	0	0	0	0	0	0	0	0
NEW MEXICO	254	22	11	4	13	29	32	3	11	14	19	3	2	1	19	64	7
NM Institute of Mining & Technology	7	2	1	2	0	1	0	0	0	0	0	0	0	0	1	0	0
NM State U.	80	11	5	0	2	11	6	0	11	5	0	0	0	0	3	21	5
U. NM	167	9	5	2	11	17	26	3	0	9	19	3	2	1	15	43	2
NEW YORK	3,413	119	134	48	174	300	519	94	74	335	382	104	60	89	474	344	163
Adelphi U.	30	0	0	0	0	0	0	4	0	23	0	0	0	0	0	0	3
Albany Medical C.	14	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0
Albert Einstein C. of Medicine	76	0	0	0	0	0	49	0	0	18	1	0	0	0	1	2	5
Alfred U.	9	0	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0
Clarkson U.	14	4	1	1	0	8	0	0	0	0	0	0	0	0	0	0	0
Columbia U.	380	12	7	12	24	31	46	27	0	3	68	27	9	19	73	0	22
Cornell U.	411	22	22	10	31	66	58	3	61	9	50	14	5	5	34	7	14
Cornell U. Weill Medical College	23	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0
Fordham U.	81	0	0	0	0	0	3	0	0	21	7	2	1	3	9	26	9
Graduate School & U. Ctr., CUNY	273	10	15	0	11	11	29	4	0	45	31	12	6	19	73	3	4
Hofstra U.	34	0	0	0	0	0	0	0	0	22	0	0	0	0	0	12	0
Jewish Theological Seminary of America	2	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
Juilliard School, The	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0
Long Island U. Brooklyn Campus	16	0	0	0	0	0	0	0	0	15	0	1	0	0	0	0	0
Long Island U. C. W. Post Campus	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Mt. Sinai School of Medicine	28	0	0	0	0	1	27	0	0	0	0	0	0	0	0	0	0
New School for Social Research	66	0	0	0	0	0	0	0	0	21	29	1	0	0	15	0	0
NY Medical C.	6	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
NY U.	371	7	5	0	19	1	50	23	0	22	46	11	5	17	99	33	33
Pace U.	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Polytechnic U.	24	0	4	0	3	16	1	0	0	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Institute	136	6	6	2	18	73	3	0	0	0	13	0	0	0	5	0	10
Rochester Institute of Technology	6	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0
Rockefeller U., The	31	1	1	0	0	0	28	0	0	0	0	0	0	0	0	1	0
St. Johns U. (Queens)	48	0	4	0	0	0	7	2	0	16	0	0	0	1	1	16	1
SUNY Albany	157	6	4	4	7	0	12	3	0	33	31	6	4	4	10	19	14
SUNY Binghamton	81	0	4	1	7	2	4	5	0	8	12	6	3	5	16	5	3



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SUNY Buffalo	264	7	21	1	6	26	31	12	0	13	29	6	18	7	29	43	15
SUNY C. of Optometry	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
SUNY Environmental Science & Forestry	31	0	6	3	0	1	7	0	13	0	0	0	0	0	0	0	1
SUNY Health Science Ctr. Brooklyn	7	0	0	0	0	0	6	0	0	1	0	0	0	0	0	0	0
SUNY Health Science Ctr. Syracuse	8	0	0	0	0	0	7	0	0	1	0	0	0	0	0	0	0
SUNY Stony Brook	265	25	15	8	29	25	51	0	0	18	16	10	2	7	57	2	0
Syracuse U.	114	3	6	0	7	14	5	2	0	11	29	4	2	1	3	17	10
Teachers C. Columbia U.	188	0	0	0	0	0	0	1	0	27	7	0	0	0	1	152	0
Union Theological Seminary	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
U. Rochester	192	16	13	1	9	15	52	6	0	8	13	3	5	1	40	6	4
NORTH CAROLINA	1,108	31	61	17	70	146	241	59	32	46	75	30	8	19	81	135	57
Appalachian State U.	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Duke U.	220	8	12	4	17	28	60	0	0	10	24	10	1	8	27	1	10
East Carolina U. School of Medicine	12	0	0	0	0	0	7	0	0	0	0	0	0	0	0	5	0
Fayetteville State U.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
NC Agricultural & Technological State U.	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
NC State U. Raleigh	322	10	14	5	31	92	52	3	32	10	18	0	0	0	0	47	8
Reformed Theological Seminary	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Southeastern Baptist Theological Seminary	8	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3
U. NC Chapel Hill	409	10	32	8	20	15	90	52	0	15	33	20	6	9	38	25	36
U. NC Charlotte	20	0	0	0	2	7	2	0	0	0	0	0	0	0	0	9	0
U. NC Greensboro	69	0	0	0	0	0	2	4	0	11	0	0	1	2	10	39	0
Wake Forest U.	35	3	3	0	0	1	28	0	0	0	0	0	0	0	0	0	0
NORTH DAKOTA	90	2	17	1	4	5	14	0	8	15	0	0	0	0	1	23	0
ND State U.	33	1	10	0	4	5	5	0	8	0	0	0	0	0	0	0	0
U. ND	57	1	7	1	0	0	9	0	0	15	0	0	0	0	1	23	0
OHIO	1,585	57	106	20	43	238	242	73	35	135	100	32	16	20	120	257	91
Air Force Institute of Technology	13	1	0	0	1	11	0	0	0	0	0	0	0	0	0	0	0
Bowling Green State U.	88	0	10	0	2	0	10	0	0	19	3	1	0	0	16	18	9
Case Western Reserve U.	165	5	11	0	8	47	45	19	0	1	8	3	2	2	6	0	8
Cleveland Institute of Music	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Cleveland State U.	35	0	1	0	0	10	5	0	0	0	3	0	0	0	0	12	4
Hebrew Union C.	3	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
Kent State U. Main Campus	123	4	9	1	1	0	16	1	0	19	8	2	2	3	6	42	9

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Medical C. of OH Toledo	12	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0
Miami U.	43	0	4	1	0	0	7	0	0	14	5	0	1	2	1	8	0
OH State U., The	575	29	30	13	20	60	85	29	35	26	49	16	3	4	52	93	31
OH U.	109	4	3	0	2	11	15	2	0	15	0	4	1	3	5	24	20
U. Akron	82	4	19	1	0	25	2	0	0	18	5	0	0	0	0	8	0
U. Cincinnati	232	5	14	4	7	43	33	15	0	13	18	3	6	4	31	31	5
U. Dayton	21	1	1	0	0	12	1	0	0	0	0	0	0	0	0	5	1
U. Toledo	65	4	4	0	1	14	4	7	0	10	1	2	1	2	0	12	3
Wright State U.	13	0	0	0	1	5	7	0	0	0	0	0	0	0	0	0	0
Youngstown State U.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
OKLAHOMA	360	6	15	19	5	39	26	10	20	42	18	10	7	5	20	96	22
OK State U.	182	2	10	9	3	15	10	5	20	21	6	5	3	2	1	63	7
U. OK	158	4	5	7	2	18	16	5	0	14	12	5	2	1	19	33	15
U. Tulsa	20	0	0	3	0	6	0	0	0	7	0	0	2	2	0	0	0
OREGON	383	12	14	13	15	32	63	19	34	19	42	7	3	8	31	49	22
OR Health Sciences U.	26	0	0	0	2	3	19	2	0	0	0	0	0	0	0	0	0
OR State U.	169	6	12	7	3	23	32	11	33	2	9	1	0	0	0	25	5
Portland State U.	32	0	0	3	2	6	0	0	1	3	5	0	0	0	0	4	8
U. OR	156	6	2	3	8	0	12	6	0	14	28	6	3	8	31	20	9
PENNSYLVANIA	2,013	43	89	30	110	355	256	83	26	142	135	41	20	43	172	325	143
Bryn Mawr C.	15	0	0	0	0	0	1	0	0	2	2	0	0	1	8	0	1
Carnegie Mellon U.	163	8	5	0	28	81	6	0	0	3	10	2	0	1	2	5	12
Drexel U.	90	2	6	1	4	35	18	3	0	12	0	0	0	0	0	4	5
Duquesne U.	34	0	2	0	0	0	3	0	0	13	0	0	1	4	9	0	2
Gannon U.	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Indiana U. PA	66	0	0	0	0	0	0	0	0	0	5	0	8	16	10	27	0
Lehigh U.	98	3	4	1	9	47	8	0	0	5	0	3	3	1	0	14	0
Marywood U.	14	0	0	0	0	0	0	0	0	11	1	0	0	0	0	2	0
PA State U., The	550	17	24	21	19	129	70	15	26	35	32	3	3	3	31	90	32
Temple U.	167	1	4	0	10	0	14	6	0	24	14	3	3	1	24	47	16
Thomas Jefferson U.	21	0	0	0	0	1	20	0	0	0	0	0	0	0	0	0	0
U. of the Sciences in Philadelphia	4	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0
U. PA	384	6	20	4	19	32	73	12	0	7	41	26	1	12	47	50	34
U. Pittsburgh	348	6	20	3	21	30	43	34	0	28	30	4	1	3	32	58	35

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
Villanova U.	5	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Westminster Theological Seminary (PA)	11	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	6
Widener U.	41	0	0	0	0	0	0	12	0	0	0	0	0	1	0	28	0
PUERTO RICO	94	1	5	9	0	3	17	0	0	45	0	2	0	0	3	9	0
Carlos Albizu U.	22	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0
Ponce School of Medicine	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Pontifical Catholic U. PR Ponce	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
U. PR Mayaguez	12	0	0	9	0	3	0	0	0	0	0	0	0	0	0	0	0
U. PR Medical Sciences Campus	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
U. PR Rio Piedras	48	1	5	0	0	0	10	0	0	18	0	2	0	0	3	9	0
RHODE ISLAND	215	10	13	5	23	18	29	7	3	15	23	8	5	8	34	5	9
Brown U.	143	10	11	0	19	10	23	2	0	2	18	8	4	5	31	0	0
Salve Regina U.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
U. RI	69	0	2	5	4	8	6	5	3	13	5	0	1	3	0	5	9
SOUTH CAROLINA	376	3	37	5	8	36	40	35	7	21	23	5	7	6	28	91	24
Clemson U.	93	2	13	2	4	23	16	0	7	0	9	0	0	0	0	11	6
Medical U. SC	19	0	1	0	0	0	15	3	0	0	0	0	0	0	0	0	0
SC State U.	29	0	0	0	0	1	0	0	0	0	0	0	0	0	0	28	0
U. SC	235	1	23	3	4	12	9	32	0	21	14	5	7	6	28	52	18
SOUTH DAKOTA	74	0	1	3	0	5	8	0	5	9	2	0	2	0	0	39	0
SD School of Mines & Technology	7	0	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
SD State U.	12	0	1	0	0	1	3	0	5	0	2	0	0	0	0	0	0
U. SD	55	0	0	0	0	0	5	0	0	9	0	0	2	0	0	39	0
TENNESSEE	650	13	21	5	18	64	108	37	3	69	38	14	3	9	27	175	46
East TN State U.	38	0	0	0	0	0	5	0	0	0	0	0	0	0	0	33	0
Meharry Medical C.	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Mid-America Baptist Theological Seminary	7	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	5
Middle TN State U.	8	0	0	0	0	0	0	0	0	0	1	2	0	0	0	5	0
TN State U.	36	0	0	0	0	0	0	0	0	11	0	0	0	0	0	24	1
TN Technological U.	15	0	0	2	0	7	1	0	0	0	0	0	0	0	0	5	0
U. Memphis, The	88	0	2	0	4	4	6	0	0	24	1	3	0	0	5	31	8
Vanderbilt U.	189	7	6	0	10	24	44	10	0	14	19	4	1	3	12	32	3

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
U. TN Health Science Ctr. Memphis	46	0	1	0	0	1	21	23	0	0	0	0	0	0	0	0	0
U. TN Knoxville	216	6	12	3	4	28	24	4	3	20	17	5	2	6	8	45	29
TEXAS	2,572	66	102	57	98	369	383	101	74	192	186	43	18	27	267	433	156
Baylor C. of Medicine	58	0	0	0	0	2	55	1	0	0	0	0	0	0	0	0	0
Baylor U.	56	1	2	2	3	0	3	0	0	1	2	0	0	3	12	27	0
Dallas Theological Seminary	13	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	6
East TX State U. Commerce	40	0	0	0	0	0	0	0	0	1	0	0	0	0	0	39	0
Lamar U.	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Rice U.	105	8	12	2	14	16	12	0	0	3	14	2	0	3	19	0	0
Sam Houston State U.	7	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Southern Methodist U.	41	1	1	4	5	17	1	0	0	2	8	1	0	0	1	0	0
Southwest TX State U.	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Southwestern Baptist Theological Seminary	36	0	0	0	0	0	0	0	0	2	0	1	0	0	20	1	12
St. Mary's U.	6	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
Stephen F. Austin State U.	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
TX A&M U.	487	5	33	10	17	117	57	6	55	26	40	4	2	7	3	73	32
TX A&M U. Corpus Christi	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
TX A&M U. Kingsville	23	0	0	0	0	0	0	0	3	0	0	0	0	0	0	20	0
TX A&M U. System Health Science Ctr.	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
TX Christian U.	25	5	0	1	0	0	0	0	0	9	0	5	0	1	4	0	0
TX Southern U.	22	0	0	2	0	0	2	0	0	0	0	0	0	0	0	18	0
TX Tech U.	165	2	3	5	4	18	18	0	14	23	3	4	5	2	24	27	13
TX Tech U. Health Sciences Ctr.	6	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0
TX Woman's U.	74	0	0	0	0	0	2	28	0	24	2	1	0	0	7	7	3
U. Dallas	7	0	0	0	0	0	0	0	0	0	3	0	0	2	2	0	0
U. Houston	190	2	17	1	4	15	18	3	0	29	15	6	1	6	18	41	14
U. North TX	145	3	5	8	11	4	4	0	0	18	9	3	2	0	29	47	2
U. North TX, Health Science Ctr.	9	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
U. of the Incarnate Word	19	0	0	0	0	0	0	0	0	0	1	0	0	0	0	18	0
U. TX Arlington	68	4	3	1	4	24	3	0	0	0	3	3	1	0	8	0	14
U. TX Austin	674	31	22	12	28	134	50	26	0	32	73	10	6	2	104	97	47
U. TX Dallas	61	3	3	4	6	6	9	2	0	3	5	3	1	1	7	0	8
U. TX El Paso	28	0	1	5	0	11	1	0	0	4	0	0	0	0	0	6	0
U. TX Health Science Ctr. Houston	77	0	0	0	0	1	49	26	0	1	0	0	0	0	0	0	0
U. TX Health Science Ctr. San Antonio	19	1	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
U. TX Medical Branch Galveston	35	0	0	0	0	0	27	6	0	0	0	0	0	0	2	0	0
U. TX Pan American	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
U. TX San Antonio	7	0	0	0	2	0	2	0	0	0	0	0	0	0	0	3	0
U. TX Southwestern Medical Ctr.	48	0	0	0	0	2	38	0	0	8	0	0	0	0	0	0	0
UTAH																	
Brigham Young U.	336	13	27	8	11	48	61	12	10	38	23	1	1	2	9	51	21
U. UT	53	2	3	0	1	4	4	0	0	14	4	0	0	0	2	18	1
U. UT	224	9	24	5	10	30	51	12	0	20	11	1	1	2	7	22	19
UT State U.	59	2	0	3	0	14	6	0	10	4	8	0	0	0	0	11	1
VERMONT																	
Middlebury C.	47	0	2	1	0	1	9	0	6	9	0	2	0	0	9	8	0
U. VT	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0
U. VT	38	0	2	1	0	1	9	0	6	9	0	2	0	0	0	8	0
VIRGINIA																	
C. of William and Mary	1,009	36	39	35	62	158	97	44	15	86	81	20	7	6	49	215	59
George Mason U.	56	5	2	8	5	0	4	0	0	1	0	4	0	0	3	24	0
Hampton U.	152	0	0	7	28	11	7	6	0	17	35	1	0	0	5	31	4
Norfolk State U.	5	3	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Old Dominion U.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Regent U.	65	6	0	2	8	18	10	1	0	2	9	0	0	0	0	6	3
Union Theological Seminary (PSCE)	14	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	12
U. VA	6	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	1
VA Commonwealth U.	337	15	15	9	16	39	32	21	0	15	18	12	7	6	35	95	2
VA Polytechnic Institute & State U.	111	1	10	0	0	3	33	9	0	18	3	0	0	0	3	13	18
WASHINGTON																	
Gonzaga U.	261	6	12	9	5	87	11	5	15	33	16	2	0	0	0	43	17
Seattle Pacific U.	651	21	35	23	33	88	111	39	21	37	64	5	4	8	54	74	34
Seattle U.	15	0	0	0	0	0	0	0	0	1	2	0	0	0	1	8	3
U. WA	10	0	0	0	0	0	0	0	0	3	0	0	0	0	0	7	0
WA State U.	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
WEST VIRGINIA	493	17	31	20	30	74	88	35	12	23	45	5	4	6	49	34	20
Marshall U.	126	4	4	3	3	14	23	4	9	10	17	0	0	2	4	18	11
WV U.	156	4	6	1	1	22	27	5	13	16	11	3	1	1	2	42	1
	10	0	0	0	0	0	2	0	0	0	0	0	0	0	0	8	0
	146	4	6	1	1	22	25	5	13	16	11	3	1	1	2	34	1

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field of study, 2003

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Institution	2003 Total	Physics & astronomy	Chemistry	Earth, atmos., & marine sciences	Mathematics & computer sciences	Engineering	Biological sciences	Health sciences	Agricultural sciences	Psychology	Other social sciences	History	American literature	English language & literature	Other humanities	Education	Professional/ other fields
WISCONSIN	819	19	39	22	31	109	141	36	48	50	71	18	5	19	86	90	35
Cardinal Stritch U.	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0
Marquette U.	44	0	2	0	0	5	4	0	0	4	0	1	0	1	17	6	4
Medical C. of WI	16	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0
U. WI Madison	653	16	32	20	27	96	117	29	48	29	56	16	4	11	64	60	28
U. WI Milwaukee	85	3	5	2	4	8	4	7	0	17	15	1	1	7	5	3	3
WYOMING	56	2	8	5	3	4	13	0	4	3	1	0	0	0	0	13	0
U. WY	56	2	8	5	3	4	13	0	4	3	1	0	0	0	0	13	0

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**APPENDIX TABLE A-8. Top 50 doctorate-granting institutions, 2003**

Rank	Institution	Number
1.	U. CA, Berkeley	767
2.	Nova Southeastern U.	675
3.	U. TX Austin	674
4.	U. WI Madison	653
5.	U. IL Urbana-Champaign	618
6.	U. MI	615
7.	U. CA, Los Angeles	593
8.	Stanford U.	578
9.	OH State U., The	575
10.	U. MN Twin Cities	561
11.	Harvard U.	550
11.	PA State U., The	550
13.	U. WA	493
14.	TX A&M U.	487
15.	U. Southern CA	468
16.	Purdue U.	464
17.	MA Institute of Technology	440
18.	U. FL	437
19.	Cornell U.	411
20.	U. MD	410
21.	U. NC Chapel Hill	409
22.	U. GA	408
23.	MI State U.	385
24.	U. PA	384
25.	IN U. Bloomington	381
26.	Columbia U.	380
27.	U. AZ	379
28.	U. CA, Davis	374
29.	NY U.	371
30.	Johns Hopkins U.	361
31.	U. Pittsburgh	348
32.	Rutgers U.	338
33.	U. VA	337
34.	U. Chicago, The	332
35.	NC State U Raleigh	322
36.	Yale U.	311
37.	AZ State U.	302
38.	Northwestern U.	301
39.	U. CO	299
40.	FL State U.	290
41.	U. Missouri Columbia	275
42.	Graduate School & U. Ctr., CUNY	273
43.	SUNY Stony Brook	265
44.	SUNY Buffalo	264
45.	U. CA, San Diego	263
46.	VA Polytechnic Institute & State U.	261
47.	Princeton U.	258
48.	Boston U.	255
48.	U. NE Lincoln	255
50.	U. CA, Santa Barbara	250

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.





## APPENDIX B: Trend Tables, 1993-2003

Appendix B includes the following two tables:

B-1: Number of doctorate recipients, by subfield, 1993-2003

B-2: Number of doctorate recipients, by sex, race/ethnicity, and citizenship, 1993-2003

**TABLE B-1:** Table B-1 presents data for the most recent decade by subfield of doctorate. In general, the subfields correspond to the fields on the questionnaire’s Specialties List located in the questionnaire at the back of the Summary Report; some subfields, however, do not appear on the current Specialties List because they are no longer included in the survey taxonomy. A dash (—) in a column indicates that the field was not on the Specialties List for that year.

Field groupings in this table may differ from those in reports published by Federal sponsors of the Survey of Earned Doctorates (SED); see the inside back cover of the questionnaire at the back of the Summary Report for a description of field groupings as reported in these tables. The “general” field categories—for example, “chemistry, general”—include individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The “other” field categories—for example, “chemistry, other”—include individuals whose specified doctoral discipline was not among the specialty fields.

The eight tables in Appendix A present additional information on the most recent cohort of research doctorate recipients by field of doctorate.

**TABLE B-2:** Table B-2 displays, by sex and citizenship, data on the race/ethnicity of doctorate recipients for 1993-2003. Table B-2 contains three panels, each displayed on a separate page. The first panel includes all doctorates; the others disaggregate the data by sex.

Since 1982, respondents have been asked to first indicate whether or not they are Hispanic, and then check one or more of the various racial group categories: American Indian or Alaska Native (indicating Tribal Affiliation since 2001), Asian, Native Hawaiians and Pacific Islanders, black, or white. In Table B-2, *doctorate recipients who reported Hispanic heritage, regardless of racial designation, are counted as Hispanic*. The remaining survey respondents are then counted in their respective racial groups or as "Other/Unknown" (which includes only those who did not indicate a specific race/ethnicity through 2000, and also includes those choosing "Multiple Race" or “Native Hawaiians and Pacific Islanders” since 2001).



APPENDIX TABLE B-1. Number of doctorate recipients, by subfield of study, 1993-2003

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Subfield of study	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
TOTAL ALL FIELDS <sup>a</sup>	39,800	41,034	41,748	42,436	42,540	42,645	41,090	41,357	40,808	39,964	40,710
PHYSICAL SCIENCES	6,496	6,822	6,808	6,675	6,679	6,742	6,322	6,074	5,975	5,719	5,963
MATHEMATICS	1,146	1,118	1,190	1,122	1,123	1,177	1,083	1,050	1,007	918	994
Applied mathematics	188	206	211	230	242	265	252	238	214	225	223
Algebra	84	78	82	78	78	75	84	82	68	65	68
Analysis & functional analysis	105	107	99	100	103	130	86	81	91	74	84
Geometry	44	35	45	72	70	54	65	59	40	52	48
Logic	19	29	35	16	23	16	23	19	24	14	18
Number theory	42	37	35	42	46	46	50	40	35	26	46
Mathematical statistics	228	205	205	178	181	204	174	195	198	167	191
Topology	54	38	51	55	62	65	65	50	54	40	49
Computing theory & practice	18	16	14	18	14	18	14	17	11	11	8
Operations research	37	26	36	21	20	17	21	19	14	19	19
Mathematics, general	276	269	305	233	153	163	116	151	155	133	150
Mathematics, other	51	72	72	79	131	124	133	99	103	92	90
COMPUTER SCIENCE	880	903	997	920	909	927	855	859	826	807	866
Computer science	825	833	913	836	828	821	741	722	688	673	698
Information sciences & systems	55	70	84	84	81	106	114	137	81	79	65
Computer/info science, other	-----	-----	-----	-----	-----	-----	-----	-----	57	55	103
PHYSICS AND ASTRONOMY	1,544	1,692	1,652	1,677	1,599	1,584	1,430	1,389	1,383	1,268	1,247
Astronomy	76	66	89	84	71	91	59	78	89	54	69
Astrophysics	69	78	84	108	127	115	100	107	97	90	98
Acoustics	27	20	18	19	19	18	16	10	10	18	25
Chem. & atomic/molecular	95	140	110	129	106	100	100	110	81	82	72
Elementary particles	170	176	183	176	170	173	169	147	121	156	134
Fluids	19	12	18	21	24	26	23	10	8	15	9
Nuclear	82	90	91	87	106	92	77	74	80	76	66
Optics	96	104	98	129	123	105	98	117	107	107	95
Plasma & high-temperature	62	79	46	48	39	55	49	38	39	29	32
Polymer	29	29	23	33	19	24	28	21	18	22	13
Solid state & low-temperature	336	388	371	364	328	314	307	279	295	298	272
Physics, general	340	343	355	323	255	190	202	224	206	172	172
Physics, other	143	167	166	156	212	281	202	174	232	149	190
CHEMISTRY	2,137	2,257	2,162	2,149	2,148	2,216	2,132	1,989	1,980	1,923	2,037
Analytical	286	334	317	346	350	383	333	326	334	302	336
Inorganic	237	262	258	249	279	287	279	221	280	247	264
Nuclear	8	10	5	5	8	6	10	9	4	9	4
Organic	518	544	483	507	567	598	563	525	522	524	556
Medicinal/pharmaceutical	99	102	96	96	105	114	131	107	115	99	109
Physical	336	334	338	300	334	279	310	271	285	302	320
Polymer	107	117	116	121	110	122	95	107	107	102	110
Theoretical	53	52	40	57	48	41	56	52	40	48	49
Chemistry, general	431	447	458	396	261	285	196	261	201	204	186
Chemistry, other	62	55	51	72	86	101	159	110	92	86	103
EARTH, ATMOS., & MARINE SCI.	789	852	807	807	900	838	822	787	779	803	819
Atmospheric physics & chemistry	13	27	27	22	45	38	43	39	33	39	39
Atmospheric dynamics	23	27	16	21	25	24	17	17	17	13	21
Meteorology	34	32	25	35	28	25	22	34	20	15	25
Atmos. sci./meteorology, general	22	37	44	33	36	22	32	36	34	27	33
Atmos. sci./meteorology, other	7	6	18	14	15	16	10	17	12	23	21
Geology	197	194	186	162	165	171	157	123	115	132	119
Geochemistry	50	59	42	49	49	58	55	49	41	70	53
Geophysics & seismology	101	106	93	101	108	106	100	70	88	91	75

APPENDIX TABLE B-1. Number of doctorate recipients, by subfield of study, 1993-2003

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Subfield of study	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Paleontology	21	17	20	14	23	23	15	31	16	22	18
Mineralogy, petrology	9	21	19	23	19	14	14	5	15	13	8
Stratigraphy, sedimentation	28	27	16	12	23	24	17	13	13	7	16
Geomorphology & glacial geology	16	13	11	11	26	20	18	14	10	16	20
Geological & related sci., general	15	18	21	27	16	13	9	20	16	12	8
Geological & related sci., other	17	24	22	22	17	40	35	18	34	30	30
Environmental science	68	61	81	83	96	73	99	95	119	112	138
Hydrology & water resources	25	30	24	31	43	35	32	43	45	35	26
Oceanography	98	91	83	107	114	94	100	99	85	86	97
Marine sciences	27	34	32	27	30	18	30	35	36	42	36
Misc. physical sci., other	18	28	27	13	22	24	17	29	30	18	36
ENGINEERING	5,698	5,821	6,008	6,309	6,115	5,924	5,330	5,321	5,502	5,071	5,265
Aerospace, aeronautic. & astronautic.	228	230	252	287	273	241	206	214	203	208	199
Agricultural	86	89	73	104	79	74	59	60	52	50	54
Bioeng. & biomedical	171	173	189	220	211	208	245	252	232	246	280
Ceramic sciences	42	39	39	41	39	24	33	22	17	13	18
Chemical	624	630	602	681	662	669	576	618	634	607	562
Civil	563	601	572	600	592	587	506	480	500	538	550
Communications	22	33	29	32	33	40	39	42	47	21	36
Computer	167	202	189	208	227	210	203	172	186	164	191
Electrical, electronics	1,354	1,438	1,513	1,501	1,460	1,346	1,236	1,330	1,343	1,207	1,236
Engineering mechanics	128	132	108	105	93	86	68	57	75	56	63
Engineering physics	21	17	17	37	24	15	28	26	22	16	28
Engineering science	55	46	56	52	45	49	49	34	53	31	39
Environmental health engineering	61	82	84	98	63	63	78	76	94	87	122
Ind./manufacturing	236	228	284	259	246	229	211	176	205	230	211
Materials science	416	433	476	472	483	482	393	404	448	364	437
Mechanical	902	883	917	947	929	936	787	807	878	771	751
Metallurgical	77	67	73	61	60	59	43	25	32	19	18
Mining & mineral	24	23	19	31	33	21	18	10	10	8	13
Nuclear	108	85	105	113	103	96	76	98	75	64	75
Ocean	24	29	21	26	34	29	16	18	28	23	12
Operations research	56	47	48	74	74	62	67	51	55	66	80
Petroleum	52	42	48	52	51	48	45	45	37	45	36
Polymer/plastics	61	53	58	65	54	59	53	62	57	53	45
Systems	57	51	47	47	49	68	42	34	47	45	46
Engineering, general	47	39	60	60	51	29	40	42	25	19	20
Engineering, other	116	129	129	136	147	194	213	166	147	120	143
LIFE SCIENCES	7,395	7,738	7,917	8,253	8,326	8,539	8,106	8,531	8,320	8,355	8,369
BIOLOGICAL SCIENCES	5,092	5,202	5,376	5,723	5,789	5,845	5,582	5,854	5,690	5,687	5,694
Biochemistry	846	804	824	794	832	800	760	776	727	781	772
Biomedical sciences	-----	-----	93	141	158	182	176	155	155	219	183
Biophysics	103	123	155	142	147	166	173	164	162	151	161
Biotechnology research	8	14	4	6	11	12	19	14	9	13	24
Bacteriology	14	18	13	16	13	13	13	15	17	12	6
Plant genetics	41	30	35	41	30	40	31	35	31	57	38
Plant pathology	41	40	32	38	33	18	36	25	31	24	27
Plant physiology	48	70	55	73	47	61	54	39	45	43	32
Botany, other	105	117	102	105	91	113	67	92	75	84	80
Anatomy	76	66	64	47	50	35	33	39	29	20	33
Biometrics & biostatistics	74	72	67	80	84	75	76	92	90	80	84
Cell biology	231	237	236	233	251	300	281	337	315	302	301
Ecology	177	201	203	245	255	293	273	296	338	312	348
Developmental biology/embryology	57	62	64	96	115	127	108	111	107	93	125
Endocrinology	16	26	20	24	17	30	19	20	18	14	21

APPENDIX TABLE B-1. Number of doctorate recipients, by subfield of study, 1993-2003

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Subfield of study	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Entomology	114	123	121	136	123	138	114	137	90	113	111
Biological immunology	169	161	190	238	214	245	223	239	266	278	261
Molecular biology	582	598	617	651	775	736	716	707	709	622	613
Microbiology	433	423	426	444	410	383	383	382	396	382	363
Neuroscience	276	284	308	404	437	413	431	495	485	489	472
Nutritional sciences	134	147	136	142	124	139	102	150	135	141	127
Parasitology	17	22	14	22	17	15	13	19	22	17	15
Toxicology	100	120	126	138	180	155	114	123	133	122	123
Human & animal genetics	172	203	202	212	217	197	216	228	198	225	225
Human & animal pathology	130	128	109	135	106	90	120	106	116	115	102
Human & animal pharmacology	274	259	278	316	300	255	254	267	257	268	274
Human & animal physiology	271	289	262	275	227	258	244	241	215	208	213
Zoology, other	114	117	145	100	97	111	126	133	103	122	127
Biological sciences, general	305	288	348	291	209	217	182	200	195	184	196
Biological sciences, other	164	160	127	138	219	228	225	217	221	196	237
HEALTH SCIENCES	1,197	1,296	1,329	1,324	1,421	1,500	1,407	1,591	1,620	1,655	1,633
Speech-Lang. pathology & audiology	98	95	106	94	88	95	86	106	92	100	94
Environmental health	38	51	51	58	67	54	69	52	56	49	53
Health systems/services admin.	35	53	62	60	66	62	62	59	51	54	58
Public health	153	142	152	156	138	156	173	207	215	216	204
Epidemiology	120	168	153	149	151	165	179	191	168	198	234
Exercise physiology/sci., kinesiology	-----	87	118	105	105	129	104	130	152	148	145
Nursing	373	336	354	354	420	399	353	414	363	437	411
Pharmacy	146	148	144	145	142	156	137	164	148	159	118
Rehabilitation/therapeutic services	36	43	20	26	34	35	26	40	118	73	69
Veterinary medicine	61	56	55	65	47	49	49	50	60	56	49
Health sciences, general	38	41	35	22	45	17	32	49	35	39	39
Health sciences, other	99	76	79	90	118	183	137	129	162	126	159
AGRICULTURAL SCIENCES	1,106	1,240	1,212	1,206	1,116	1,194	1,117	1,086	1,010	1,013	1,042
Agricultural economics	137	162	173	169	133	155	149	138	154	119	119
Agricultural business & management	1	0	3	2	1	2	2	5	3	1	1
Animal breeding & genetics	18	17	19	12	24	18	21	22	16	14	21
Animal nutrition	52	58	50	54	55	45	47	45	45	49	41
Dairy science	11	11	14	9	14	10	12	9	2	7	18
Poultry science	16	21	11	11	9	11	8	9	11	10	17
Fisheries science & management	38	48	49	46	45	30	38	43	44	53	47
Animal sciences, other	74	86	85	90	62	60	70	73	71	70	88
Agronomy & crop science	104	143	114	110	77	97	106	70	75	74	55
Plant breeding & genetics	68	81	72	63	67	69	44	68	37	59	50
Plant pathology	58	55	52	90	65	66	66	63	51	53	48
Plant sciences, other	28	24	30	21	20	37	38	29	26	27	29
Food distribution	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
Food engineering	9	16	7	7	11	13	7	10	13	7	11
Food sciences, other	141	152	135	142	175	153	137	142	130	129	157
Soil chemistry/microbiology	26	21	27	29	32	27	29	26	23	29	24
Soil sciences, other	59	69	72	78	56	74	67	64	56	54	50
Horticulture science	62	65	67	73	44	60	66	55	37	46	54
Forest biology	18	20	24	19	22	20	14	22	27	19	16
Forest engineering	3	0	4	0	13	2	1	3	0	3	3
Forest management	17	17	20	22	21	27	17	13	13	14	18
Wood sci. & pulp/paper tech.	20	26	26	18	25	25	21	11	20	29	19
Conserv./renewable nat. res.	13	21	24	13	17	25	25	19	32	27	47
Forestry & related sci., other	55	59	71	55	50	69	50	54	48	56	47
Wildlife/range mgt	54	52	50	64	50	56	44	56	40	37	45

APPENDIX TABLE B-1. Number of doctorate recipients, by subfield of study, 1993-2003

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Subfield of study	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Agricultural sciences, general	10	4	6	5	10	8	8	10	2	4	2
Agricultural sciences, other	14	11	7	4	18	35	30	27	34	23	15
SOCIAL SCIENCES & PSYCHOLOGY	6,545	6,614	6,635	6,823	7,041	7,073	7,041	7,112	6,833	6,615	6,777
SOCIAL SCIENCES	3,125	3,235	3,206	3,328	3,484	3,398	3,373	3,494	3,391	3,417	3,502
Anthropology	342	384	375	397	434	425	463	446	410	495	472
Area studies	36	34	27	28	10	14	11	14	19	25	12
Criminology	39	41	44	60	49	55	51	66	62	56	76
Demography/population studies	22	23	15	11	24	30	28	20	12	20	15
Economics	906	913	952	979	999	976	911	933	914	890	909
Econometrics	24	26	27	29	31	25	15	15	13	14	23
Geography	137	146	150	165	149	154	144	197	186	197	168
International relations/affairs	102	112	73	99	88	96	119	77	91	82	99
Political science & government	507	589	599	622	665	662	655	669	658	606	660
Public policy analysis	98	94	94	104	127	97	125	138	139	147	146
Sociology	513	525	540	517	577	549	544	617	565	545	597
Statistics	48	46	48	48	56	61	72	60	49	54	48
Urban affairs/studies	123	133	103	108	92	77	57	79	80	92	78
Social sciences, general	32	21	35	26	26	30	25	37	25	33	27
Social sciences, other	196	148	124	135	157	147	153	126	168	161	172
PSYCHOLOGY	3,420	3,379	3,429	3,495	3,557	3,675	3,668	3,618	3,442	3,198	3,275
Clinical	1,373	1,285	1,290	1,327	1,255	1,344	1,441	1,353	1,262	1,218	1,184
Cognitive & psycholinguistics	104	129	104	128	166	113	143	141	141	121	133
Comparative	5	8	4	3	6	6	11	7	5	2	4
Counseling	488	497	471	465	488	448	460	475	482	469	437
Developmental and child	202	179	152	188	215	267	193	203	193	171	178
Human/individual & family develop.	-----	129	150	151	126	119	135	147	137	138	150
Experimental	143	139	151	128	146	149	139	133	134	112	119
Educational	91	69	74	92	61	61	64	97	48	54	52
Family & marriage counseling	-----	-----	57	51	63	51	56	54	45	67	62
Industrial & organizational	159	137	155	162	187	189	158	188	173	154	155
Personality	22	19	16	24	26	25	16	23	11	17	17
Physiological/psychobiology	85	93	92	80	77	92	87	89	92	88	85
Psychometrics	9	5	10	11	11	9	15	13	2	9	7
Quantitative	16	17	13	19	17	15	14	8	10	13	11
School	95	84	91	82	84	106	121	99	109	89	102
Social	125	153	155	170	181	186	176	207	198	179	202
Psychology, general	306	280	306	281	318	300	235	239	223	146	226
Psychology, other	197	156	138	133	130	195	204	142	177	151	151
HUMANITIES	4,481	4,742	5,062	5,115	5,432	5,514	5,459	5,634	5,597	5,373	5,412
GENERAL HUMANITIES	2,852	3,101	3,208	3,366	3,561	3,612	3,656	3,751	3,804	3,604	3,684
History, American	269	310	344	355	373	408	418	443	425	422	415
History, Asian	-----	-----	43	54	54	70	68	51	51	67	66
History, european	162	180	185	187	245	230	235	243	246	232	189
History/philosophy of sci. & tech.	37	27	41	37	35	44	50	42	40	46	46
History, general	116	140	148	101	82	86	75	102	75	81	72
History, other	142	144	128	123	176	152	164	180	190	182	152
Classics	61	84	62	72	53	85	77	64	55	57	75
Comparative literature	153	163	191	164	181	164	166	188	203	175	164
Linguistics	214	221	201	230	244	220	251	230	230	195	224
Speech & rhetorical studies	111	142	139	155	138	169	150	143	126	137	151
Letters, general	18	22	43	28	23	22	19	55	34	31	27
Letters, other	37	25	34	61	60	82	82	93	94	79	68
American studies	101	88	94	115	84	100	98	113	127	97	94
Archeology	38	34	35	21	35	34	26	36	40	26	33

APPENDIX TABLE B-1. Number of doctorate recipients, by subfield of study, 1993-2003

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Subfield of study	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Art history/criticism/conservation	158	182	181	177	188	221	188	228	223	216	254
Music	613	683	713	697	727	696	767	746	787	762	874
Philosophy	274	302	298	369	444	410	389	364	412	359	391
Religion	257	252	248	317	303	327	334	348	342	348	303
Drama/theater arts	91	102	80	103	116	92	99	82	104	92	86
LANGUAGE AND LITERATURE	1,523	1,537	1,718	1,618	1,746	1,721	1,648	1,711	1,597	1,600	1,551
American literature	293	296	327	314	408	389	372	460	385	367	362
English language & literature	655	647	752	699	686	689	650	610	592	607	567
French	137	129	151	142	150	137	148	143	141	121	102
German	105	67	93	88	82	106	90	83	84	68	100
Italian	19	32	35	24	23	33	20	16	16	23	33
Spanish	178	212	209	196	249	207	201	218	233	243	238
Russian	28	38	28	37	39	43	25	29	27	26	28
Slavic	13	10	16	11	9	15	17	14	12	19	11
Chinese	21	25	20	29	23	19	27	21	16	22	24
Japanese	11	12	7	10	19	11	10	18	17	15	20
Hebrew	15	10	11	12	7	8	4	11	6	8	5
Arabic	10	4	8	6	4	9	12	15	6	5	4
Other language & literature	38	55	61	50	47	55	72	73	62	76	57
OTHER HUMANITIES	106	104	136	131	125	181	155	172	196	169	177
Humanities, general	30	32	25	39	25	23	24	40	29	19	27
Humanities, other	76	72	111	92	100	158	131	132	167	150	150
EDUCATION	6,689	6,711	6,650	6,785	6,574	6,571	6,546	6,429	6,337	6,487	6,627
RESEARCH & ADMINISTRATION	4,997	4,929	4,942	5,235	5,034	4,992	5,066	4,952	4,992	5,370	5,307
Curriculum & instruction	856	819	896	899	917	884	993	965	884	987	998
Educational admin. and supervision	1,340	1,207	1,086	1,172	1,020	952	895	813	839	793	772
Educational leadership	783	793	890	993	1,031	1,116	1,149	1,214	1,225	1,547	1,580
Educ./instruct. media design	96	112	121	107	92	91	123	138	140	171	129
Educ. stat./research methods	64	68	63	76	58	56	57	55	65	67	61
Educ. assess., test., & meas.	23	28	19	32	30	35	39	45	44	31	47
Educational psychology	290	311	297	309	359	327	298	278	281	302	285
School psychology	86	97	71	114	118	112	108	137	123	170	124
Social/phil. found. of educ.	109	140	130	125	138	129	125	135	141	126	146
Special education	277	241	254	278	270	247	262	260	229	213	214
Counseling educ./couns. & guidance	288	284	268	278	207	270	260	214	211	257	221
Higher education/evaluation & research	357	428	457	481	504	431	465	438	515	445	489
Pre-elementary/early childhood	97	91	70	81	43	54	49	34	49	50	70
Elementary education	65	71	61	46	56	62	59	53	55	52	34
Secondary education	33	24	24	34	27	54	31	23	22	21	19
Adult & continuing education	233	215	235	210	164	172	153	150	169	138	118
TEACHING FIELDS	943	960	924	864	919	954	892	823	721	684	714
Agricultural education	54	52	35	32	38	25	38	22	22	28	25
Art education	38	33	39	41	30	46	47	31	31	30	34
Business education	27	25	21	20	26	31	45	37	19	13	6
English education	53	56	60	57	62	53	64	44	56	53	47
Foreign languages education	48	54	60	45	47	73	62	43	47	41	45
Health education	83	97	99	90	58	70	58	71	65	39	54
Home economics education	14	11	15	13	13	8	10	14	8	9	4
Technical/industrial arts education	16	20	15	11	19	30	21	21	16	7	13
Mathematics education	69	74	92	100	93	115	101	90	80	88	80
Music education	80	89	96	91	101	93	79	79	62	80	74
Nursing education	19	24	18	23	21	14	22	11	5	7	8
Physical education & coaching	161	139	104	101	109	109	115	83	80	72	74
Reading education	95	97	85	66	70	76	68	89	72	66	60

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Subfield of study	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Science education	73	85	73	96	77	109	58	60	72	60	69
Social science education	9	10	14	12	26	15	9	35	12	10	10
Technical education	21	30	20	24	32	18	27	20	10	23	24
Trade & industrial education	24	24	13	12	16	14	14	12	7	5	5
Teacher ed./spec. acad. & voc., other	59	40	65	30	81	55	54	61	57	53	82
OTHER EDUCATION	749	822	784	686	621	625	588	654	624	433	606
Education, general	411	484	429	353	336	234	196	253	256	158	312
Education, other	338	338	355	333	285	391	392	401	368	275	294
PROFESSIONAL/OTHER FIELDS	2,496	2,586	2,668	2,476	2,373	2,282	2,286	2,256	2,244	2,344	2,297
BUSINESS AND MANAGEMENT	1,281	1,283	1,329	1,277	1,244	1,172	1,107	1,064	1,052	1,096	1,035
Accounting	183	179	168	156	150	154	154	111	115	110	106
Banking/financial support services	170	134	163	114	69	83	74	72	66	76	79
Business admin. & management	324	319	341	393	426	348	315	321	347	339	342
Business/managerial economics	33	40	37	38	48	57	42	52	50	38	44
International business	-----	22	23	36	39	33	34	32	29	24	44
Mgmt. inf. sys./business data proc.	102	117	111	95	100	86	83	85	98	89	86
Marketing mgmt. & research	166	167	153	153	153	142	127	141	113	132	111
Operations research	63	54	60	64	45	57	52	61	40	36	26
Organizational behavior	73	102	100	108	122	103	100	98	118	173	111
Bus. mgmt./admin. serv., general	87	87	92	67	28	38	49	36	20	33	18
Bus. mgmt./admin. serv., other	80	62	81	53	64	71	77	55	56	46	68
COMMUNICATIONS	321	371	381	389	332	373	379	389	389	399	415
Communications research	33	40	40	60	51	52	50	53	60	64	63
Mass communications	117	156	121	137	117	142	153	154	153	156	161
Communication theory	41	45	53	37	40	48	47	39	40	43	42
Communications, general	69	68	78	81	74	62	69	77	78	70	89
Communications, other	61	62	89	74	50	69	60	66	58	66	60
OTHER PROFESSIONAL FIELDS	867	891	932	771	773	721	768	797	801	799	844
Architectural environmental design	54	67	55	61	66	52	65	60	66	67	69
Home economics	57	31	31	28	36	18	23	23	20	24	21
Law	29	33	38	24	27	31	37	41	34	49	52
Library science	70	42	47	49	40	34	39	45	40	32	42
Parks/recreation/leisure/fitness	44	37	54	29	24	38	29	45	41	52	38
Public administration	117	135	128	103	95	104	117	103	96	103	121
Social work	237	272	303	256	247	235	224	257	260	237	273
Theology/religious education	243	262	273	213	178	158	162	171	194	172	173
Professional fields, general	1	1	1	2	4	0	9	3	8	7	4
Professional fields, other	15	11	2	6	56	51	63	49	42	56	51
OTHER FIELDS	27	41	26	39	24	16	32	6	2	50	3

NOTE: Dashes (-----) indicate that the field was not on the questionnaire's Specialties List that year. Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

<sup>a</sup> Includes respondents missing data for doctoral field: 5 in 1997; 7 in 1998; 1 in 1999; 5 in 2000; 1 in 2001; 2 in 2002.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.



**APPENDIX TABLE B-2a. Number of doctorate recipients, by sex, race/ethnicity, and citizenship, 1993-2003 - Total all doctorates**

Citizenship status by race/ethnicity	Year of doctorate										
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total all doctorates <sup>a</sup>	39,800	41,034	41,748	42,436	42,540	42,645	41,090	41,357	40,808	39,964	40,710
U.S. citizens	26,449	27,149	27,742	27,775	28,151	28,456	27,984	27,978	27,031	25,997	26,413
Permanent visas	2,259	3,748	4,317	3,765	2,931	2,702	2,308	1,950	1,838	1,649	1,631
Temporary visas	9,973	9,422	8,831	9,649	9,193	9,496	9,057	9,663	9,827	9,723	10,585
Unknown citizenship	1,119	715	858	1,247	2,265	1,991	1,741	1,766	2,112	2,595	2,081
Total known race/ethnicity	38,297	39,848	40,347	40,706	38,911	39,391	38,682	38,800	38,062	36,747	37,600
U.S. citizens	26,221	26,900	27,447	27,445	27,074	27,540	27,525	27,423	26,557	25,508	25,705
Permanent visas	2,225	3,701	4,275	3,732	2,868	2,614	2,269	1,898	1,804	1,602	1,589
Temporary visas	9,718	9,130	8,565	9,403	8,852	9,089	8,800	9,371	9,501	9,361	10,134
Unknown citizenship	133	117	60	126	117	148	88	108	200	276	172
American Indian <sup>b</sup>	121	146	148	188	167	190	214	169	164	155	141
U.S. citizens	120	143	148	185	167	189	214	169	149	147	133
Permanent visas <sup>c</sup>	0	0	0	1	0	0	0	0	2	3	3
Temporary visas <sup>c</sup>	1	3	0	2	0	0	0	0	12	5	5
Unknown citizenship	0	0	0	0	0	1	0	0	1	0	0
Asian <sup>d</sup>	8,659	9,353	9,693	9,802	9,006	8,563	7,993	8,059	8,104	7,872	8,251
U.S. citizens	876	937	1,129	1,066	1,296	1,155	1,304	1,363	1,394	1,364	1,350
Permanent visas	1,126	2,597	3,168	2,608	1,813	1,552	1,191	909	777	745	668
Temporary visas	6,623	5,805	5,384	6,105	5,865	5,826	5,469	5,764	5,911	5,732	6,209
Unknown citizenship	34	14	12	23	32	30	29	23	22	31	24
Black/African-American	1,610	1,681	1,807	1,825	1,760	1,913	2,051	2,094	2,011	2,027	2,097
U.S. citizens	1,109	1,099	1,293	1,305	1,335	1,485	1,629	1,629	1,614	1,662	1,708
Permanent visas	169	178	168	141	139	119	133	119	118	87	88
Temporary visas	325	391	336	366	276	297	281	334	265	257	266
Unknown citizenship	7	13	10	13	10	12	8	12	14	21	35
Hispanic <sup>e</sup>	1,430	1,534	1,544	1,632	1,694	1,879	1,899	1,962	1,905	2,023	2,206
U.S. citizens	833	884	922	957	1,063	1,205	1,184	1,180	1,127	1,237	1,270
Permanent visas	139	146	142	156	135	122	140	128	144	131	149
Temporary visas	454	503	475	514	484	543	561	648	619	645	780
Unknown citizenship	4	1	5	5	12	9	14	6	15	10	7
White	26,434	27,085	27,081	27,158	26,250	26,786	26,411	26,388	25,463	24,269	24,405
U.S. citizens	23,245	23,795	23,891	23,847	23,181	23,454	23,092	22,968	21,930	20,755	20,818
Permanent visas	791	779	795	823	781	819	801	741	752	628	668
Temporary visas	2,310	2,422	2,362	2,404	2,225	2,417	2,481	2,612	2,652	2,672	2,814
Unknown citizenship	88	89	33	84	63	96	37	67	129	214	105
Other/unknown race/ethnicity <sup>f</sup>	1,546	1,235	1,475	1,831	3,663	3,314	2,522	2,685	3,161	3,618	3,610
U.S. citizens	266	291	359	415	1,109	968	561	669	817	832	1,134
Permanent visas	34	48	44	36	63	90	43	53	45	55	55
Temporary visas	260	298	274	258	343	413	265	305	368	412	511
Unknown citizenship	986	598	798	1,122	2,148	1,843	1,653	1,658	1,931	2,319	1,910

<sup>a</sup> Total includes doctorate recipients for whom sex was not reported.

<sup>b</sup> Includes Alaskan Natives.

<sup>c</sup> In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.

<sup>d</sup> Includes native Hawaiians/other Pacific islanders through 2000, but excludes them in 2001 - 2003 per revised OMB guidelines issued for 2001.

<sup>e</sup> Persons reporting an Hispanic ethnicity, whether singly or in combination with another race/ethnicity, are included in the respondent-selected Hispanic ethnicity category.

<sup>f</sup> Includes only those with unknown race/ethnicity through 2000. In 2001, this category was expanded to include Native Hawaiians and other Pacific Islanders and respondents choosing multiple races (excluding those selecting an Hispanic ethnicity).

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**APPENDIX TABLE B-2b. Number of doctorate recipients, by sex, race/ethnicity, and citizenship, 1993-2003 - Total males**

Citizenship status by race/ethnicity	Year of doctorate										
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total all doctorates <sup>a</sup>	24,384	25,058	25,161	25,285	24,943	24,633	23,434	23,166	22,791	21,771	22,188
U.S. citizens	14,513	14,733	14,965	14,720	15,047	14,872	14,513	14,155	13,636	12,849	13,042
Permanent visas	1,468	2,636	2,907	2,483	1,834	1,665	1,379	1,135	1,000	869	813
Temporary visas	7,865	7,320	6,855	7,415	6,974	7,007	6,630	6,854	7,025	6,750	7,250
Unknown citizenship	538	369	434	667	1,088	1,089	912	1,022	1,130	1,303	1,083
Total known race/ethnicity	23,538	24,327	24,308	24,274	23,017	22,727	22,067	21,633	21,249	20,056	20,456
U.S. citizens	14,346	14,567	14,759	14,498	14,439	14,331	14,221	13,826	13,352	12,558	12,629
Permanent visas	1,444	2,602	2,881	2,461	1,795	1,605	1,352	1,102	979	843	792
Temporary visas	7,672	7,105	6,642	7,233	6,717	6,714	6,445	6,651	6,797	6,497	6,964
Unknown citizenship	76	53	26	82	66	77	49	54	121	158	71
American Indian <sup>b</sup>	61	74	80	102	79	104	96	76	78	72	56
U.S. citizens	60	71	80	101	79	104	96	76	67	67	52
Permanent visas <sup>c</sup>	0	0	0	0	0	0	0	0	2	2	1
Temporary visas <sup>c</sup>	1	3	0	1	0	0	0	0	8	3	3
Unknown citizenship	0	0	0	0	0	0	0	0	1	0	0
Asian <sup>d</sup>	6,596	7,052	7,095	7,197	6,425	6,027	5,526	5,351	5,426	5,143	5,426
U.S. citizens	543	582	662	603	742	641	764	740	746	747	732
Permanent visas	732	1,877	2,197	1,787	1,142	985	711	501	424	374	330
Temporary visas	5,297	4,584	4,227	4,792	4,522	4,385	4,030	4,094	4,239	4,003	4,351
Unknown citizenship	24	9	9	15	19	16	21	16	17	19	13
Black/African-American	839	888	877	929	857	820	909	880	867	854	836
U.S. citizens	441	410	487	531	528	524	609	560	591	611	596
Permanent visas	138	142	125	107	108	86	91	82	85	61	55
Temporary visas	255	330	261	287	212	203	204	233	186	178	178
Unknown citizenship	5	6	4	4	9	7	5	5	5	4	7
Hispanic <sup>e</sup>	874	866	914	935	980	1,060	991	1,070	1,017	1,040	1,164
U.S. citizens	423	438	463	480	543	610	510	546	498	540	590
Permanent visas	94	80	79	87	81	72	69	63	71	61	72
Temporary visas	356	347	370	364	350	375	405	459	443	434	499
Unknown citizenship	1	1	2	4	6	3	7	2	5	5	3
White	15,146	15,420	15,307	15,063	14,660	14,683	14,495	14,198	13,655	12,761	12,732
U.S. citizens	12,859	13,042	13,037	12,744	12,532	12,423	12,199	11,853	11,288	10,445	10,464
Permanent visas	480	503	479	480	464	461	478	455	393	342	326
Temporary visas	1,761	1,838	1,780	1,781	1,632	1,748	1,802	1,859	1,892	1,844	1,895
Unknown citizenship	46	37	11	58	32	51	16	31	82	130	47
Other/unknown race/ethnicity <sup>f</sup>	868	758	888	1,059	1,942	1,939	1,417	1,591	1,748	1,901	1,974
U.S. citizens	187	190	236	261	623	570	335	380	446	439	608
Permanent visas	24	34	27	22	39	61	30	34	25	29	29
Temporary visas	195	218	217	190	258	296	189	209	257	288	324
Unknown citizenship	462	316	408	586	1,022	1,012	863	968	1,020	1,145	1,013

<sup>a</sup> Total includes doctorate recipients for whom sex was not reported.

<sup>b</sup> Includes Alaskan Natives.

<sup>c</sup> In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.

<sup>d</sup> Includes native Hawaiians/other Pacific islanders through 2000, but excludes them in 2001 - 2003 per revised OMB guidelines issued for 2001.

<sup>e</sup> Persons reporting an Hispanic ethnicity, whether singly or in combination with another race/ethnicity, are included in the respondent-selected Hispanic ethnicity category.

<sup>f</sup> Includes only those with unknown race/ethnicity through 2000. In 2001, this category was expanded to include Native Hawaiians and other Pacific Islanders and respondents choosing multiple races (excluding those selecting an Hispanic ethnicity).

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

**APPENDIX TABLE B-2c. Number of doctorate recipients, by sex, race/ethnicity, and citizenship, 1993-2003 - Total females**

Citizenship status by race/ethnicity	Year of doctorate										
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total all doctorates <sup>a</sup>	15,121	15,822	16,417	16,956	17,241	17,848	17,479	18,124	17,947	18,123	18,402
U.S. citizens	11,931	12,413	12,775	13,055	13,072	13,570	13,471	13,820	13,395	13,147	13,368
Permanent visas	788	1,111	1,409	1,282	1,096	1,021	929	813	838	780	817
Temporary visas	2,080	2,080	1,959	2,221	2,204	2,469	2,423	2,808	2,801	2,967	3,321
Unknown citizenship	322	218	274	398	869	788	656	683	913	1,229	896
Total known race/ethnicity	14,740	15,507	16,031	16,427	15,881	16,639	16,614	17,165	16,813	16,690	17,136
U.S. citizens	11,873	12,330	12,688	12,947	12,632	13,206	13,304	13,596	13,205	12,949	13,074
Permanent visas	779	1,098	1,393	1,271	1,072	1,001	917	796	825	759	796
Temporary visas	2,033	2,018	1,917	2,166	2,126	2,362	2,354	2,720	2,704	2,864	3,166
Unknown citizenship	55	61	33	43	51	70	39	53	79	118	100
American Indian <sup>b</sup>	60	72	68	86	88	86	118	93	86	83	85
U.S. citizens	60	72	68	84	88	85	118	93	82	80	81
Permanent visas <sup>c</sup>	0	0	0	1	0	0	0	0	0	1	2
Temporary visas <sup>c</sup>	0	0	0	1	0	0	0	0	4	2	2
Unknown citizenship	0	0	0	0	0	1	0	0	0	0	0
Asian <sup>d</sup>	2,049	2,292	2,591	2,600	2,574	2,520	2,466	2,708	2,678	2,729	2,820
U.S. citizens	332	354	467	463	553	513	540	623	648	617	618
Permanent visas	392	719	970	821	671	560	480	408	353	371	337
Temporary visas	1,316	1,216	1,151	1,309	1,337	1,434	1,438	1,670	1,672	1,729	1,855
Unknown citizenship	9	3	3	7	13	13	8	7	5	12	10
Black/African-American	769	791	930	896	903	1,091	1,142	1,214	1,144	1,173	1,258
U.S. citizens	668	689	806	774	807	961	1,020	1,069	1,023	1,051	1,110
Permanent visas	31	36	43	34	31	32	42	37	33	26	33
Temporary visas	69	60	75	79	64	93	77	101	79	79	87
Unknown citizenship	1	6	6	9	1	5	3	7	9	17	28
Hispanic <sup>e</sup>	555	668	630	697	714	817	908	891	888	983	1,042
U.S. citizens	410	446	459	477	520	594	674	633	629	697	680
Permanent visas	45	66	63	69	54	50	71	65	73	70	77
Temporary visas	97	156	105	150	134	167	156	189	176	211	281
Unknown citizenship	3	0	3	1	6	6	7	4	10	5	4
White	11,286	11,662	11,773	12,095	11,584	12,098	11,916	12,189	11,808	11,507	11,673
U.S. citizens	10,385	10,751	10,854	11,103	10,647	11,030	10,893	11,115	10,642	10,309	10,354
Permanent visas	311	276	316	343	316	358	323	286	359	286	342
Temporary visas	548	583	582	623	590	665	679	753	760	828	919
Unknown citizenship	42	52	21	26	31	45	21	35	47	84	58
Other/unknown race/ethnicity <sup>f</sup>	402	337	425	582	1,378	1,236	929	1,029	1,343	1,648	1,524
U.S. citizens	76	101	121	154	457	387	226	287	371	393	525
Permanent visas	9	14	17	14	24	21	13	17	20	26	26
Temporary visas	50	65	46	59	79	110	73	95	110	118	177
Unknown citizenship	267	157	241	355	818	718	617	630	842	1,111	796

<sup>a</sup> Total includes doctorate recipients for whom sex was not reported.

<sup>b</sup> Includes Alaskan Natives.

<sup>c</sup> In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.

<sup>d</sup> Includes native Hawaiians/other Pacific islanders through 2000, but excludes them in 2001 - 2003 per revised OMB guidelines issued for 2001.

<sup>e</sup> Persons reporting an Hispanic ethnicity, whether singly or in combination with another race/ethnicity, are included in the respondent-selected Hispanic ethnicity category.

<sup>f</sup> Includes only those with unknown race/ethnicity through 2000. In 2001, this category was expanded to include Native Hawaiians and other Pacific Islanders and respondents choosing multiple races (excluding those selecting an Hispanic ethnicity).

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.



## Appendix C: Technical Notes

Appendix C includes the following three tables:

- C-1. Survey response rates
- C-2. Profiles of respondents versus nonrespondents for critical item data, by source of response, 2003
- C-3. Item response rates, 1993-2003

### Survey Overview

The Survey of Earned Doctorates (SED) is designed to obtain data on the number and characteristics of individuals receiving research doctoral degrees from U.S. institutions. The results of the survey are used to assess trends in doctorate production. This information is vital for educational and labor force planners within the Federal Government and in academia. The survey has been completed by individuals receiving research doctorates since 1958. The graduate schools are responsible for submitting completed forms and sending them to be compiled in the Doctorate Records File (DRF).

#### **Key variables of the survey include:**

- Academic institution attended
- Citizenship status at graduation
- Country of birth
- Country of citizenship
- Date of birth
- Disability status
- Educational attainment of parents
- Educational history after high school
- Field of degree specialty (N= 282)
- Field of employment
- Field of science and engineering
- Level of degree
- Marital status

Number of dependents  
Place of birth  
Postgraduate plans  
Primary type of financial support  
Race and Hispanic ethnicity (by subgroup)  
Sex  
Type of academic institution that conferred degrees  
Type of employment planned  
Type of financial support (e.g., fellowship, research assistantship, etc.)  
Type of institutional control (public versus private)  
Work activity planned after doctoral degree

A complete questionnaire is contained in appendix D.

## **Data Collection**

The population eligible for the 2003 survey consisted of all individuals who received a research doctorate from a U.S. academic institution in the 12-month period ending on June 30, 2003. The total universe consisted of 40,710 persons in more than 400 institutions that confer research doctorates awards in 2003.

Survey instruments were mailed to institutional coordinators in the graduate schools who distributed the survey forms to individuals receiving a research doctorate. The institutional coordinators also collected the forms and returned them to the contractor for editing/processing. Follow-up of missing critical items and forms is also conducted.

Since the survey collects a complete college education history, coding of institutions is very important. Because about 30 percent of doctorate recipients from U.S. universities are from foreign countries, a coding manual for foreign institutions of higher education was developed by the U.S. Department of Education, entitled "Mapping the World of Education: The Comparative Database System" (three volumes).

The survey was conducted by the National Research Council of the National Academy of Sciences under contract to the National Science Foundation until 1997; the National Opinion Research Center at the University of Chicago (Chicago, Illinois) currently conducts the survey under contract.

## Survey Response Rates

Of the 40,710 new research doctorates granted in 2003, 91 percent of degree recipients returned their completed survey instruments. Limited records (containing field of study, doctorate institution and sex) for nonrespondents are constructed based on information collected from administrative lists of the university -- commencement programs, graduation lists, and other similar public records. Nonresponse was concentrated in certain institutions; graduates from 10 institutions accounted for 29 percent of the total nonrespondents.

APPENDIX TABLE C-1. Survey response rates <sup>a</sup>

Year	Self-report rate	Year	Self-report rate
1967	97.3	1986	93.5
1968	97.6	1987	93.1
1969	96.6	1988	92.9
1970	98.1	1989	92.3
1971	97.5	1990	93.6
1972	97.3	1991	94.6
1973	97.5	1992	95.1
1974	94.2	1993	94.7
1975	97.3	1994	94.6
1976	97.2	1995	94.2
1977	96.6	1996	92.9
1978	96.3	1997	91.5
1979	96.4	1998	91.9
1980	96.2	1999	91.9
1981	95.7	2000	92.4
1982	95.3	2001	92.5
1983	95.5	2002	91.2
1984	95.1	2003	91.3
1985	94.8		

<sup>a</sup> The rates for 1967-2002 reflect late responses. The rate for 2003 may increase slightly in the next year if additional questionnaires are received after survey closure.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

The percentage of doctorate recipients completing the survey form is referred to as the “self-report” rate. The remaining doctorate recipients have either “skeletal” records containing only doctoral institution, degree date, field of degree, and gender, or “institution provided” records including the skeletal information above as well as information provided by the institution in “missing information rosters (MIRs)” where available.

Wherever possible this report includes data from all Ph.D. records whether complete or skeletal; thus the reported total number of doctorate recipients for 2003 (40,710) includes both respondents and non-respondents. It should also be noted that, in keeping with the practice of earlier data collection cycles, counts for previous years were corrected by the addition of data from surveys received after the close of data collection for a given year.

### **A Comparison of Self-Reported and Institution-Supplied Data**

**TABLE C-2:** Table C-2 presents the results of a chi-square test comparing respondent-completed cases and nonresponding cases where institutions supplied data on critical items. The profile of nonrespondents is significantly different from the profile of respondents in seven of the eight critical item variables. Nonrespondents appear to be slightly older than respondents. Nonrespondents are more likely to be non-white. While a majority of both respondents and nonrespondents are male, nonrespondents appear slightly more likely to be female than respondents. These findings should be considered suggestive only, as there is a high proportion of missing data from institutions on citizenship status, bachelor's institution, year of bachelor's degree and postgraduation location.



**APPENDIX TABLE C-2. Profiles of respondents versus nonrespondents for critical item data, by source of response, 2003**

Critical item variable	Respondents (percent self-reported)	Nonrespondents (percent institution-provided)	Percent difference
Year of birth *			
Missing data	2.1	26.8	
Before 1969 <sup>a</sup>	44.7	59.3	-14.5
1969 and later	55.3	40.7	14.5
Sex *			
Missing data	0.0	1.0	
Male	54.8	51.1	3.7
Female	45.2	48.9	-3.7
Citizenship status			
Missing data	0.5	10.6	
U.S. citizen	68.4	68.7	-0.4
Permanent resident	4.3	2.3	2.0
Temporary resident	27.3	29.0	-1.6
Country of citizenship (for non-U.S. citizens only) *			
Country reported	98.3	54.0	44.4
Country not reported	1.7	46.0	-44.4
Race/ethnicity * (U.S. citizens & perm residents only)			
Missing data	1.2	12.0	
American Indian <sup>b</sup>	0.5	1.0	-0.5
Asian <sup>c</sup>	7.5	3.7	3.7
Black	6.1	16.3	-10.2
Hispanic <sup>d</sup>	5.1	5.9	-0.7
White	78.2	71.1	7.1
Other <sup>e</sup>	2.6	2.1	0.6
Bachelor's institution *			
Missing data	3.2	37.0	
U.S.	70.9	73.5	-2.7
Non-U.S.	29.1	26.5	2.7
Year of bachelor's degree *			
Missing data	3.4	42.5	
Before 1992 <sup>f</sup>	43.0	46.9	-3.8
1992-after	57.0	53.1	3.8
Postgraduation location *			
Missing data	1.3	42.3	
U.S.	89.1	92.8	-3.7
Non-U.S.	10.9	7.2	3.7

\* Significant at .05 level, chi-square test performed on non-missing data.

Note: Missing data percentages calculated from all data, missing and non-missing. All other percentages calculated on non-missing data.

<sup>a</sup> 1969 is the median year of birth of 2003 doctorate recipients

<sup>b</sup> Includes Alaskan Natives.

<sup>c</sup> Does not include Native Hawaiians and other Pacific Islanders.

<sup>d</sup> Persons reporting an Hispanic ethnicity, whether singly or in combination with another race/ethnicity, are included in the respondent-selected Hispanic ethnicity category.

<sup>e</sup> Includes Native Hawaiians and other Pacific Islanders, respondents choosing multiple races (excluding those selecting an Hispanic ethnicity), and respondents with unknown race/ethnicity.

<sup>f</sup> 1992 is the median year of baccalaureate of 2003 doctorate recipients.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

## Item Response Rates

Item nonresponse rates in 2003 for the main SED demographic variables ranged from 0.3 percent for sex to 7.3 percent for postgraduation location. No imputation was performed for missing data items.

<u>Key variable</u>	<u>Item response rate</u>
Sex	99.7
Citizenship	94.9
Race/ethnicity	93.5
Country of citizenship	94.5
Postgraduation location	92.7

**TABLE C-3:** Table C-3 on the following pages shows the response rates for each item in the Survey of Earned Doctorates for 1993 through 2003. The numbers and percentages shown in the tables and figures in the body of the summary report are based only on the number of research doctorate recipients who responded to the applicable survey items. For cross-tabulations, the response rate for a given tabulation will be no greater than the lowest response rate for the items involved in the tabulation.

APPENDIX TABLE C-3. Item response rates, 1993-2003

Page 1 of 3

Variable Name	Variable description	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
AMERIND	American Indian/Alaska Native race indicator	95.4	96.1	95.6	94.8	90.2	90.8	92.4	92.4	93.6	91.9	92.7
ASIAN	Asian race indicator	95.4	96.1	95.6	94.8	90.2	90.8	92.4	92.4	93.6	91.9	92.7
BAFIELD	B.A. field	93.0	92.8	92.5	90.9	83.2	84.8	85.1	86.9	87.3	86.5	86.4
BAINST	B.A. institution	97.5	97.9	97.4	96.5	89.6	91.2	92.5	91.2	92.9	91.8	92.4
BAMONTH	Month of B.A.	90.3	90.2	90.0	88.6	82.2	83.0	83.7	85.0	85.2	84.3	83.8
BAONE	No B.A./no M.A. indicator	8.6	9.1	9.7	11.4	6.9	8.1	8.0	2.7	9.5	10.1	9.5
BAYEAR	Year of B.A.	96.8	97.4	97.1	96.4	88.6	90.7	92.3	90.5	92.4	91.3	91.9
BIRTHMO	Month of birth	97.3	98.1	97.5	96.7	92.7	92.9	95.0	95.2	94.3	93.1	93.8
BIRTHPL	Place of birth	96.4	97.2	96.9	95.9	93.8	93.8	94.2	94.3	93.5	92.3	93.3
BIRTHYR	Year of birth	97.4	98.2	97.5	96.8	92.9	92.7	95.0	95.3	94.4	93.2	94.1
BLACK	Black race indicator	95.4	96.1	95.6	94.8	90.2	90.8	92.4	92.4	93.6	91.9	92.7
CEPLACE	Place of college entry	92.8	92.3	92.2	90.6	82.6	90.4	90.6	89.9	92.0	92.4	93.8
CEYEAR	Year of college entry	91.7	91.5	91.3	89.2	82.7	88.8	89.1	87.3	89.4	87.7	87.3
CITIZ	Type of citizenship	97.2	98.3	97.9	97.1	94.7	95.3	95.8	95.7	94.8	93.5	94.9
CNTRYCIT	Country of citizenship	97.1	98.2	97.9	96.9	94.3	95.0	95.5	95.5	94.6	93.2	94.5
DEBTIND	Debt level indicator	92.8	92.8	92.3	91.3	89.3	89.7	90.6	91.1	-----	-----	-----
DEPENDS	Number of dependents	89.8	89.7	89.4	89.5	88.3	88.8	89.1	89.4	-----	-----	-----
DEPEND5	Number of dependents - ages 5 or younger	-----	-----	-----	-----	-----	-----	-----	-----	-----	89.0	89.0
DEPEND18	Number of dependents - ages 6-18	-----	-----	-----	-----	-----	-----	-----	-----	-----	89.0	89.0
DEPEND19	Number of dependents - ages 19 and older	-----	-----	-----	-----	-----	-----	-----	-----	-----	89.0	89.0
EDFATHER	Fathers education	92.7	92.7	92.3	91.5	89.5	89.8	90.5	90.9	90.8	89.7	89.8
EDMOTHER	Mothers education	92.6	92.5	92.2	91.7	89.8	90.0	90.7	91.1	91.0	90.0	90.0
GDEBTLVL	Graduate debt level	-----	-----	-----	-----	-----	-----	-----	-----	-----	89.3	89.5
GEYEAR	Year of graduate entry	88.6	88.2	87.4	85.8	77.4	81.4	84.8	83.7	84.3	83.4	82.1
HANDICAP	Handicapped status	93.6	93.7	93.3	91.8	90.1	90.1	90.4	90.9	90.8	89.8	89.9
HAWAIIAN	Native Hawaiian/Pacific Islander race indicator	-----	-----	-----	-----	-----	-----	-----	-----	-----	91.2	92.5
HISPANIC	Hispanic origin indicator	96.8	97.6	97.1	96.4	93.1	93.6	95.1	94.8	92.1	91.4	91.8
HISPORIG	Hispanic origin specified	96.1	96.8	96.4	95.6	92.3	92.5	94.1	93.7	90.9	90.2	90.3
HSPLACE	Place of high school	94.0	93.9	93.5	92.3	90.2	90.9	91.4	91.9	90.9	90.1	90.2
JRCOLL	Junior college indicator	92.9	92.5	92.4	90.6	91.5	91.9	91.8	92.3	92.0	90.9	90.8
MAFIELD	Masters field	83.8	84.1	83.6	84.6	75.4	78.1	78.3	73.8	80.3	80.1	79.9
MAINST	Masters institution	86.2	86.9	86.3	87.3	79.1	80.7	80.6	76.0	82.4	82.2	81.8
MAMONTH	Month of masters	80.0	80.3	79.8	81.0	73.3	75.3	75.8	71.2	77.3	77.5	77.3
MARITAL	Marital status	91.5	91.5	91.0	91.7	89.3	90.2	90.8	91.2	91.0	89.9	90.1
MAYEAR	Year of masters	84.7	85.1	84.7	85.6	77.8	80.4	79.5	75.0	81.1	81.3	81.0
PDEMPLOY	Postdoctoral employer type	88.2	88.3	87.6	87.6	83.4	85.7	86.5	87.8	88.6	88.3	88.6
PDLOC	Post-graduation location	93.8	94.6	94.2	92.7	83.7	89.6	92.0	92.3	92.4	91.2	92.7
PDOPPLAN	Post-graduation plans	92.4	92.4	91.9	91.3	87.2	88.0	89.3	90.7	90.2	89.5	89.7
PDOSTAT	Post-graduation status	91.8	91.7	91.0	91.0	89.0	89.7	90.5	91.2	91.0	90.0	90.2
PDSTDSUP	Postdoctoral study support	90.4	90.6	89.9	89.9	87.7	87.5	88.6	90.0	90.1	89.3	89.4

APPENDIX TABLE C-3. Item response rates, 1993-2003

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Variable Name	Variable description	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
PDUSFOR	Post-graduation location: U.S. or foreign	100.0	100.0	100.0	100.0	100.0	89.6	92.0	92.3	92.4	91.2	92.7
PDWK1ED	Edited primary work activity	81.4	83.3	83.2	86.9	83.7	85.0	86.2	87.4	86.8	86.2	86.5
PDWK2ED	Edited secondary work activity	63.4	65.2	65.0	74.6	74.9	76.2	76.0	76.8	74.5	75.5	77.2
PDWKPRIM	Primary work activity	81.4	83.3	83.2	86.9	83.7	85.0	86.2	87.4	86.8	86.2	86.5
PDWKSEC	Secondary work activity	63.4	65.2	65.0	74.6	74.9	76.2	76.0	76.8	74.5	75.5	77.2
PHDCY	Calendar year of Ph.D.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDDISS	Dissertation field	92.7	93.3	92.4	92.2	89.2	90.1	91.0	91.5	91.4	90.5	90.7
PHDENTRY	First year entry PHDINST after B.A.	86.9	86.7	86.5	85.6	79.1	83.7	85.9	85.3	85.2	83.7	83.4
PHDFIELD	Ph.D. field	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDFY	Fiscal year of Ph.D.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDINST	Doctoral institution	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDMONTH	Month of doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDTYPE1	Type of doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDTYPE2	Applied research doctorate type	100.0	99.6	99.6	99.6	99.5	99.8	99.5	99.7	99.7	99.7	99.8
PROFDEG	Type of professional doctorate	1.6	1.7	1.8	1.9	1.9	1.2	2.0	2.2	1.8	2.1	1.9
PROFYEAR	Year of professional doctorate	1.6	1.7	1.8	1.9	1.8	2.8	2.8	2.2	1.8	2.1	1.9
QUESTYR	Year questionnaire filled out	94.7	94.5	94.1	92.9	91.5	91.9	91.9	92.3	92.2	91.2	91.3
RACE	Edited race/ethnic code	96.7	97.6	97.1	96.4	93.1	93.6	95.1	94.9	94.1	93.0	93.5
RACEOTH	Other/multiple race indicator	95.4	96.1	95.6	94.8	90.2	90.8	92.4	92.0	-----	-----	-----
REGTID	Registered time to degree	89.5	89.4	88.8	87.1	77.1	81.0	84.8	83.3	85.4	85.0	84.4
SEX	Sex of student	99.3	99.6	99.6	99.5	99.2	99.6	99.6	99.8	99.8	99.8	99.7
SRCE1ED	Edited primary source of support	66.2	72.4	74.9	88.0	87.9	88.6	89.9	90.2	90.1	88.6	87.2
SRCEPRIM	Primary source support	66.2	72.4	74.9	88.0	87.9	88.7	89.9	90.2	90.1	88.6	88.6
TOTTID	Total time to degree	96.0	96.7	96.0	94.9	86.5	87.9	91.0	89.4	90.9	89.7	90.2
TUITREMS	Tuition remission - full or partial	-----	-----	-----	-----	-----	-----	-----	-----	-----	87.2	88.1
UDEBTLVL	Undergraduate debt level	-----	-----	-----	-----	-----	-----	-----	-----	-----	89.4	89.6
WHITE	White race indicator	95.4	96.1	95.6	94.8	90.2	90.8	92.4	92.4	93.6	91.9	92.7
YRSCOURS	Years of coursework	-----	-----	-----	-----	-----	-----	-----	-----	-----	89.9	90.0
YRSDISST	Years preparing dissertation	-----	-----	-----	-----	-----	-----	-----	-----	-----	90.1	90.2
YRSGRAD	Years from graduate entry to doctorate	-----	-----	-----	-----	-----	-----	-----	-----	-----	89.9	89.9

NOTE: ----- = data not available.

1. For the purposes of this analysis, "response rate" is the percent of cases providing data on the item divided by the universe of doctorate recipients eligible to answer that item. On most items, the full universe of doctorate recipients establishes the universe of eligible respondents. However, on a subset of the full universe is eligible to answer the item. Variables DEPEND5, DEPEND18, DEPEND19, GDEBTLVL, PHDDISS2, UDEBTLVL, YRSCOURS, YRSDISST and YRSGRAD appeared for the first time on the 2001 survey form. Because about 25 percent of AY 2001 respondents submitted data on earlier versions of the survey form, AY 2001 response rates for these variables are not reported. Response rates for these variables are reported in 2002 and later because the entire universe had the opportunity to provide data for these questions.

2. Particular variables (including BANONE, REGNURSE, PROFDEG, PROFYEAR, PHDDISS2) have low response rates because of the nature of the data collected. Although all respondents are considered eligible to provide data for these items, only some will be able to do so. For instance, the data response rate to REGNURSE represents only the small number of doctorate recipients who report having received a registered nurse degree. In some ways, it is more appropriate to consider the figures for these variables to be measurements of the percentage of the SED universe to which these items apply, rather than a "response rate" as it is defined above.

# APPENDIX TABLE C-3. Item response rates, 1993-2003

3. The time-to-degree measures (REGTTD and TOTTTD) result from the Doctorate Data Project's calculation of these figures from six variables measuring durations spent inside and outside of educational institutions between bachelor's degree receipt and doctorate receipt. The time-to-degree measures are presented here because they are more meaningful summaries of valid data than the response rates of the individual component variables used to calculate them.
4. The items DEPENDS and DEBTLEVL are not collected on current SED survey forms. They are calculated from other current variables and presented here so as to illustrate trends with earlier years in which these items were asked. The response rate for the variable CNTRYCIT counts as respondents all doctorate recipients who reported being U.S. citizens and non-citizens who also provided their country of citizenship.
5. It is common for each AY's data to include data gathered on that year's survey forms and data gathered on earlier survey forms. Therefore, in the first year in which a variable appears on the new survey form, only the respondents using that form will have the opportunity to provide data on that item. To address cases like these, response rates are calculated on a base of respondents who used the new survey form.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2003 Survey of Earned Doctorates.

## Derived Variables

The following derived variables deserve further explanation.

### Postdoctoral Plans to Stay in the United States

Starting in 1997, the planned postdoctoral location of doctorate recipients was coded in a new variable called PDLOC using FIPS codes for U.S. states and territories and countries. Values of PDLOC of less than '100' indicate a postdoctoral location in the United States. Values between '100' and '555' indicate a non-U.S. location. A value of '-1' on PDLOC indicates a respondent refusal to provide data.

Also beginning in 1997, a dichotomous variable, PDUSFOR, was created to index whether the planned postdoctoral location reported by the respondent was in the United States or in a foreign location, with 1 = U.S. and 2 = Non-U.S. Data in PDUSFOR and PDLOC can be slightly different because PDUSFOR will capture a respondent's report of postgraduation location (in the U.S. or outside the U.S.) even if the respondent does not indicate a specific state or country.

### Definite Postdoctoral Plans

Postdoctoral plans are coded using the values of PDOCSTAT, which indicate that the doctorate recipient's postdoctoral plans were definite at the time the survey was completed. That is, codes 0, 1, or A on PDOCSTAT indicate that the respondent had definite postdoctoral plans, whereas codes 2, 3, and 4 indicate that the respondent was still seeking to determine postdoctoral placement.

The following is the SAS code used to derive FIRMPLAN from PDOCSTAT :

```
if PDOCSTAT in ("0","1","A") then FIRMPLAN=1;  /* Definite */  
if PDOCSTAT in ("2","3","4") FIRMPLAN=2;  /* Seeking */  
if PDOCSTAT eq " " then FIRMPLAN=.;
```

## Definite Plans to Stay in the United States

This variable is derived from PDUSFOR and FIRMPLAN. A respondent is coded as having firm plans to stay in the United States if the reported postdoctoral location was in the United States and the reported postdoctoral plans were coded “definite.”

The following is the SAS code that creates the variable PDUSFOR from USPLAN and FIRMPLAN as described above.

```
FIRMUS=2;
```

```
if (USPLAN eq 1 and FIRMPLAN eq 1) then FIRMUS=1;
```

```
if USPLAN eq . or FIRMPLAN eq . then FIRMUS=.;
```

## Time to Doctorate

***Total time to degree (TTD):*** TTD measures the total elapsed time between the baccalaureate and the doctorate (including time not enrolled in school). TTD can be computed only for individuals whose baccalaureate year is known. Baccalaureate year is often obtained from commencement programs or doctorate institutions when not reported by the recipient. *Months are now included in the computation (see note below).*

***Registered time to degree (RTD):*** RTD gauges the time in attendance at colleges and universities between receipt of the baccalaureate and the doctorate. Enrollment may include years of attendance not related to a recipient’s doctoral program. RTD can only be computed for individuals who provided all years of college attendance after the baccalaureate. *Months are now included in the computation (see note below).*

***Note about medians:*** The method of computing medians, beginning with *Summary Report 1994*, is as follows. Months (of birth, baccalaureate, and doctorate) are included in the calculations whenever available; if months are missing, month values are assigned to the mid-point of the range of days, with a leap year factor included (i.e. assignment to a value of 181.25). (However, medians are not computed for years prior to 1969 because doctorate month is unavailable for all doctorate recipients.) Medians presented in previous summary reports were based only on years. Some medians would be the same regardless of the method of computation, but the new method generally computes slightly different results. While differences are small

(usually one- or two-tenths of a year), readers should consider these differences when comparing medians presented in the report with those in earlier reports.

## Race and Hispanic Ethnicity

Beginning in 2001, a new set of questionnaire items was used to collect information about citizenship. Just as in the past, respondents have been asked to first indicate whether or not they are Hispanic, and then check one or more of the various racial group categories (e.g., American Indian, indicating Tribal Affiliation, Asian (including Native Hawaiians and Pacific Islanders through the year 2000), black, or white). *Doctorate recipients who reported Hispanic heritage, regardless of racial designation, are counted as Hispanic in this report.* The remaining survey respondents are then counted in their respective racial groups or as “Other/Unknown” (which includes only those who did not indicate a specific race/ethnicity through 2000, and also includes those choosing “Multiple Race”, Native Hawaiian and other Pacific Islander in 2001 to the present). (Note: Doctorate recipients who checked the category “American Indian or Alaskan Native” are identified as American Indian in this report.)

## Citizenship

As in the past, the variable CITIZ is used to identify non-U.S. citizens for whom visa status was unknown. The new code frame for the data introduced in the year 2000 was as follows:

Code	Citizenship Category
0	U.S. Native
1	U.S. Naturalized Citizen
2	Non-U.S. Immigrant (Permanent Resident)
3	Non-U.S. Non-immigrant (Temporary Resident)
4	Non-U.S., Visa Status Unknown
Blank	Missing/Citizenship Unknown

Beginning in 2000, a logical assignment to code 4 was made if all follow-up attempts for missing citizenship were unsuccessful. The assignment was made for 1997-2003 records if three out of four variables – BIRTHPL, HSPLACE, CEPLACE, PDLOC – were non-U.S. locations. For the purposes of the tabulations in this report, code 4 was combined with code 3. This is



consistent with what was done in previous rounds and seems well justified by an examination of the data. However, the existence of this new code will allow the data user to exclude the cases for which visa status is unknown if desired. One should keep in mind that the number of cases in this group (code 4) is not sufficient to warrant analysis as a separate group.

To match the numbers in this report, use the following code before analyzing citizenship:

```
/*RECODE CITIZ 4 */  
IF (CITIZ eq '4') THEN CITIZ='3';
```

## **Debt**

This item indexing debt was changed in AY 2001 to allow the identification of debt due to undergraduate education separately from that due to graduate education (see item A9). The resulting variables identify nine ranges of debt for each referent (undergraduate or graduate). To estimate overall debt, we took the midpoint of the chosen range for undergraduate and for graduate debt. These two values were summed to yield a total debt amount. These amounts were then assigned to the appropriate range as shown below:

### **Cumulative Debt**

No Debt  
\$5,000 OR LESS  
\$5,001-\$10,000  
\$10,001-\$15,000  
\$15,001-\$20,000  
\$20,001-\$25,000  
\$25,001-\$30,000  
\$30,001-\$35,000  
\$35,001 and up

## **Availability of Data**

The Survey of Earned Doctorates has collected information on doctoral recipients annually since 1957. More limited information is contained in the cumulative Doctorate Records File maintained for NSF by the SED data collection contractor for research doctorate recipients from 1920-1956. This annual *Summary Report* is an interagency report sponsored by the Federal agencies that support the SED (six in 2003). The report as well as the *Summary Reports* for 1997-2002 is available on the Web at: <http://www.norc.uchicago.edu/issues/docdata.htm>.

The data from this survey are also published annually in Detailed Statistical Tables in the series *Science and Engineering Doctorate Awards*, available on the SRS Web site at (<http://www.nsf.gov/sbe/srs/sengdr/start.htm>). These reports focus on science and engineering fields of study. (The list of how fields of study are grouped for this report is shown at the end of the Technical Notes.) Companion data from this survey for earlier years (1960-1991) were published in Detailed Statistical Tables in the report *Science and Engineering Doctorates: 1960-91* (NSF 93-301). This report is out of print, but tables from it are available on request.

Information from the survey is also included in the NSF-SRS report series *Science and Engineering Degrees*; in *Science and Engineering Indicators*; in *Women, Minorities, and Persons With Disabilities in Science and Engineering*; and in special occasional publications.

Selected summary data from this survey are available on the NSF-SRS Web site and in the NSF-SRS WebCASPAR database by institution. Access to restricted data for researchers interested in analyzing microdata can be arranged through a licensing agreement with NSF-SRS.

A complete methodology report for the 2003 SED is available upon request from NSF-SRS. A complete list of methodological research concerning the Survey of Earned Doctorates is also available upon request from NSF-SRS.

Additional information about this survey can be obtained by contacting:

Joan S. Burrelli, Ph.D.  
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## **APPENDIX D: Survey of Earned Doctorates Questionnaire Academic Year 2003**



*Please print your name in full:*

First Name	Middle Name	Last Name	Suffix (e.g., Jr.)
------------	-------------	-----------	--------------------

Cross reference: Birth name or former name legally changed
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Name of Doctoral Institution	City or Branch	Date Degree Granted (mm/yyyy)
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## *Survey of Earned Doctorates*

*July 1, 2002, to June 30, 2003*

*Conducted by*

The National Opinion Research Center at the University of Chicago  
for

The National Science Foundation

The National Institutes of Health

The U.S. Department of Education

The National Endowment for the Humanities

The U.S. Department of Agriculture

The National Aeronautics and Space Administration

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. ALL INFORMATION YOU PROVIDE WILL BE TREATED AS CONFIDENTIAL and used only for research or statistical purposes by your doctoral institution, the survey sponsors, their contractors, and collaborating researchers for the purpose of analyzing data, preparing scientific reports and articles, and selecting samples for a limited number of carefully defined follow-up studies. Any information publicly released (such as statistical summaries) will be in a form that does not personally identify you. Your response is voluntary and failure to provide some or all of the requested information will not in any way adversely affect you. Your Social Security number is also solicited under the NSF Act of 1950, as amended; providing it is also voluntary. It is used for survey quality control, program evaluation, and for matching with other databases.

The time needed to complete this form varies according to individual circumstances, but the average time is estimated to be 20 minutes. If you have comments regarding this time estimate, you may write to the National Science Foundation, 4201 Wilson Blvd., Arlington, VA 22230, Attention: NSF Reports Clearance Officer.

## INSTRUCTIONS

Thank you for taking the time to complete this questionnaire. Directions are provided for each question. Because not all questions will apply to everyone, you may be asked to skip certain questions.

- If you have not already done so, please print your name on the front cover.
- Please print all responses; you may use either a pen or pencil.
- When answering questions that require marking a box, please use an "X."
- If you need to change an answer, please make sure that your old answer is either completely erased or clearly crossed out.
- On page 7 (inside the back cover) is a Specialties List for classifying your field(s) of specialization in questions A2 and A8.

### PART A - Education

#### A1. What is the title of your dissertation?

☐ Please mark (X) this box if the title below refers to a performance, project report, or a musical or literary composition required instead of a dissertation.

Title

---



---



---

#### A2. Using the Specialties List (page 7), please write the name and number of the primary field of your dissertation research.

Name of Field

Number of Field

If you had a secondary field for your dissertation research, list the name and number.

Name of Field

Number of Field

#### A3. Please name the department (or interdisciplinary committee, center, institute, etc.) of the university that supervised your doctoral program.

☐ Mark (X) box if none

---



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Department/Committee/Center/Institute/Program

#### A4. Please name the school or college within the university that supervised your doctoral program.

☐ Mark (X) box if not applicable

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*School or College within University*

#### A5. Which of the following were sources of support during graduate school?

Mark (X) Yes or No for each

	Yes	No
a. Fellowship, scholarship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
b. Dissertation grant	1 <input type="checkbox"/>	2 <input type="checkbox"/>
c. Teaching assistantship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
d. Research assistantship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
e. Traineeship	1 <input type="checkbox"/>	2 <input type="checkbox"/>
f. Internship or residency	1 <input type="checkbox"/>	2 <input type="checkbox"/>
g. Loans (from any source)	1 <input type="checkbox"/>	2 <input type="checkbox"/>
h. Foreign (non-U.S.) support	1 <input type="checkbox"/>	2 <input type="checkbox"/>
i. Personal savings	1 <input type="checkbox"/>	2 <input type="checkbox"/>
j. Personal earnings during graduate school (other than sources listed above)	1 <input type="checkbox"/>	2 <input type="checkbox"/>
k. Spouse's, partner's, or family earnings or savings	1 <input type="checkbox"/>	2 <input type="checkbox"/>
l. Employer reimbursement/assistance	1 <input type="checkbox"/>	2 <input type="checkbox"/>
m. Other - Specify	1 <input type="checkbox"/>	2 <input type="checkbox"/>

#### A6. Which TWO sources listed in A5 provided the most support?

Enter letters of primary and secondary sources

1.  Primary source of support

☐ Mark (X) if no primary source

2.  Secondary source of support

☐ Mark (X) if no secondary source

#### A7. If you received full or partial tuition remission (waiver) for your doctoral studies, was it:

0 ☐ I did not receive any tuition remission

1 ☐ for less than 1/3 of tuition

2 ☐ between 1/3 and 2/3 of tuition

3 ☐ more than 2/3 of tuition

☐ Mark (X) box if bachelor's degree (or equivalent) was never received. ☐ Mark (X) box if master's degree (or equivalent) was never received.

EXAMPLE Institution and Location			Years Attended		Field of Study		Degree (if any)		
					Use Specialties List, page 7		Granted		
Institution <i>Indian Institute of Technology</i>			From <i>1990</i>	To <i>1992</i>	Field Name <i>Mathematics</i>	Number <i>498</i>	Title <i>--</i>	Mo. <i>--</i>	Yr. <i>--</i>
Branch or City <i>Madras</i>	State or Province	Country (if not U.S.) <i>India</i>							
Institution <i>University of California</i>			From <i>1993</i>	To <i>1995</i>	Field Name <i>Mechanical Engineering</i>	Number <i>345</i>	Title <i>B.S.</i>	Mo. <i>6</i>	Yr. <i>1995</i>
Branch or City <i>Berkeley</i>	State or Province <i>CA</i>	Country (if not U.S.)							
Institution <i>University of California</i>			From <i>1997</i>	To <i>2000</i>	Field Name <i>Mechanical Engineering</i>	Number <i>345</i>	Title <i>M.S.</i>	Mo. <i>6</i>	Yr. <i>2000</i>
Branch or City <i>Berkeley</i>	State or Province <i>CA</i>	Country (if not U.S.)							

Institution and Location			Years Attended		Field of Study		Degree (if any)		
					<i>Use specialties List, page 7</i>		Granted		
Institution			From	To	Field Name	Number	Title	Mo.	Yr.
Branch or City	State or Province	Country (if not U.S.)							

Institution	From	To	Field Name	Number	Title	Mo.	Yr.
Branch or City      State or Province      Country (if not U.S.)							

Institution	From	To	Field Name	Number	Title	Mo.	Yr.
Branch or City      State or Province      Country (if not U.S.)							

Institution			From	To	Field Name	Number	Title	Mo.	Yr.
Branch or City	State or Province	Country (if not U.S.)							

Institution	From	To	Field Name	Number	Title	Mo.	Yr.
Branch or City      State or Province      Country (if not U.S.)							

Institution	From	To	Field Name	Number	Title	Mo.	Yr.
Branch or City	State or Province	Country (if not U.S.)					

175  
3

**A9. When you receive your doctoral degree, how much money will you owe that is directly related to your undergraduate and graduate education?**

Mark (X) one in each column

**Undergraduate**

- 0 ☐ None  
 1 ☐ \$5,000 or less  
 2 ☐ \$5,001 - \$10,000  
 3 ☐ \$10,001 - \$15,000  
 4 ☐ \$15,001 - \$20,000  
 5 ☐ \$20,001 - \$25,000  
 6 ☐ \$25,001 - \$30,000  
 7 ☐ \$30,001 - \$35,000  
 8 ☐ \$35,001 - or more

**Graduate**

- 0 ☐ None  
 1 ☐ \$5,000 or less  
 2 ☐ \$5,001 - \$10,000  
 3 ☐ \$10,001 - \$15,000  
 4 ☐ \$15,001 - \$20,000  
 5 ☐ \$20,001 - \$25,000  
 6 ☐ \$25,001 - \$30,000  
 7 ☐ \$30,001 - \$35,000  
 8 ☐ \$35,001 - or more

**A10. How many years were there between the date you first entered graduate school in any program or capacity and the date your doctorate was granted?**

Years   Round to whole years

**A11. How many years were you taking courses or preparing for exams required for or related to your doctoral degree?**

Years   Round to whole years

**A12. How many years did you spend on your dissertation (non-course related preparation or research, writing and defense)?**

Years   Round to whole years

## PART B - Postgraduation Plans

**B1. How definite are your immediate (within the next year) postgraduate plans?**

Mark (X) one

- 0 ☐ Am returning to, or continuing in, predoctoral employment  
 1 ☐ Have signed contract or made definite commitment for other work or study  
 2 ☐ Am negotiating with one or more specific organizations  
 3 ☐ Am seeking position but have no specific prospects  
 4 ☐ Other - Specify

GO TO B2

SKIP TO B3

**B2. Please name the organization and geographic location where you will work or study.**

Name

SKIP TO B4

City  State  Country   
 (if U.S.) (if not U.S.)

**B3. In what state or country do you intend to live after graduation (within the next year)?**

0 ☐ in U.S. → State

1 ☐ not in U.S. → Country

**B4. What best describes your immediate (within the next year) postgraduate plans?**

Mark (X) one

**Further Training or Study**

- 0 ☐ Postdoctoral fellowship  
 1 ☐ Postdoctoral research associateship  
 2 ☐ Traineeship  
 3 ☐ Other study - Specify

GO TO B5

**Career Employment**

- 4 ☐ Employment (other than 0, 1, 2, 3)  
 5 ☐ Military service  
 6 ☐ Other - Specify

SKIP TO B6

**B5. What will be the main source of financial support for your postdoctoral study/research within the next year?**

Mark (X) one

- 0 ☐ U.S. Government  
 1 ☐ Industry/Business  
 2 ☐ College or university  
 3 ☐ Private foundation  
 4 ☐ Nonprofit, other than private foundation  
 5 ☐ Other - Specify   
 6 ☐ Unknown

SKIP TO C1



**B6. For what type of employer will you be working within the next year?**

Mark (X) one

**EDUCATION**

- a. ☐ U.S. 4-year college or university other than medical school
- b. ☐ U.S. medical school (including university-affiliated hospital or medical center)
- c. ☐ U.S. junior or community college or technical institute
- d. ☐ Preschool, elementary, or secondary school in the U.S.
- e. ☐ Foreign educational institution

**GOVERNMENT**

- f. ☐ Foreign government
- g. ☐ U.S. federal government
- h. ☐ U.S. state government
- i. ☐ U.S. local government

**PRIVATE SECTOR**

- j. ☐ Nonprofit organization
- k. ☐ Industry or business
- l. ☐ Self-employed

**OTHER**

- m. ☐ Other - Specify

**B7. From the list below, please indicate what your primary and secondary work activities will be by entering the numbers of your selections in the appropriate boxes:**

Enter numbers from below:

a.  Primary Activity

b.  Secondary Activity

- 0 Research and development
- 1 Teaching
- 2 Administration
- 3 Professional services to individuals
- 4 Other - Specify

## PART C - Background Information

**C1. Are you -**

- 1 ☐ Male
- 2 ☐ Female

**C2. What is your marital status?**

Mark (X) one

- 1 ☐ Married
- 2 ☐ Living in a marriage-like relationship
- 3 ☐ Widowed
- 4 ☐ Separated/divorced
- 5 ☐ Never married

**C3. Not including yourself (or your spouse/partner), how many dependents do you have - that is, how many others receive at least one half of their support from you?**

☐ Mark (X) box if none

Number

- 5 years of age or younger
- 6 to 18 years
- 19 years or older

**C4. What is the highest educational attainment of your mother and father?**

Mark (X) one for each parent

	a. Mother	b. Father
Less than high school/secondary school	1 <input type="checkbox"/>	1 <input type="checkbox"/>
High-school/secondary-school graduate	2 <input type="checkbox"/>	2 <input type="checkbox"/>
Some college	3 <input type="checkbox"/>	3 <input type="checkbox"/>
Bachelor's degree	4 <input type="checkbox"/>	4 <input type="checkbox"/>
Master's degree	5 <input type="checkbox"/>	5 <input type="checkbox"/>
Professional degree	6 <input type="checkbox"/>	6 <input type="checkbox"/>
Doctoral degree	7 <input type="checkbox"/>	7 <input type="checkbox"/>

**C5. What is your place of birth?**

State (if U.S.)

OR

Country (if not U.S.)

**C6. What is your date of birth?**

Month   Day   Year  1  9

**C7. What is your citizenship status?**

Mark (X) one

**U.S. Citizen:**

- 0 ☐ Native Born  → SKIP TO C9
- 1 ☐ Naturalized

**Non-U.S. Citizen:**

- 2 ☐ With a Permanent U.S. Resident Visa ("Green Card")  → GO TO C8
- 3 ☐ With a Temporary U.S. Visa

**C8. (IF A NON-U.S. CITIZEN) Of which country are you a citizen?**

(Specify country of present citizenship)

**C9. In what state or country was the high school/secondary school that you last attended?**

State (if U.S.)

OR

Country (if not U.S.)

**C10. Are you a person with a disability?**

- 1 ☐ Yes → **GO TO C11**  
2 ☐ No → **SKIP TO C12**

**C11. (IF YES) Which of the following categories describes your disability(ies)?**

Mark (X) one or more

- a. ☐ Blind/Visually Impaired  
b. ☐ Deaf/Hard of Hearing  
c. ☐ Physical/Orthopedic Disability  
d. ☐ Learning/Cognitive Disability  
e. ☐ Vocal/Speech Disability  
f. ☐ Other - Specify

**C12. Are you Hispanic (or Latino)?**

- 1 ☐ Yes → **GO to C13**  
2 ☐ No → **SKIP to C14**

**C13. (IF YES TO C12) Which of the following describes your Hispanic origin or descent?**

- 1 ☐ Mexican American or Chicano  
2 ☐ Puerto Rican  
3 ☐ Cuban  
4 ☐ Other Hispanic - Specify

**C14. What is your racial background?**

Mark (X) one or more

- a. ☐ American Indian or Alaska Native

Specify tribal affiliation(s)

- b. ☐ Native Hawaiian or other Pacific Islander  
c. ☐ Asian  
d. ☐ Black or African-American  
e. ☐ White

**C15. Please fill in your U.S. Social Security number.**

**C16. In case we need to clarify some of the information you have provided, please list an E-mail address, website address (if applicable), and telephone numbers where you can be reached.**

E-mail address

Website address

Daytime telephone

Evening telephone

**C17. Please provide your address and the name and address of a person through whom you could always be reached.**

**Current Address**

Number Street

City State Country Zip or Postal Code

**Contact Person**

Name

Number Street

City State Country Zip or Postal Code

Phone Number (including area or country code)

E-mail Address

**C18. Please sign and date.**

Signature

Date

The Summary Report on this survey is available at  
<http://www.norc.uchicago.edu/issues/docdata.htm>

Please use the back cover to make any additional comments you may have about this survey.

Thank you for completing the questionnaire. Please return it to your GRADUATE SCHOOL for forwarding to Survey of Earned Doctorates, The National Opinion Research Center at the University of Chicago, 1 N. State Street, Floor 16, Chicago, IL 60602. If you have questions or concerns about the survey, you may contact us by e-mail at [4800-sed@norcmail.uchicago.edu](mailto:4800-sed@norcmail.uchicago.edu) or phone at 1-800-248-8649.

## SPECIALTIES LIST

INSTRUCTIONS: The following field listing is to be used in responding to items A2 and A8. If you choose a field marked with an asterisk (\*), please write in your field of specialization in the space provided in those items.

<b>AGRICULTURAL SCIENCES</b>			<b>Miscellaneous Physical Sciences</b>		
000	Agricultural Economics	180	Pharmacology, Human & Animal	435	Geometry
002	Agricultural Business & Mgmt.	185	Physiology, Human & Animal	440	Logic (See also 785)
005	Animal Breeding & Genetics	189	Zoology, Other*	445	Number Theory
010	Animal Nutrition	198	Biological Sciences, General	450	Mathematical Statistics
012	Dairy Science	199	Biological Sciences, Other*	455	Topology
014	Poultry Science			460	Computing Theory & Practice
019	Animal Sciences, Other*			465	Operations Research (See also 363, 930)
020	Agronomy & Crop Science			498	Mathematics, General
025	Plant Breeding & Genetics			499	Mathematics, Other*
030	Plant Pathology (See also 120)				
039	Plant Sciences, Other*				
043	Food Engineering				
044	Food Sciences, Other*				
046	Soil Chemistry/Microbiology				
049	Soil Sciences, Other*				
050	Horticulture Science				
055	Fisheries Sci. & Management				
066	Forest Biology				
068	Forest Engineering				
070	Forest Management				
072	Wood Sci. & Pulp/Paper Tech.				
074	Conserv./Renewable Natural Res.				
079	Forestry & Related Sci., Other*				
080	Wildlife/Range Management				
098	Agricultural Sci., General				
099	Agricultural Sci., Other*				
<b>BIOLOGICAL SCIENCES</b>			<b>HEALTH SCIENCES</b>		
100	Biochemistry	300	Speech-Lang. Path. & Audiology	200	Speech-Lang. Path. & Audiology
103	Biomedical Sciences	303	Environmental Health	210	Environmental Health
105	Biophysics	306	Epidemiology (See also 133)	212	Health Systems/Service Admin.
107	Biotechnology Research	309	Exercise Physiology/Sci., Kinesiology	215	Public Health
110	Bacteriology	312	Nursing	220	Epidemiology (See also 133)
115	Plant Genetics	315	Pharmacy	222	Exercise Physiology/Sci., Kinesiology
120	Plant Pathology (See also 030)	318	Rehabilitation/Therapeutic Services	230	Nursing
125	Plant Physiology	321	Veterinary Medicine	240	Pharmacy
129	Botany, Other*	324	Health Sciences, General	245	Rehabilitation/Therapeutic Services
130	Anatomy	327	Health Sciences, Other*	250	Veterinary Medicine
133	Biometrics & Biostatistics	330		298	Health Sciences, General
136	Cell Biology (See also 154)	333		299	Health Sciences, Other*
139	Ecology	336			
142	Developmental Bio./Embryology	339			
145	Endocrinology	342			
148	Entomology	345			
151	Biological Immunology	348			
154	Molecular Biology	351			
157	Microbiology	357			
160	Neuroscience	360			
163	Nutritional Sciences	363			
166	Parasitology	366			
169	Toxicology	369			
170	Genetics, Human & Animal	372			
175	Pathology, Human & Animal (See also 120)	377			
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</					

**To the Doctorate Recipient:**

Congratulations on earning a doctoral degree! This is an important accomplishment for you. Your accomplishment is also significant for both this nation and others, as the new knowledge generated by research doctorates enhances the quality of life in this country and throughout the world. Because of the importance of persons earning research doctorates, several Federal agencies—listed on the cover—sponsor this Survey of Earned Doctorates.

The basic purpose of this survey is to gather objective data about doctoral graduates. These data are important in improving graduate education both at your home institution and beyond. Often, decisions made by governmental and private agencies to develop new programs, or to support present ones, are based in part on the data developed from this survey. If you have any comments about the survey, please provide them in the space below.

On behalf of the sponsoring Federal agencies, I thank you for your participation in this survey.

Best wishes,

Dr. Lynda Carlson  
National Science Foundation

**Comments About This Survey**

**Please return this questionnaire to your GRADUATE DEAN for forwarding to  
Survey of Earned Doctorates, NORC at the University of Chicago,  
1 N. State Street, Floor 16, Chicago, IL 60602.**

**If you have questions or concerns about the survey, you may contact us by e-mail at  
4800-sed@norcmail.uchicago.edu or phone at 1-800-248-8649.**

OFFICE USE ONLY					
Case ID		Instit. Code:		Grad Date:	
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PROCESSING					
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## **APPENDIX E: Field Classification and Research Degree Titles**



## APPENDIX E: Field Classification and Research Degree Titles

The appendix tables present data according to the following field classifications. Appendix Tables A-1 and A-2 and Appendix Table B-1 display all subfields that are on the survey Specialties List. Appendix Tables A-4, A-5, and A-6 show data by seven broad fields only. Appendix Tables A-3 and A-7 include the additional field groupings indicated below.

### SCIENCES

#### Physical Sciences (400-599)

Physics and Astronomy (500 -505, 560-579)  
Chemistry (520-539)  
Earth, Atmospheric, and Marine Sciences  
(510-519, 540-559, 590-599)  
Mathematics (420-499)  
Computer Sciences (400410) } Combined in Table A -7

#### Engineering (300-399)

#### Life Sciences (000-299)

Biological Sciences (100 -199)  
Biochemistry (100)  
Other Biological Sciences (103 -199)  
Health Sciences (200-299)  
Agricultural Sciences (000 -099)

#### Social Sciences (600-699)

Psychology (600-649)  
Economics and Econometrics (666, 668)  
Anthropology and Sociology (650, 686)  
Political Science and International Relations  
(674,678)  
Other Social Sciences  
(652-662, 670, 672, 682, 690-699) } Combined in Table A -7

### NONSCIENCES

#### Humanities (700-799)

History (700-719)  
English and American Language  
and Literature (732 -734)  
Foreign Languages and Literature  
(740-769)  
Other Humanities  
(720-729, 736-739, 770-799) } Combined in Table A -7

#### Education (800-899)

#### Professional and Other Fields (900-999)

Business and Management (900 -939)  
Other Professional Fields (940 -989)  
Other Fields (999)

**NOTE:** Doctorate recipients indicate their fields of specialty.  
Their choices may differ from departmental names.

### TITLES OF RESEARCH DEGREES INCLUDED IN THE SURVEY OF EARNED DOCTORATES

DA/DAT	Doctor of Arts/Arts in Teaching	DMM	Doctor of Music Ministry
DArch	Doctor of Architecture	DMSc	Doctor of Medical Science
DAS	Doctor of Applied Science	DNSc	Doctor of Nursing Science
DBA	Doctor of Business Administration	DPA	Doctor of Public Administration
DChem	Doctor of Chemistry	DPE	Doctor of Physical Education
DCJ	Doctor of Criminal Justice	DPH	Doctor of Public Health
DCL	Doctor of Comparative Law/Civil Law	DPS	Doctor of Professional Studies
DCrim	Doctor of Criminology	DrDES	Doctor of Design
DED	Doctor of Environmental Design	DRec/DR	Doctor of Recreation
DEng	Doctor of Engineering	DSc/ScD	Doctor of Science
DEnv	Doctor of Environment	DScD	Doctor of Science in Dentistry
DESc/ScDE	Doctor of Engineering Science	DScH	Doctor of Science and Hygiene
DF	Doctor of Forestry	DScVM	Doctor of Science in Veterinary Medicine
DFA	Doctor of Fine Arts	DSM	Doctor of Sacred Music
DGS	Doctor of Geological Science	DSSc	Doctor of Social Science
DHL	Doctor of Hebrew Literature/Letters	DSW	Doctor of Social Work
DHS	Doctor of Health and Safety	EdD	Doctor of Education
DHS	Doctor of Hebrew Studies	JCD	Doctor of Canon Law
DIT	Doctor of Industrial Technology	JSD	Doctor of Juristic Science
DLS	Doctor of Library Science	LScD	Doctor of Science of Law
DM	Doctor of Music	PhD	Doctor of Philosophy
DMA	Doctor of Musical Arts	RhD	Doctor of Rehabilitation
DME	Doctor of Musical Education	SJD	Doctor of Juridical Science
DML	Doctor of Modern Languages	ThD	Doctor of Theology





# NSF Publications from the Doctorate Data Project

## ***InfoBriefs***

- Employment Sector, Salaries, Publishing, and Patenting Activities of S&E Doctorate Holders (2004)
- Emigration of U.S.-Born S&E Doctorate Recipients (2004)
- Plans for Postdoctoral Research Appointments Among Recent U.S. Doctorate Recipients (2004)
- How Large is the U.S. S&E Workforce?
- Declines in U.S. Doctorate Awards in Physics and Engineering
- Interstate Migration Patterns of Recent Science and Engineering Doctorate Recipients
- Employment Preferences and Outcomes of Recent Science and Engineering Doctorate Holders in the Labor Market
- Academic Employment of Recent Science and Engineering Doctorate Holders
- Psychology Doctorate Recipients: How Much Financial Debt at Graduation?
- Does the Educational Debt Burden of Science and Engineering Doctorates Differ by Race/Ethnicity and Sex?
- Healthy Economy Yields Even Lower Unemployment Rate for Doctoral Scientists and Engineers
- How Much Does the U.S. Rely on Immigrant Engineers?
- Despite Increases, Women and Minorities Still Underrepresented in Undergraduate Science and Engineering Education

## ***Reports***

- Women, Minorities, and Persons with Disabilities in Science and Engineering: 2004
- Science and Engineering Doctorate Awards: 2002
- Science and Engineering Degrees, by Race/Ethnicity of Recipients: 1992-2001
- Science and Engineering Degrees: 1966-2001
- Doctoral Scientists and Engineers in the U.S.: 2001 Profile Tables
- Characteristics of Doctoral Scientists and Engineers in the U.S.: 2001
- Science and Engineering State Profiles 2000-2001
- Older Doctoral Scientists and Engineers: Selected Labor Force Characteristics
- Modes of Financial Support in the Graduate Education of S&E Doctorate Recipients
- SESTAT: A Tool for Studying Scientists and Engineers in the United States

## ***Data sources and publications sources:***

*These publications contain data from*

- 1) *the annual Survey of Earned Doctorates(a universe survey on the education of research doctorates) or*
- 2) *the biennial Survey of Doctorate Recipients (a longitudinal sample survey of workforce characteristics).*

*Complete electronic information on these surveys and publications may be obtained on the web at:*

<http://www.nsf.gov/sbe/srs/stats.htm>

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