

Report on the 2001-2002 New Doctoral Recipients

This report presents a statistical profile of recipients of doctoral degrees awarded by departments in the mathematical sciences at universities in the United States during the period July 1, 2001, through June 30, 2002. It includes a preliminary analysis of the fall 2002 employment plans of 2001-02 doctoral recipients and a demographic profile summarizing characteristics of citizenship status, sex, and racial/ethnic group. All information came from the departments that gave the degrees.

Table 1 provides the departmental response rates for the 2002 Survey of New Doctoral Recipients. See page 253 for a description of the groups. No adjustments were made in this report for nonresponding departments.

Table 1: Doctorates Granted Response Rates

Group I (Pu)	25 of 25 including 0 with 0 degrees
Group I (Pr)	23 of 23 including 0 with 0 degrees
Group II	51 of 56 including 4 with 0 degrees
Group III	71 of 73 including 28 with 0 degrees
Group IV	72 of 86 including 9 with 0 degrees
Group Va	21 of 22 including 2 with 0 degrees
Group Vb	No longer surveyed

This preliminary report will be updated, using information gathered from the new doctoral recipients, in the Second Report of the 2002 Annual Survey. It will appear in the August 2003 issue of the *Notices of the AMS*.

Changes in the Annual Survey occur over time, and these changes need to be considered when comparing results in this report to those in prior years. Information about changes that occurred in 1997 or later can be found in the First Report for the 2000 Annual Survey in the February 2001 issue of the *Notices of the AMS*.

In this First Report's tables referring to new doctoral recipients, "Fall" refers to results based on information about new doctoral recipients received from departments granting their degrees. This information is gathered in the first fall following the academic year in which the degrees were granted. "Final" refers to results based on supplemental information received from the new doctoral recipients themselves as well as additional new doctoral recipients not reported by departments in time for publication in the First Report. These results are published each August in the Second Report.

Doctoral Degrees Granted in 2001-2002

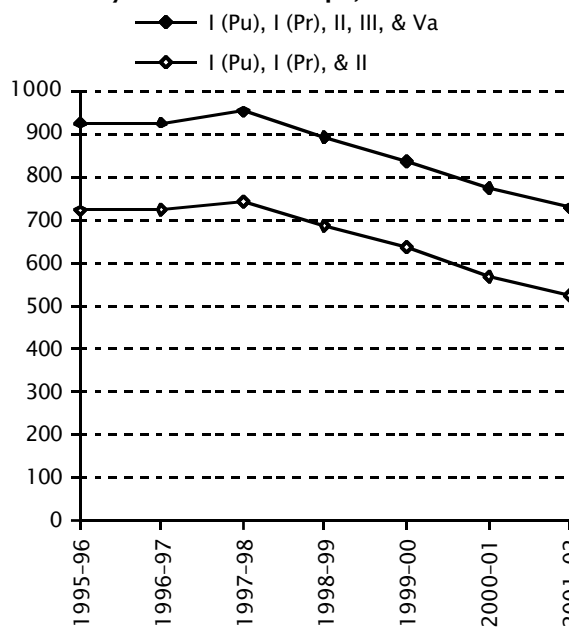
Table 2 shows the number of new doctoral degrees granted by the different doctoral groups surveyed in the Annual Survey for the past seven years. The 948 new doctorates granted by these departments in 2001-02 is a decrease of 60 from the fall count for 2000-01. Figure 1 presents the trends in doctorates granted across the combined Groups I (Pu), I (Pr), and II and Groups I (Pu), I (Pr), II, III, and Va.

Table 2: New Doctoral Degrees Awarded by Group, Fall Count

Group	I (Pu)	I (Pr)	II	III	IV	Va	TOTAL*
1995-96	325	174	222	124	172	81	1098
1996-97	297	187	238	132	197	72	1123
1997-98	306	174	264	129	213	77	1163
1998-99	292	152	241	136	243	69	1133
1999-00	256	157	223	132	284	67	1119
2000-01	233	129	203	125	237	81	1008
2001-02	218	139	164	124	222	81	948

* Does not include Vb. See "Definitions of the Groups" on page 253.

Figure 1: New Doctoral Degrees Awarded by Combined Groups, Fall Count



Group I (Pr) was up 10, Group Va stayed the same, while all other groups had a decrease in new doctoral recipients. The decrease of 39 in Group II is the largest. The response rates were above 90% for every group except Group IV, which historically has had slightly lower response rates than the other groups. Eight more departments responded in time for the First Report this year than responded by this time last year. Otherwise the drops probably would have been even larger.

Table 3: Full-Time Graduate Students in Groups I, II, III, & Va by Citizenship, Fall 1992 to Fall 2001
 (* Data Reprinted from Table 6B in Fall 2001 Third Report)

GRADUATE STUDENTS	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total full-time*	10595	10525	10185	9761	9476	9003	8791	8838	9637	9361
First-year full-time*	2906	2762	2668	2601	2443	2386	2510	2664	2839	2875
U.S. citizen full-time*	6020	5865	5945	5623	5445	4947	4831	4668	5085	4631
First-year U.S. citizen full-time	1801	1700	1664	1551	1465	1316	1349	1401	1527	1517

The 948 new doctoral recipients is a preliminary count. A final count will appear in the Second Report in the August 2003 issue of the *Notices of the AMS*. Efforts are under way to obtain data from as many of the nonresponding departments as possible. A careful look at the past history of the nonresponding departments makes it unlikely that the final count of new doctoral recipients will break 1,000. The final count for last year was 1,065. It is clear that there will be another substantial drop in new doctoral recipients for 2001-02.

Table 2 shows that most groups had a peak or near peak in new doctorates in 1997-98. Group IV had a peak in 1999-00. From 1997-98 to 2001-02, the number of new doctorates in Groups I (Pu), I (Pr), and II dropped from 744 to 521, a decrease of 30%. If Groups I (Pu), I (Pr), II, and III are considered, the drop was from 873 to 645, a decrease of 26% from 1997-98 to 2001-02. Figure 1 shows these trends.

Table 3 gives historical information about various types of full-time graduate students in Groups I, II, III, and Va combined. These data, gathered in the 2001 Departmental Profile survey, are reprinted from Table 6B of the Third Report of the 2001 Annual Survey (*Notices of the AMS*, September 2002). It sheds

some light on the downward trend in number of new doctorates given in the last four years as shown in Table 2 and Figure 1. The total number of full-time graduate students fell from 10,595 in 1992 to 8,791 in 1998, and was 9,361 in fall 2001. The number of first-year full-time graduate students fell from 2,906 in 1992 to 2,386 in 1997 and was 2,875 in fall 2001. Full-time first-year U.S. citizen graduate students fell from 1,801 in 1992 to 1,316 in 1997 and was 1,517 in fall 2001. Using six or seven years as the typical number of years to complete a doctorate, it appears likely that the total number of new doctoral recipients and the number of U.S. citizen new doctoral recipients will continue to decline for two or three more years. The decline may be at a slower rate than it has been for the past four years.

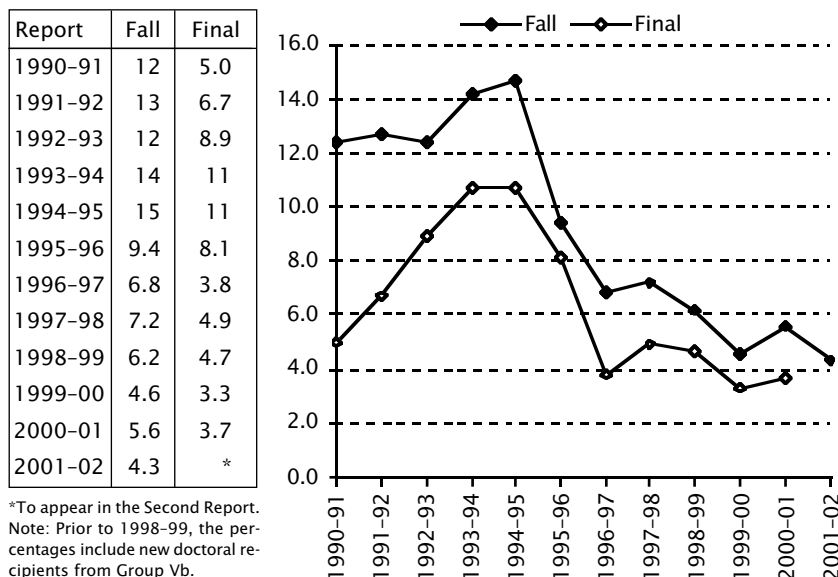
The 2001-02 numbers in Table 2 will be broken down in various ways, such as by sex, in later sections of this report. The names of the 948 new doctoral recipients are found on pages 264-280 of this issue of the *Notices*.

**Employment Status of 2001-02
 New Doctoral Recipients**

Table 4A gives a cross-tabulation of the 948 new doctoral recipients in the mathematical sciences:

Type of Employer by Field of Thesis. Table 4B gives a cross-tabulation of the same data: Type of Employer by Type of Degree-Granting Department (Group). Table 4C gives a cross-tabulation of these same data: Type of Degree-Granting Department (Group) by Field of Thesis. This table gives a picture of the type of doctoral students being trained in the various groups. These tables contain a wealth of information about these new doctoral recipients, some of which will be discussed in this report. Note that these tables also give a breakdown by sex for type of employer, type of degree-granting department, and field of thesis. Keep in mind that the results in this report come from the departments giving the degrees and not from the degree recipients themselves. These tables will be revised using information from the doctoral recipients themselves and will appear in the 2002 Second Report in August 2003.

Figure 2: Percentage of New Doctoral Recipients Unemployed
 (as reported in the respective Annual Survey Reports 1991-2002)



*To appear in the Second Report. Note: Prior to 1998-99, the percentages include new doctoral recipients from Group Vb.

Table 4A: Employment Status of 2001–02 U.S. New Doctoral Recipients in the Mathematical Sciences by Field of Thesis

TYPE OF EMPLOYER	FIELD OF THESIS												TOTAL
	Algebra Number Theory	Real, Comp., Funct., & Harmonic Analysis	Geometry/Topology	Discr. Math./Combin./Logic/Comp. Sci.	Probability	Statistics/Biostat.	Applied Math.	Numerical Analysis/Approximations	Linear Nonlinear Optim./Control	Differential, Integral, & Difference Equations	Math. Educ.	Other/Unknown	
Group I (Public)	16	12	12	8	4	0	3	4	0	10	0	0	69
Group I (Private)	11	9	13	3	0	1	7	5	0	7	0	0	56
Group II	16	12	8	4	4	3	7	6	1	4	2	0	67
Group III	4	0	2	2	0	4	1	3	1	2	2	0	21
Group IV	0	0	0	0	2	43	1	0	0	0	0	0	46
Group Va	0	0	0	0	2	1	3	0	0	1	0	0	7
Master's	5	3	5	8	2	6	5	2	1	0	2	2	41
Bachelor's	27	17	8	11	1	7	7	2	2	10	5	0	97
Two-Year College	2	0	5	0	0	1	1	0	0	0	1	0	10
Other Academic Dept.	4	3	1	5	1	30	11	6	1	5	3	1	71
Research Institute/Other Nonprofit	3	1	1	0	0	7	1	3	0	2	0	0	18
Government	1	1	3	5	0	11	10	5	0	2	0	0	38
Business and Industry	6	2	6	6	8	63	20	6	1	3	1	1	123
Non-U.S. Academic	13	8	12	7	3	13	11	3	3	8	0	0	81
Non-U.S. Nonacademic	0	3	1	0	0	4	2	0	1	0	0	0	11
Not Seeking Employment	2	0	2	1	1	4	0	0	0	0	0	0	10
Still Seeking Employment	2	4	1	3	0	13	6	2	1	2	0	0	34
Unknown (U.S.)	10	9	12	6	4	32	12	10	0	7	2	1	105
Unknown (non-U.S.)*	4	2	7	3	3	10	5	3	2	3	0	1	43
TOTAL	126	86	99	72	35	253	113	60	14	66	18	6	948
Column Subtotals	98	63	74	48	28	147	89	47	13	40	8	3	658
	28	23	25	24	7	106	24	13	1	26	10	3	290

*Includes those whose status is reported as "unknown" or "still seeking employment".

Table 4B: Employment Status of 2001–02 U.S. New Doctoral Recipients in the Mathematical Sciences by Type of Degree-Granting Department

TYPE OF EMPLOYER	TYPE OF DOCTORAL DEGREE-GRANTING DEPARTMENT						TOTAL	Row Subtotals	
	Group I (Public) Math.	Group I (Private) Math.	Group II Math.	Group III Math.	Group IV Statistics	Group Va Applied Math.		Male	Female
Group I (Public)	34	19	11	0	0	5	69	55	14
Group I (Private)	16	29	4	4	0	3	56	41	15
Group II	27	11	16	10	1	2	67	47	20
Group III	5	3	2	9	2	0	21	11	10
Group IV	0	1	0	3	40	2	46	31	15
Group Va	0	0	0	1	1	5	7	6	1
Master's	7	1	14	9	6	4	41	24	17
Bachelor's	17	7	30	34	6	3	97	62	35
Two-Year College	2	0	3	4	1	0	10	8	2
Other Academic Dept.	10	7	9	11	28	6	71	44	27
Research Institute/Other Nonprofit	2	5	2	1	7	1	18	11	7
Government	5	8	6	4	8	7	38	26	12
Business and Industry	15	12	19	6	56	15	123	88	35
Non-U.S. Academic	28	19	8	10	11	5	81	61	20
Non-U.S. Nonacademic	2	3	1	1	2	2	11	9	2
Not Seeking Employment	1	1	2	2	4	0	10	6	4
Still Seeking Employment	3	2	6	4	11	8	34	24	10
Unknown (U.S.)	29	7	26	9	27	7	105	73	32
Unknown (non-U.S.)*	15	4	5	2	11	6	43	31	12
TOTAL	218	139	164	124	222	81	948	658	290
Column Subtotals	171	100	114	78	130	65	658		
	47	39	50	46	92	16	290		

*Includes those whose status is reported as "unknown" or "still seeking employment".

Table 4C: Field of Thesis of 2001-02 New Doctoral Recipients by Type of Degree-Granting Department

TYPE OF DOCTORAL DEGREE-GRANTING DEPARTMENT	FIELD OF THESIS												TOTAL
	Algebra Number Theory	Real, Comp., Funct., & Harmonic Analysis	Geometry/Topology	Discr. Math./Combin./Logic/Comp. Sci.	Probability	Statistics/Biostat.	Applied Math.	Numerical Analysis/Approximations	Linear Nonlinear Optim./Control	Differential, Integral, & Difference Equations	Math. Educ.	Other/Unknown	
Group I (Public)	46	30	42	18	10	3	25	18	2	22	2	0	218
Group I (Private)	30	14	35	14	5	8	17	2	2	10	0	2	139
Group II	33	28	12	11	7	8	22	19	3	15	4	2	164
Group III	15	14	9	21	2	16	18	7	1	9	12	0	124
Group IV	0	0	0	1	6	215	0	0	0	0	0	0	222
Group Va	2	0	1	7	5	3	31	14	6	10	0	2	81
Column Total	126	86	99	72	35	253	113	60	14	66	18	6	948

Table 5A: U.S. Employed 2001-02 New Doctoral Recipients by Type of Degree-Granting Department

U.S. EMPLOYER	I (Pu)	I (Pr)	II	III	IV	Va	TOTAL
Groups I, II, III, IV, and Va	82	63	33	27	44	17	266
Master's, Bachelor's, and 2-Year Colleges	26	8	47	47	13	7	148
Other Academic and Research Institutes	12	12	11	12	35	7	89
Government	5	8	6	4	8	7	38
Business and Industry	15	12	19	6	56	15	123
Total	140	103	116	96	156	53	664

The last column (Total) in Table 4A can be used to find the overall unemployment rate. In this and other unemployment calculations in this report, the individuals whose employment status is not known (Unknown (U.S.) and Unknown (non-U.S.)) are first removed, and the unemployment fraction is the number still seeking employment divided by the total number of individuals left after the "Unknowns" are removed. The overall unemployment rate for these data is 4.3%. This figure will be updated later with information gathered from the individual new doctoral recipients. The figure for fall 2001 was 5.6%. Figure 2 shows how this unemployment rate compares with other years over the past decade. The unemployment rates, calculated using Table 4B, vary from group to group, with a

Table 5B: Number of New Doctoral Recipients Taking Positions in Business and Industry in the U.S. by Type of Degree-Granting Department, Fall 1998 to Fall 2002

Group	I (Pu)	I (Pr)	II	III	IV	Va	TOTAL
Fall 1998	29	27	41	27	70	25	219
Fall 1999	28	19	23	19	57	14	160
Fall 2000	31	23	34	25	79	14	206
Fall 2001	24	15	25	21	59	24	168
Fall 2002	15	12	19	6	56	15	123

high of 12% for Group Va and lows of 1.6% and 1.7% for Groups I (Private) and I (Public), respectively.

There are 664 new doctoral recipients employed in the U.S. Table 5A gives a breakdown of type of employer by type of degree-granting department for these 664 new doctoral recipients. Of these, 503 (76%) hold academic positions, 38 (5.7%) are employed by government, and 123 (19%) hold positions in business and industry. In the First Report for 2000-01, there were 717 new doctoral recipients employed in the U.S., of which 510 (71%) held academic positions, 39 (5.4%) were in gov-

Table 5C: Number of New Doctoral Recipients Taking U.S. Academic Positions by Type of Degree-Granting Department, Fall 1998 to Fall 2002

Group	I (Pu)	I (Pr)	II	III	IV	Va	TOTAL
Fall 1998	117	97	122	49	84	32	501
Fall 1999	157	87	130	70	82	38	564
Fall 2000	133	78	112	75	126	27	551
Fall 2001	146	70	109	74	84	27	510
Fall 2002	120	83	91	86	92	31	503

ernment, and 168 (23%) were in business and industry.

Table 5B shows the number of new doctoral recipients who took positions in business and industry by the type of department granting their degree for fall 1998 to fall 2002. The number of new doctoral recipients taking jobs in business and industry, which had been rising steadily in the mid-1990s and oscillating in the late 1990s, has now had drops of 38 in fall 2001 and 45 in fall 2002. Among the 664 new doctoral recipients known to have employment in the U.S. in fall 2002, Group III has the smallest percentage taking jobs in business and industry at 6.3% and Group IV the highest at 36%.

Table 5C shows the number of new doctoral recipients who took academic positions in the U.S. by type of department granting their degree for fall

Table 5D: U.S. Academic Positions Filled by New Doctoral Recipients by Type of Hiring Department, Fall 1998 to Fall 2002

Group	I-III	IV	Va	M&B	Other	TOTAL
Fall 1998	177	35	7	177	105	501
Fall 1999	221	49	17	175	102	564
Fall 2000	209	46	13	158	125	551
Fall 2001	199	41	12	161	97	510
Fall 2002	213	46	7	138	99	503

1998 to fall 2002. Among the 664 new doctoral recipients employed in the U.S. in fall 2002, 76% have academic positions. This percentage is highest for Group III at 90% and lowest for Groups IV at 59% and Va at 58%.

Table 5D shows how many positions were filled with new doctoral recipients for each type of aca-

Table 5E: Females as a Percentage of 2001-02 New Doctoral Recipients Produced by and Hired by Doctoral-Granting Groups

%	I (Pu)	I (Pr)	II	III	IV	Va	TOTAL
Produced	22	28	31	37	41	20	31
Hired	20	27	30	48	33	14	28

ademic employer. The number taking academic positions in the U.S. dropped in 2001 after being relatively high for the previous two years. The 2002 figure was down only slightly from last year, especially considering this year's substantial decrease in new doctoral recipients.

In fall 2002, 61 new doctoral recipients hold positions in the institution that granted their de-

gree, although not necessarily in the same department. This represents 8.1% of new doctoral recipients who are currently employed and 12% of the U.S. academic positions held by new doctoral recipients. In fall 2001 there were 58 such individuals making up 7.1% of the new doctoral recipients who were employed at the time of the First Report. Nine new doctoral recipients have taken part-time positions in fall 2002.

Table 5G: 2001-02 New Doctoral Recipients Having Employment in the U.S. by Type of Employer and Citizenship

U.S. EMPLOYER	CITIZENSHIP		TOTAL
	U.S.	Non-U.S.	
Academic, Groups I-Va	116	150	266
Academic, Other	138	99	237
Nonacademic	67	94	161
Total	321	343	664

Information about 2001-02 Female New Doctoral Recipients

Tables 4A and 4B give male and female breakdowns of the new doctoral recipients in 2001-02 by Field of Thesis, by Type of Degree-Granting Department, and by Type of Employer.

Overall, 290 (31%) of the 948 new doctoral recipients in 2001-02 are female. In 2000-01, 292 (29%) of the new doctoral recipients were female. This percentage varies over the different groups, and these percentages are given in the first row of Table 5E. Following the same trend as in recent years, the percentage is highest for Group IV, statistics/biostatistics departments, at 41%. While the

Table 5F: Employment Status of 2001-02 U.S. New Doctoral Recipients by Citizenship Status

TYPE OF EMPLOYER	CITIZENSHIP				TOTAL
	U.S. CITIZENS	NON-U.S. CITIZENS			
		Permanent Visa	Temporary Visa	Unknown Visa	
U.S. Employer	321	35	293	15	664
U.S. Academic	254	18	218	13	503
Groups I, II, III, and Va	100	8	109	3	220
Group IV	16	1	25	4	46
Non-Ph.D. Department	133	9	72	5	219
Research Institute/Other Nonprofit	5	0	12	1	18
U.S. Nonacademic	67	17	75	2	161
Non-U.S. Employer	11	2	76	3	92
Non-U.S. Academic	11	2	65	3	81
Non-U.S. Nonacademic	0	0	11	0	11
Not Seeking Employment	4	0	6	0	10
Still Seeking Employment	17	2	15	0	34
SUBTOTAL	353	39	390	18	800
Unknown (U.S.)	65	6	31	3	105
Unknown (non-U.S.)*	0	2	35	6	43
TOTAL	418	47	456	27	948

*Includes those whose status is reported as "unknown" or "still seeking employment".

Table 6: Sex, Race/Ethnicity, and Citizenship of 2001–02 U.S. New Doctoral Recipients

RACIAL/ETHNIC GROUP	MALE					FEMALE					TOTAL
	U.S. CITIZENS	NON-U.S. CITIZENS			Total Male	U.S. CITIZENS	NON-U.S. CITIZENS			Total Female	
		Permanent Visa	Temporary Visa	Unknown Visa			Permanent Visa	Temporary Visa	Unknown Visa		
American Indian or Alaska Native	2	0	2	0	4	0	0	0	0	0	4
Asian	14	10	159	9	192	4	7	79	4	94	286
Black or African American	6	4	6	0	16	6	1	1	0	8	24
Hispanic or Latino	6	1	17	0	24	2	0	5	1	8	32
Native Hawaiian or Other Pacific Islander	3	0	0	0	3	0	0	0	0	0	3
White	258	12	133	6	409	112	10	48	3	173	582
Unknown	2	0	5	3	10	3	2	1	1	7	17
TOTAL	291	27	322	18	658	127	20	134	9	290	948

lowest percentage last year was for Group I (Pr) at 17%, this year it is for Group Va, at 20%.

The second row of Table 5E gives the percentage of the new doctoral recipients hired who are female for each of the Groups I, II, III, IV and Va. In addition, 42% of the new doctoral recipients hired in Group M, master's departments, are female; 36% of the new doctoral recipients hired in Group B, bachelor's departments, are female; and 29% of new doctoral recipients hired in business and industry are female.

The unemployment rate for female new doctoral recipients is 4.1% compared to 4.3% for males and 4.3% overall.

The percentage of female new doctoral recipients within fields of thesis ranged from 7.1% in optimization/control to 42% in statistics and 56% in mathematics education.

Later sections in this First Report give more information about the female new doctoral recipients by citizenship and the female new doctoral recipients in Group IV.

Employment Information about 2001–02 New Doctoral Recipients by Citizenship and Type of Employer

Table 5F shows the pattern of employment within broad job categories broken down by citizenship status of the new doctoral recipients.

The unemployment rate for the 418 U.S. citizens is 4.8% compared to 6.4% in fall 2001. The unemployment rate for non-U.S. citizens is 3.8%. This varies by type of visa. The unemployment rate for non-U.S. citizens with a permanent visa is 5.1%, while that for non-U.S. citizens with a temporary visa is 3.8%.

Among U.S. citizens whose employment status is known, 91% are employed in the U.S. Among non-U.S. citizens with a permanent visa whose employment status is known, 90% have jobs in the U.S.,

while the percentage for non-U.S. citizens with a temporary visa is 75%.

Table 5G is a cross-tabulation of the 664 new doctoral recipients who have employment in the U.S. by citizenship and broad employment categories, using numbers from Table 5F. Of the 664 new doctoral recipients having jobs in the U.S., 48% are U.S. citizens. Of the 266 new doctoral recipients who took jobs in U.S. doctoral-granting departments, 44% are U.S. citizens. Of the 237 who took other academic positions, 58% are U.S. citizens. Of the 161 who took nonacademic positions, 42% are U.S. citizens.

Of the 321 U.S. citizens employed in the U.S., 36% have jobs in a doctoral-granting department, 43% are in other academic positions, and 21% are in nonacademic positions. For the 343 non-U.S. citizens employed in the U.S., the analogous percentages are 44%, 29%, and 27% respectively.

Sex, Race/Ethnicity, and Citizenship Status of 2001–02 New Doctoral Recipients

Table 6 presents a breakdown of new doctoral recipients according to sex, racial/ethnic group, and citizenship status. The information reported in this table was obtained in summary form from the departments granting the degrees.

There were 418 (44%) U.S. citizens among the 948 new doctoral recipients in 2001–02. Among U.S. citizens, 18 are Asians (14 male and 4 female), 12 are Blacks or African Americans (6 male and 6 female), 8 are Hispanics or Latinos (6 male and 2 female), 370 are Whites (258 male and 112 female), and 10 are other. Among non-U.S. citizens, there are 268 Asians, 24 Hispanics or Latinos, 212 Whites, and 26 other.

Table 7 and Figure 3 give the number of new U.S. doctoral recipients and the number of U.S. citizens back to 1975–76. The 418 U.S. citizen new doctoral recipients is down by 168 (29%) since 1997–98. The percentage of U.S. citizens, which had remained steady over the last four years at 48%–49%, de-

Table 7: U.S. Citizen Doctoral Recipients

Year	Total Doctorates Granted by U.S. Institutions	Total U.S. Citizen Doctoral Recipients	%
1975-76	965	722	75
1980-81	839	567	68
1985-86	755	386	51
1990-91	1061	461	43
1995-96	1150	493	43
1996-97	1158	516	45
1997-98	1216	586	48
1998-99*	1133	554	49
1999-00	1119	537	48
2000-01	1008	494	49
2001-02	948	418	44

*Prior to 1998-99, the counts include new doctoral recipients from Group Vb. In addition, prior to 1982-83, the counts include recipients from computer science departments.

creased to 44% this year, close to the all-time low of 42% in 1991-92.

Females make up 30% of the 418 U.S. citizens receiving doctoral degrees in the mathematical sciences in 2001-02. This is nearly the same as last year but down from 34% in 1998-99, the highest percentage of females among U.S. citizen new doctoral recipients ever reported by the Annual Survey. Among the 530 non-U.S. citizen new doctoral recipients, 163 (31%) are female, up from last year's 27%.

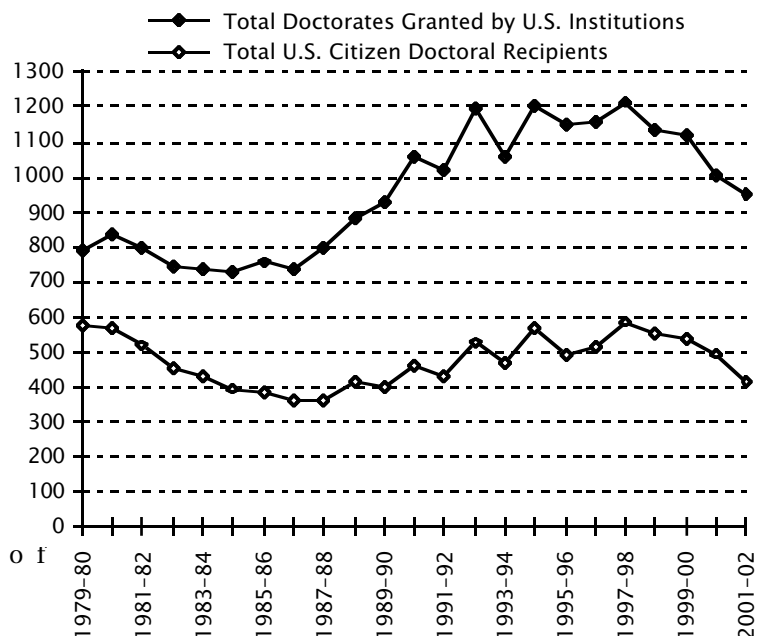
Table 8 and Figure 4 give the historical record of U.S. citizen new doctoral recipients, broken down by male and female for past years, going back to 1975-76. The number of male U.S. citizen new doctoral recipients decreased by 52 from 2000-01 and is down by 132 (31%) from 1997-98. In fact, the 423 male U.S. citizen new doctoral recipients in 1997-98 is more than the total number

Table 8: U.S. Citizen Doctoral Recipients by Sex

Year	Total U.S. Citizen Doctoral Recipients	Male	Female	% Female
1975-76	722	636	86	12
1980-81	567	465	102	18
1985-86	386	304	82	21
1990-91	461	349	112	24
1995-96	493	377	116	24
1996-97	516	368	148	29
1997-98	586	423	163	28
1998-99*	554	367	187	34
1999-00	537	379	158	29
2000-01	494	343	151	31
2001-02	418	291	127	30

*Prior to 1998-99, the counts include new doctoral recipients from Group Vb. In addition, prior to 1982-83, the counts include recipients from computer science departments.

Figure 3: U.S. Citizen Doctoral Recipients



U.S. citizen new doctoral recipients for 2001-02. The number of female U.S. citizen new doctoral recipients is down 60 (32%) from an all-time high of 187 in 1998-99.

Table 9 gives a sex and citizenship breakdown of the new doctorates within each of the six types of doctoral-granting departments. Among all 948 new doctoral recipients, 44% of the males and 44% of the females are U.S. citizens. The percentage of the new doctoral recipients who are U.S. citizens within the groups is lowest in Group IV at 35% and

Figure 4: Females as a Percentage of U.S. Citizen New Doctoral Recipients

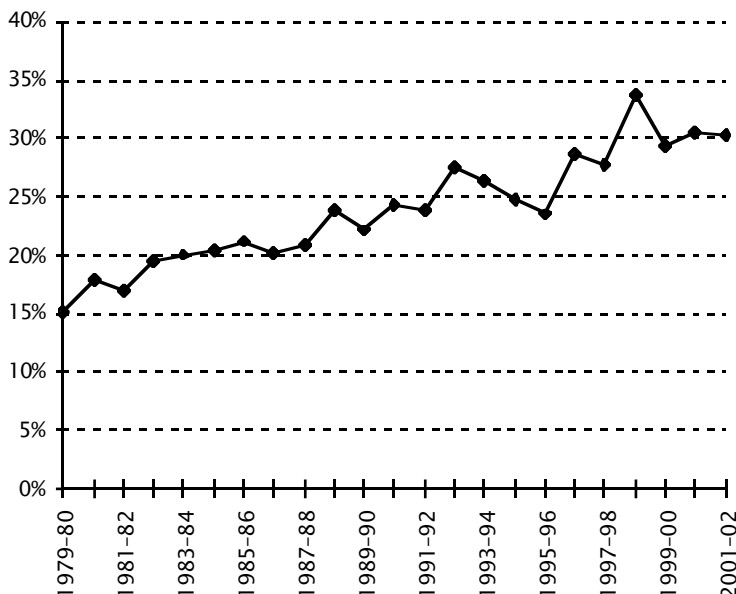


Table 9: Sex and Citizenship of 2001-02 New Doctoral Recipients by Granting Department

CITIZENSHIP	GROUP												TOTAL	
	I (Pu)		I (Pr)		II		III		IV		Va			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
U.S.	82	19	40	17	62	28	31	25	46	31	30	7	291	127
Non-U.S.	89	28	60	22	52	22	47	21	84	61	35	9	367	163
TOTAL	171	47	100	39	114	50	78	46	130	92	65	16	658	290

highest in Group II at 55%. Group II is the only group to have more U.S. citizen than non-U.S. citizen new doctoral recipients in 2001-02.

2001-02 New Doctoral Recipients with Dissertations in Statistics/Biostatistics and Probability

Group IV contains U.S. departments (or programs) of statistics, biostatistics, and biometrics reporting a doctoral program. In the Annual Survey Reports, Group IV is referred to as the Statistics Group. In addition, other groups in the Annual Survey produce new doctoral recipients with dissertations in statistics/biostatistics and probability. The other groups produced 67 new doctoral recipients with dissertations in statistics/biostatistics and probability in 2001-02 and have averaged 83 per year over the past seven years. Information about these 67 new doctoral recipients and the 222 new doctoral recipients in Group IV is found in this section of the report.

For seven years substantial effort has gone into making Group IV an appropriate set of departments for the Annual Survey and increasing the number of Group IV departments that respond to the Annual Survey. Table 10 contains information about new doctoral recipients in Group IV as well as those with dissertations in statistics/biostatistics and probability in other groups for the past seven years. The last two rows of Table 10 give a split of the 2001-02 results between the 55 statistics departments and the 31 biostatistics and bio-

metrics departments in Group IV. Quite a bit of the variation in numbers from year to year in this table is due to the changes made in the departments in Group IV over the seven years and to the relatively low response rate for this group. At the time of the Second Report last year, 77 of 86 (90%) of Group IV departments had responded, which is the largest percentage ever.

Group IV has 86 departments for 2001-02, 13 more than the next largest doctoral group. It contains 30% of all doctoral departments surveyed, and the 72 Group IV departments responding to the Annual Survey reported 222 new doctoral recipients, 23% of all new doctoral recipients in 2001-02. The number of new doctoral recipients in Group IV is down 15 from the number reported at this time last year, even though the number of departments responding is up two from the number responding by this time last year.

Because of its size, the data from Group IV have a large effect on the overall results when all doctoral groups are combined. Furthermore, Group IV results are often quite different from those for Groups I (Pu), I (Pr), II, III, and Va. Group IV results can mask important changes in the other doctoral groups. In the following paragraphs some of these differences are presented.

Table 9 shows that for the Group IV new doctoral recipients, 92 of 222 (41%) are female, while 198 of 726 (27%) are female in the other doctoral groups. Among U.S. citizens, females accounted for 31 of the 77 (40%) Group IV new doctoral re-

Table 10: Information about New Doctoral Recipients with Dissertations in Statistics/Biostatistics and Probability

Year	Depts Surveyed	Depts Responding (percent)	New Doctoral Recipients in Group IV				New Doctoral Recipients in Statistics/Biostatistics and Probability				New Doctoral Recipients Hired by Group IV	
			Total	Females (percent)	Jobs in Bus & Ind	Percentage Unemployed	Total	Group IV	Other Groups	Percentage Unemployed	Male	Female
1995-96	80	54 (68)	172	46 (27)	55	3.9	266	171	95	4.8	24	6
1996-97	81	60 (74)	197	74 (38)	70	4.2	292	187	105	5.1	24	9
1997-98	82	59 (72)	213	73 (34)	70	3.2	294	199	95	3.7	25	10
1998-99	91	72 (79)	243	87 (36)	57	4.9	320	240	80	5.8	29	20
1999-00	89	75 (84)	284	110 (39)	79	2.4	351	278	73	2.0	24	22
2000-01	86	70 (81)	237	98 (41)	59	5.1	289	221	68	5.3	27	14
2001-02	86	72 (84)	222	92 (41)	56	6.0	288	*221	**67	5.4	31	15
Statistics	55	47 (86)	147	50 (34)	42	6.2					17	8
Biostatistics	31	25 (81)	75	42 (56)	14	5.5					14	7

* Of 221, there were 215 in statistics/biostatistics and 6 in probability. For complete details, see Table 4C.

** Of 67, there were 38 in statistics/biostatistics and 29 in probability. For complete details, see Table 4C.

ipients, while for the other groups, 96 of 341 (28%) were female. Overall, 127 of 418 (30%) U.S. citizen new doctoral recipients were female.

In Group IV, 77 of 222 (35%) new doctoral recipients are U.S. citizens, while in other groups 341 of 726 (47%) are U.S. citizens.

Of the 156 new doctoral recipients from Group IV who found employment in the U.S., 56 (36%) took jobs in business or industry. From the other groups, 508 new doctoral recipients found employment in the U.S., of which 67 (13%) took jobs in business or industry.

The employment status for 184 Group IV new doctoral recipients is known, and 11 (6.0%) are unemployed. For the other groups, the employment status of 616 is known, and 23 (3.7%) are unemployed. Fifteen of 46 (33%) new doctoral recipients hired by Group IV departments were female, down from last year's 34% and down significantly from the 48% reported in 1999-2000. The other doctoral groups reported that 60 of 220 (27%) new doctoral recipients hired were female, up from last year's 23% and significantly more than the 16% reported in 1999-00.

Group IV had 221 new doctoral recipients with fields of thesis in statistics/biostatistics (215) and probability (6), and the other doctoral departments had 67 with field of thesis in statistics/biostatistics (38) and probability (29). The distribution of these 67 degrees among the various groups can be found in Table 4C. The number of new doctoral recipients with theses in statistics/biostatistics and probability (288) is larger than any other field, with algebra and number theory next with 126.