

## Report on the 2001 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, 2000, through June 30, 2001. It includes a preliminary analysis of the employment of 2000-01 doctoral recipients and a demographic profile summarizing characteristics of

**Table 1: Doctorates Granted Response Rates**

<b>Group I (Pu)</b>	24 of 25 including 0 with 0 degrees
<b>Group I (Pr)</b>	22 of 23 including 0 with 0 degrees
<b>Group II</b>	51 of 56 including 4 with 0 degrees
<b>Group III</b>	70 of 74 including 20 with 0 degrees
<b>Group IV</b>	70 of 86 including 8 with 0 degrees
<b>Group Va</b>	18 of 20 including 1 with 0 degrees
<b>Group Vb</b>	No longer surveyed

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 2001 Survey of New Doctoral Recipients. See page 231 for a description of the groups. No adjustments were made in this report for nonresponding departments.

### Recent Changes in Procedures for the Annual Survey

The following three changes need to be considered when comparing results in this report to those in prior years. More details on these changes can be found in the First Report for the 2000 Annual Survey.

1. Data used for the First Report is gathered from doctoral-granting departments beginning in May each year. These results are updated in the Second Report using data gathered from the new doctoral recipients in the following October. Prior to 1997 these latter data were gathered earlier and early returns were used in the First Reports.

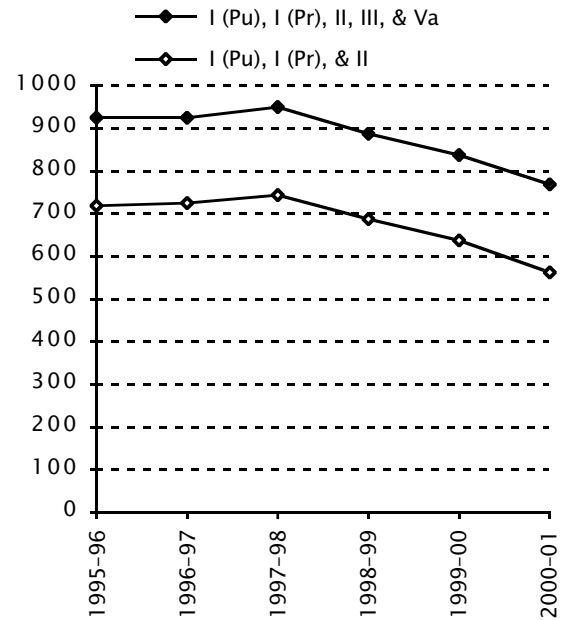
2. Group Vb containing Operations Research/Management Science doctoral-granting departments has not been surveyed since 1998. Doctorates granted in Group Vb have been removed from any tables in this report that give data from past years, unless noted otherwise.

3. For the past five years Group IV, doctoral-granting statistics and biostatistics departments, has been under revision. It included 80 departments in 1995-96 and for 2000-01 it has 86 departments. Several drops and additions were involved in going from 80 to 86.

**Table/Figure 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

\*Does not include Vb. See "Recent Changes in Procedures" on page 217.



### Doctoral Degrees Granted

Table 2 shows the number of new doctoral degrees granted by the different doctoral groups surveyed in the Annual Survey for the past six years. The 1,008 new doctorates granted by these departments in 2000-01 is a decrease of 111 from 1999-2000. While every group except Group Va showed a decrease this year, the drops in Groups I (Pu), I (Pr), II, and IV were particularly large. Response rates were down slightly, mainly in Groups II and IV.

A department by department analysis showed that overall the drop in response rates only accounted for about 40% of the overall drop in new doctorates granted in 2000-01. It accounted for almost none of the drops in Groups I (Pu), I (Pr), and III, but did account for 75%-80% of the drops in Groups II and IV. It is hoped that response rates can be increased before these results are updated in the 2001 Second Report which will be published in August 2002.

If one considers the new doctoral recipients in all Groups except IV for the six years in Table 2, the numbers are 926, 926, 950, 890, 835, and

**Table 3A: Employment Status of 2000-01 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	Applied Math.	Numerical Analysis/Approximations	Linear Nonlinear Optim./Control	Differential, Integral, & Difference Equations	Math. Education	Other/Unknown		
Group I (Public)	14	15	11	9	5	0	4	3	1	7	0	1	<b>70</b>	
Group I (Private)	11	3	16	5	1	2	4	6	2	5	0	2	<b>57</b>	
Group II	10	8	9	4	0	2	4	4	1	6	2	0	<b>50</b>	
Group III	7	3	2	1	0	3	3	0	0	3	0	0	<b>22</b>	
Group IV	0	0	0	0	4	34	0	0	0	1	0	2	<b>41</b>	
Group Va	0	1	1	1	0	1	4	1	1	2	0	0	<b>12</b>	
Master's	9	6	6	4	2	7	3	1	4	11	3	1	<b>57</b>	
Bachelor's	19	14	16	17	3	6	7	6	2	6	5	3	<b>104</b>	
Two-Year College	4	1	2	1	0	1	0	0	0	1	1	0	<b>11</b>	
Other Academic Dept.	4	0	3	5	2	26	13	4	1	4	5	2	<b>69</b>	
Research Institute/Other Nonprofit	3	1	1	2	1	5	3	1	0	0	0	0	<b>17</b>	
Government	2	1	1	2	1	19	4	7	0	2	0	0	<b>39</b>	
Business and Industry	11	9	7	12	7	69	23	13	4	9	0	4	<b>168</b>	
Non-U.S. Academic	12	9	13	4	2	18	6	0	5	9	2	0	<b>80</b>	
Non-U.S. Nonacademic	3	1	0	0	1	7	1	1	0	1	0	0	<b>15</b>	
Not Seeking Employment	2	1	1	3	0	3	4	0	0	1	0	0	<b>15</b>	
Still Seeking Employment	9	2	5	4	3	10	8	0	1	6	1	0	<b>49</b>	
Unknown (U.S.)	9	5	6	9	0	34	10	6	1	8	5	1	<b>94</b>	
Unknown (non-U.S.)*	8	1	8	2	2	8	0	4	1	4	0	0	<b>38</b>	
<b>Column Total</b>	<b>137</b>	<b>81</b>	<b>108</b>	<b>85</b>	<b>34</b>	<b>255</b>	<b>101</b>	<b>57</b>	<b>24</b>	<b>86</b>	<b>24</b>	<b>16</b>	<b>1008</b>	
<b>Column Subtotals</b>	Male	106	67	78	60	27	152	76	45	19	64	14	8	<b>716</b>
	Female	31	14	30	25	7	103	25	12	5	22	10	8	<b>292</b>

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

**Table 3B: Employment Status of 2000-01 U.S. New Doctoral Recipients in the Mathematical Sciences by Type of Degree-Granting Department**

TYPE OF EMPLOYER	TYPE OF DOCTORAL DEGREE-GRANTING DEPARTMENT							ROW TOTAL	ROW SUBTOTAL	
	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)	41	11	10	4	1	3	<b>70</b>	53	17	
Group I (Private)	26	25	1	0	2	3	<b>57</b>	47	10	
Group II	17	6	16	7	3	1	<b>50</b>	35	15	
Group III	11	1	3	4	2	1	<b>22</b>	17	5	
Group IV	1	2	1	0	37	0	<b>41</b>	27	14	
Group Va	6	1	0	0	0	5	<b>12</b>	10	2	
Master's	4	3	23	18	6	3	<b>57</b>	42	15	
Bachelor's	24	8	40	27	5	0	<b>104</b>	70	34	
Two-Year College	4	1	2	4	0	0	<b>11</b>	6	5	
Other Academic Dept.	10	6	12	9	23	9	<b>69</b>	43	26	
Research Institute/Other Nonprofit	2	6	1	1	5	2	<b>17</b>	12	5	
Government	3	3	8	4	17	4	<b>39</b>	22	17	
Business and Industry	24	15	25	21	59	24	<b>168</b>	129	39	
Non-U.S. Academic	21	13	19	5	16	6	<b>80</b>	62	18	
Non-U.S. Nonacademic	1	3	2	0	6	3	<b>15</b>	13	2	
Not Seeking Employment	4	2	5	1	3	0	<b>15</b>	9	6	
Still Seeking Employment	13	7	8	5	10	6	<b>49</b>	28	21	
Unknown (U.S.)	17	3	23	12	34	5	<b>94</b>	66	28	
Unknown (non-U.S.)*	4	13	4	3	8	6	<b>38</b>	25	13	
<b>Column Total</b>	<b>233</b>	<b>129</b>	<b>203</b>	<b>125</b>	<b>237</b>	<b>81</b>	<b>1008</b>	<b>716</b>	<b>292</b>	
<b>Column Subtotals</b>	Male	172	107	147	92	139	59	<b>716</b>		
	Female	61	22	56	33	98	22	<b>292</b>		

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

**Table 3C: Field of Thesis of 2000-01 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	Applied Math.	Numerical Analysis/Approximations	Linear Nonlinear Optim./Control	Differential, Integral, & Difference Equations	Math. Education	Other/Unknown	
Group I (Public)	57	27	43	28	8	7	15	10	4	26	0	8	233
Group I (Private)	33	7	30	14	5	2	13	5	3	17	0	0	129
Group II	38	30	22	17	9	7	26	16	8	23	7	0	203
Group III	8	15	12	10	3	18	12	12	4	14	17	0	125
Group IV	0	0	0	0	8	213	8	0	0	0	0	8	237
Group Va	1	2	1	16	1	8	27	14	5	6	0	0	81
<b>Total</b>	<b>137</b>	<b>81</b>	<b>108</b>	<b>85</b>	<b>34</b>	<b>255</b>	<b>101</b>	<b>57</b>	<b>24</b>	<b>86</b>	<b>24</b>	<b>16</b>	<b>1008</b>

771. There has been an 18.8% drop in new doctoral recipients in these departments from 1997-98 to 2000-01. If one considers only Groups I (Pu), I (Pr), and II, there has been a 24.1% drop in new doctoral recipients since 1997-98, from 744 to 565. Figure 2 illustrates these trends.

The 2000-01 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 1,008 new doctoral recipients are found on pages 241-258 of this issue of the *Notices*.

**Employment Status of 2000-01 U.S. New Doctoral Recipients**

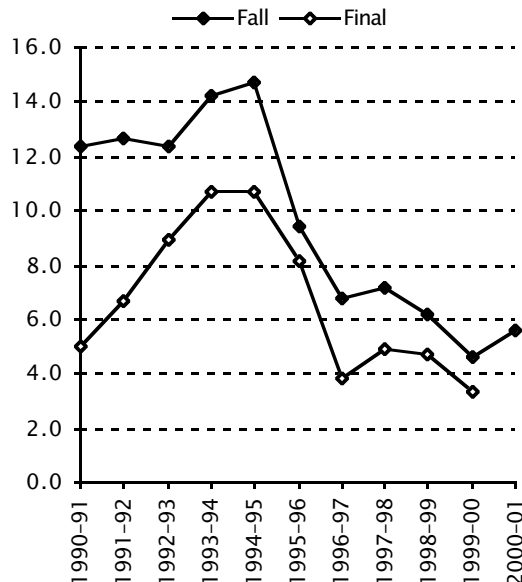
Table 3A gives a cross-tabulation of the 1,008 new doctoral recipients in the mathematical sciences: Type of Employer by Field of Thesis. Table 3B gives a cross-tabulation of the same data: Type of Employer by Type of Degree-Granting Department (Group). Table 3C gives a cross-tabulation of these same data: Type of De-

gree-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 the employment of these new doctoral recipients, some of which will be discussed in this report. 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 they will appear in the 2001 Second Report in August 2002.

The last column (Total) in Table 3A 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 in-

**Table/Figure 4A: Percentage of New Doctoral Recipients Unemployed (as reported in the respective Annual Survey Reports 1991-2001)**

Report	Fall	Final
1990-91	12.4	5.0
1991-92	12.7	6.7
1992-93	12.4	8.9
1993-94	14.2	10.7
1994-95	14.7	10.7
1995-96	9.4	8.1
1996-97	6.8	3.8
1997-98	7.2	4.9
1998-99	6.2	4.7
1999-00	4.6	3.3
2000-01	5.6	*



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

**Table 4B: 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 2001**

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

dividuals left after the "Unknowns" are removed. The overall unemployment rate for these data is 5.6%. This figure will be updated later with information gathered from the individual new doctoral recipients. The analogous figure for fall 2000 is 4.6%. Table/Figure 4A shows how this employment rate compares with other years over the past decade. The unemployment rate varies from group to group, with a high of 8.6% for Group Va and a low of 4.5% for both Groups II and III.

There are 717 new doctoral recipients employed in the U.S. Of these, 510 (71.1%) hold academic positions, 39 (5.4%) are employed by government, and 168 (23.4%) hold positions in business and industry. In the First Report for 1999–2000, there were 796 new doctoral recipients employed in the U.S., of which 551 (69.2%) held academic positions, 39 (4.9%) were in gov-

**Table 4C: Number of New Doctoral Recipients Taking U.S. Academic Positions by Type of Degree-Granting Department, Fall 1998 to Fall 2001**

Group	I (Pu)	I (Pr)	II	III	IV	Va	Total
Fall 1998	117	97	122	49	84	32	<b>501</b>
Fall 1999	157	87	130	70	82	38	<b>564</b>
Fall 2000	133	78	112	75	126	27	<b>551</b>
Fall 2001	146	70	109	74	84	27	<b>510</b>

ernment, and 206 (25.9%) were in business and industry.

The number of new doctoral recipients taking jobs in business and industry which had been rising steadily in the mid-1990s has been oscillating for the past four years. Table 4B 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 2001. Among the 717 new doctoral recipients known to have employment in the U.S. in fall 2001, Group I (Pu) has the smallest percentage taking jobs in business and industry at 13.9% and Group Va the highest at 43.6%.

Table 4C shows the number of new doctoral recipients who took academic positions in the U.S. by type of department granting their degree

for fall 1998 to fall 2001. Among the 717 new doctoral recipients employed in the U.S. 71.1% have academic positions. This percentage is highest for Group I (Pu) at 84.4% and lowest for

**Table 4D: U.S. Academic Positions Filled by New Doctoral Recipients by Type of Hiring Department, Fall 1998 to Fall 2001**

Group	I-III	IV	Va	M&B	Other	Total
Fall 1998	177	35	7	177	105	<b>501</b>
Fall 1999	221	49	17	175	102	<b>564</b>
Fall 2000	209	46	13	158	125	<b>551</b>
Fall 2001	199	41	12	161	97	<b>510</b>

Groups IV at 52.5% and Va at 49.1%. Table 4D shows how many positions were filled with new doctoral recipients for each type of academic employer. The number taking academic positions in the U.S. dropped off after being relatively high for the past two years.

**Table 4E: Females as a Percentage of 2000–01 New Doctoral Recipients Produced by and Hired by Doctoral-Granting Groups**

%	I (Pu)	I (Pr)	II	III	IV	Va	Total
Produced	26.2	17.1	27.6	26.4	41.4	27.2	<b>29.0</b>
Hired	24.3	17.5	30.0	22.7	34.1	16.7	<b>25.0</b>

In fall 2001, 58 new doctoral recipients hold positions in the institution that granted their degree, although not necessarily in the same department. This represents 7.1% of new doctoral recipients who are currently employed and 11.4% of the U.S. academic positions held by new doctoral recipients. In fall 2000 there were also 58 such individuals making up 6.5% of the new doc-

**Table 4F: Employment Status of 2000–01 U.S. New Doctoral Recipients by Citizenship Status**

TYPE OF EMPLOYER	CITIZENSHIP				TOTAL DOCTORAL RECIPIENTS
	U.S. CITIZENS	NON-U.S. CITIZENS			
		Permanent Visa	Temporary Visa	Unknown Visa	
U.S. Employer	393	76	227	21	<b>717</b>
U.S. Academic	287	53	155	15	<b>510</b>
Groups I, II, III, and Va	105	28	70	8	<b>211</b>
Group IV	12	6	22	1	<b>41</b>
Non-Ph.D. Department	161	18	56	6	<b>241</b>
Research Institute/Other Nonprofit	9	1	7	0	<b>17</b>
U.S. Nonacademic	106	23	72	6	<b>207</b>
Non-U.S. Employer	11	1	77	6	<b>95</b>
Non-U.S. Academic	10	0	66	4	<b>80</b>
Non-U.S. Nonacademic	1	1	11	2	<b>15</b>
Not Seeking Employment	8	1	4	2	<b>15</b>
Still Seeking Employment	28	4	17	0	<b>49</b>
SUBTOTAL	440	82	325	29	<b>876</b>
Unknown (U.S.)	53	11	27	3	<b>94</b>
Unknown (non-U.S.)*	1	0	33	4	<b>38</b>
TOTAL	<b>494</b>	<b>93</b>	<b>385</b>	<b>36</b>	<b>1008</b>

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

toral recipients who were employed at the time of the First Report. Fourteen new doctoral recipients have taken part-time positions in fall 2001.

#### Information about 2000–01 Female New Doctoral Recipients

Tables 3A and 3B give male and female breakdowns of the new doctoral recipients in 2000–01 by Field of Thesis, by Type of Degree-Granting Department, and by Type of Employer.

Overall, 292 (29.0%) of the 1,008 new doctoral recipients in 2000–01 are female. In 1999–2000, 302 (27.0%) 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 4E. Following the same trend as in recent years, the percentage is lowest for Group I (Pr), at 17.1%, and highest for Group IV, statistics departments, at 41.4%. The second row of Table 4E 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, 26.3% of the new doctoral recipients hired in Group M, master's departments, are female; 32.7% of the new doctoral recipients hired in Group B, bachelor's departments, are female; and 23.2% of new doctoral recipients hired in business and industry are female. The unemployment rate for female new doctoral recipients is 8.4% compared to 4.5% for males and 5.6% overall.

The percentage of female new doctoral recipients within fields of thesis was very similar to previous years, ranging from 17.3% in real, complex, functional, and harmonic analysis to 38.1% in probability or statistics and 41.7% in mathematics education.

Later sections in this First Report give more information about the female new doctoral re-

cipients who are U.S. citizens and the female new doctoral recipients in Group IV.

#### Employment Information about 2000–01 New Doctoral Recipients by Citizenship and Type of Employer

Table 4F shows the pattern of employment within broad job categories broken down by citizenship status of the new doctoral recipients. The citizenship status is known for all 1,008 new doctoral recipients in 2000–01.

The unemployment rate for the 494 U.S. citizens is 6.4% compared to 4.2% in 1999–2000. The unemployment rate for non-U.S. citizens is 4.8%. This varies by type of visa. The unemployment rate for non-U.S. citizens with a permanent visa is 4.9%, while that for non-U.S. citizens with a temporary visa is 5.2%.

Among U.S. citizens whose employment status is known, 89.3% are employed in the U.S. Among non-U.S. citizens with a permanent visa whose employment status is known, 92.7% have jobs in the U.S., while this percentage for non-U.S. citizens with a temporary visa is 69.8%.

Table 4G is a cross-tabulation of the 717 new doctoral recipients who have employment in

**Table 4G: 2000–01 New Doctoral Recipients Having Employment in the U.S. by Type of Employer and Citizenship**

Employer	U.S.	Non-U.S.	Total
U.S. Academic, Groups I–Va	117	135	252
U.S. Academic, Other	170	88	258
U.S. Nonacademic	106	101	207
Total	393	324	717

the U.S. by citizenship and broad employment categories, using numbers from Table 4F. Of the 717 new doctoral recipients having jobs in the U.S., 54.8% are U.S. citizens. Of the 252 new doc-

**Table 5: Sex, Race/Ethnicity, and Citizenship of 2000–01 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	4	1	0	0	5	1	0	0	0	1	6
Asian	18	20	144	15	197	12	14	63	3	92	289
Black or African American	6	5	7	0	18	8	1	1	0	10	28
Hispanic or Latino	6	1	15	4	26	5	0	4	0	9	35
Native Hawaiian or Other Pacific Islander	1	0	1	0	2	1	0	0	0	1	3
White	308	29	117	9	463	123	22	30	1	176	639
Unknown	0	0	2	3	5	1	0	1	1	3	8
TOTAL	343	56	286	31	716	151	37	99	5	292	1008

**Table 6: U.S. Citizen Doctoral Recipients**

Year	Total Doctorates 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

\*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.

toral recipients who took jobs in U.S. doctoral-granting departments, 46.4% are U.S. citizens. Of the 258 who took other academic positions, 65.9% are U.S. citizens. Of the 207 who took nonacademic positions, 51.2% are U.S. citizens.

Of the 393 U.S. citizens employed in the U.S., 29.8% have jobs in a doctoral-granting department, 43.3% are in other academic positions, and 27.0% are in nonacademic positions. For the 324 non-U.S. citizens employed in the U.S., the analogous percentages are 41.7%, 27.2%, and 31.2% respectively.

**Sex, Race/Ethnicity, and Citizenship Status of 2000-01 U.S. New Doctoral Recipients**

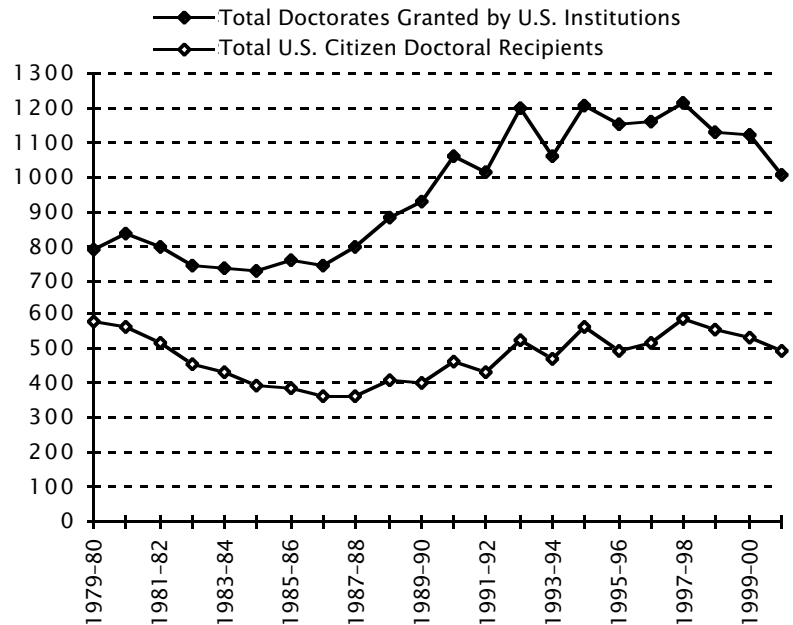
Table 5 presents a breakdown according to sex, racial/ethnic group, and citizenship status of new doctoral recipients. The information reported in this table was obtained in summary

**Table 7: U.S. Citizen Doctoral Recipients by Sex**

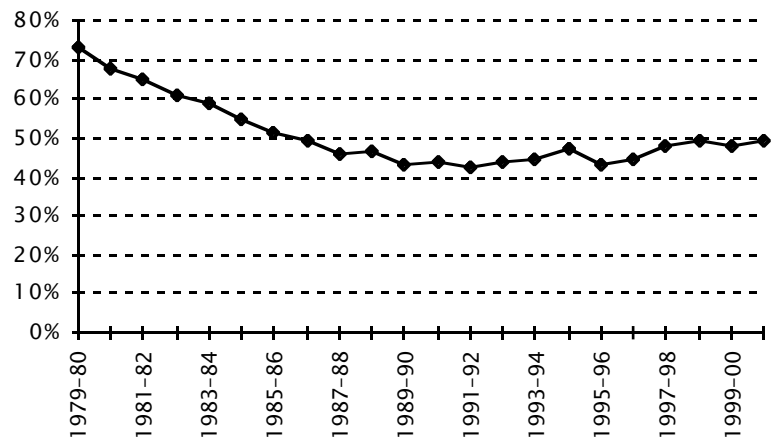
Year	Total U.S. Citizen Doctoral Recipients	Male	Female	% Female
1975-76	722	636	86	12
1980-81	567	465	102	18
1985-86	386	304	82	21
1990-91	461	349	112	24
1995-96	493	377	116	24
1996-97	516	368	148	29
1997-98	586	423	163	28
1998-99*	554	367	187	34
1999-00	537	379	158	29
2000-01	494	343	151	31

\*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.

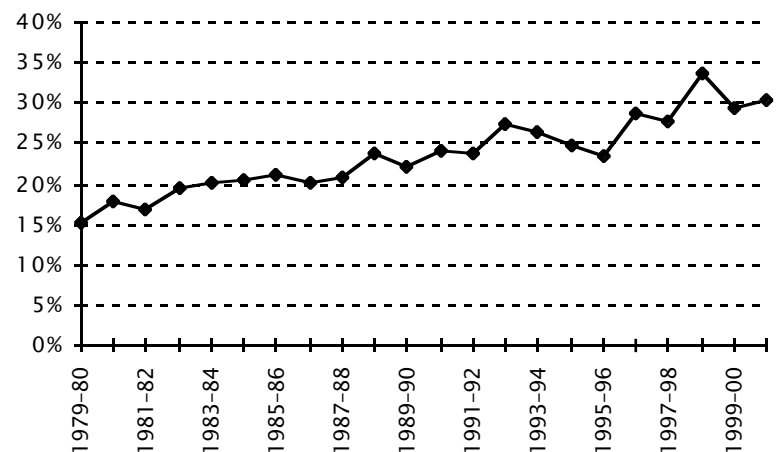
**Figure 6A: U.S. Citizen Doctoral Recipients**



**Figure 6B: U.S. Citizen Doctoral Recipients by Percent**



**Figure 7: Female U.S. Citizen Doctoral Recipients by Percent**



**Table 8: Sex and Citizenship of 2000–01 New Doctoral Recipients by Granting Department**

Group	I (Pu)		I (Pr)		II		III		IV		Va		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
U.S. Citizen	84	26	45	12	77	35	45	22	62	47	30	9	343	151
Non-U.S. Citizen	88	35	62	10	70	21	47	11	77	51	29	13	373	141
Total	172	61	107	22	147	56	92	33	139	98	59	22	716	292

form from the departments granting the degrees.

There were 494 (49.0%) U.S. citizens among the 1,008 new doctoral recipients in 2000–01. Table 6, Figure 6A, and Figure 6B give the number of new U.S. doctoral recipients and the number of U.S. citizens back to 1975–76. The percentage of U.S. citizens has remained essentially the same over the last four years.

Among U.S. citizens, 30 are Asians (18 male and 12 female), 14 are Blacks or African Americans (6 male and 8 female), 11 are Hispanics or Latinos (6 male and 5 female), 431 are whites (308 male and 123 female), and 8 are other. Among non-U.S. citizens, there are 259 Asians, 24 Hispanics or Latinos, 208 whites, and 23 are other.

Females make up 30.6% of the 494 U.S. citizens receiving doctoral degrees in the mathematical sciences in 2000–01. This is up from last year but still down from 33.8% in 1998–99, the highest percentage of females among U.S. citizen new doctoral recipients ever reported by the Annual Survey. Among the 514 non-U.S. citizen new doctoral recipients, 141 (27.4%) are female.

Table 7 and Figure 7 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 36 from 1999–2000.

Table 8 gives a sex by citizenship breakdown of the new doctorates within each of the six

types of doctoral granting departments. Among all 1,008 new doctoral recipients, 47.9% of the males and 51.8% 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 I (Pr) at 44.2% and highest in Group II at 55.2%.

**2000–01 New Doctoral Recipients in Group IV**

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. For five 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. Progress that has been made with these efforts can be seen in Table 9, which contains six years of information for Group IV. Efforts are still ongoing to increase the response rate in this group.

For 2000–01, Group IV has 86 departments, 12 more than the next largest doctoral group. It contains 30% of all doctoral departments surveyed and the 70 departments responding to the Annual Survey produced 237 new doctoral recipients, 23.5% of all new doctoral recipients in 2000–01. The number of new doctorates granted is down 47 from the number reported last year. A large portion of this drop is due to five less departments responding for 2000–01 and the particular departments that did not respond.

**Table 9: Six Years of Information about Group IV: Statistics and Biostatistics Departments**

Year	Depts Surveyed	Depts Responding (percent)	New Doctoral Recipients in Group IV				New Doctoral Recipients in Probability or Statistics				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 (67.5)	172	46 (26.7)	55	3.9	266	171	95
1996–97	81	60 (74.1)	197	74 (37.6)	70	4.2	292	187	105	5.1	24	9
1997–98	82	59 (72.0)	213	73 (34.3)	70	3.2	294	199	95	3.7	25	10
1998–99	91	72 (79.1)	243	87 (35.8)	57	4.9	320	240	80	5.8	29	20
1999–00	89	75 (84.3)	284	110 (38.7)	79	2.4	351	278	73	2.0	24	22
2000–01	86	70 (81.4)	237	98 (41.4)	59	5.1	289	*221	**68	5.3	27	14
Statistics	55	47 (85.5)	169	60 (35.5)	48	4.1					15	9
Biostatistics	31	23 (74.2)	68	38 (55.9)	11	8.3					12	5

\* Of 221, there were 213 in statistics and 8 in probability. For complete details, see Table 3C.

\*\* Of 68, there were 42 in statistics and 26 in probability. For complete details, see Table 3C.

In Table 9, most of the variation in numbers for Group IV during these six years is due to changes in Group IV mentioned in the first paragraph of this section and to the number of departments responding. The last two rows of Table 9 give a split of the 2000-01 results between the 55 statistics departments and the 31 biostatistics and biometrics departments when possible.

Because of its size, it is clear that 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 than 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.

For the Group IV new doctoral recipients, 98 of 237 (41.4%) are female, while 194 of 771 (25.2%) are female in the other doctoral groups. Among the U.S. citizens, females accounted for 47 of the 109 (43.1%) Group IV new doctoral recipients while for the other groups, 104 of 385 (27.0%) were female. Overall 151 of 494 (30.6%) U.S. citizen new doctoral recipients were female.

Of 160 Group IV new doctoral recipients who have employment in the U.S., 59 (36.9%) took jobs in business or industry, while for the other doctoral groups 109 of 557 (19.6%) took jobs in business and industry.

Of 195 Group IV new doctoral recipients whose employment status is known, 10 (5.1%) are unemployed, while for the other doctoral groups 39 of 681 (5.7%) are unemployed. Fourteen of 41 (34.1%) new doctoral recipients hired by Group IV departments were female, down from last year's 47.8%. For the other doctoral groups, 49 of 211 (23.2%) new doctoral recipients hired were female, up from last year's 16.2%.

Group IV had 221 new doctoral recipients with field of thesis in probability (8) or statistics (213) and the other doctoral departments had 68 with field of thesis in probability (26) or statistics (42). The distribution of these 68 degrees among the various groups can be found in Table 3C. The number of new doctoral recipients with theses in probability or statistics (289) is larger than any other field, with algebra and number theory next with 137. The unemployment rate for new doctoral recipients in probability or statistics is 5.3% compared to 5.7% for new doctoral recipients in all other fields combined.