

Table 8-4

## Biological and biomedical sciences research doctorate recipients, statistical profile by sex and major field of doctorate: 2021

(Number, percent, and median years)

Characteristic	All biological and biomedical sciences fields	Biochemistry, biophysics, and molecular biology	Bioinformatics, biostatistics, and computational biology	Cell/ cellular biology and anatomy	Ecology, evolutionary biology, and epidemiology	Genetics and genomics	Microbiology and immunology	Neurobiology and neurosciences	Pharmacology and toxicology	Physiology, oncology, and cancer biology	Biological and biomedical sciences, other
All doctorate recipients (number) <sup>a</sup>	8,259	1,348	563	657	984	398	974	1,014	311	713	1,297
Sex (%)											
Male	47.8	53.3	58.4	47.3	40.1	47.5	43.6	45.2	47.3	52.2	46.4
Female	52.2	46.7	41.6	52.7	59.9	52.5	56.4	54.8	52.7	47.8	53.5
Unknown	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Citizenship status (%)											
U.S. citizen or permanent resident	71.1	65.4	52.6	69.3	80.6	73.1	78.6	78.4	71.4	72.5	66.2
Temporary visa holder	25.0	31.6	44.8	26.3	16.9	23.4	18.4	17.8	23.2	23.1	27.8
Unknown	3.8	3.0	2.7	4.4	2.5	3.5	3.0	3.8	5.5	4.3	5.9
Marital status (%)											
Never married	39.1	42.2	43.5	41.2	34.6	39.2	37.1	39.6	37.3	41.0	36.9
Married	36.5	36.2	36.4	36.2	40.2	33.7	38.0	34.1	34.1	37.0	35.8
Marriage-like relationship	13.5	12.9	9.9	13.5	15.8	15.1	15.7	16.6	13.5	10.9	11.0
Separated, divorced, widowed	1.9	1.6	1.8	1.2	2.5	1.5	2.7	0.7	1.6	2.0	2.5
Unknown	9.0	7.0	8.3	7.8	6.9	10.6	6.6	9.0	13.5	9.1	13.8
Has dependent age 18 or younger (%)	15.6	14.7	17.1	15.6	21.3	15.7	13.5	10.8	15.6	15.6	17.1
Has one or more functional limitations (%)	11.9	12.7	9.5	9.3	14.1	12.6	12.4	12.9	13.5	7.9	12.0
Age at doctorate (median years)	30.4	30.0	30.3	30.3	32.1	30.2	30.2	30.3	30.1	30.4	30.7
Bachelor's in same field as doctorate (%) <sup>b</sup>	64.3	62.2	35.3	80.3	58.4	75.3	82.2	58.9	56.2	55.8	69.4
Master's earned (%)	45.0	37.3	64.9	35.0	65.1	36.7	32.4	37.3	44.1	48.4	50.6
Master's earned at same doctorate institution (%)	38.4	45.1	52.6	35.0	32.8	41.6	33.1	49.3	36.3	36.3	28.4
Time to doctorate (median years)											
Years since earning bachelor's degree	8.0	7.3	7.6	7.6	9.3	7.6	7.7	8.0	7.3	8.0	8.0
From graduate school start	6.3	6.3	6.7	6.5	7.3	6.3	6.1	6.3	6.0	6.3	6.8
From doctoral program start <sup>c</sup>	5.8	5.8	5.3	5.9	5.6	5.8	5.5	5.8	5.3	5.3	5.4
Received tuition remission (%)	89.2	90.8	87.3	89.3	87.7	88.4	88.1	90.8	88.6	90.2	88.6
Male doctorate recipients (number)	3,946	718	329	311	395	189	425	458	147	372	602
Citizenship status (%)											
U.S. citizen or permanent resident	70.0	67.8	54.4	66.6	77.0	69.3	77.6	78.2	65.3	72.6	66.8
Temporary visa holder	26.3	29.1	43.8	29.6	20.8	25.9	19.3	18.1	28.6	23.4	27.9
Unknown	3.6	3.1	1.8	3.9	2.3	4.8	3.1	3.7	6.1	4.0	5.3
Marital status (%)											
Never married	39.5	44.0	41.3	38.9	34.7	36.0	41.4	40.0	31.3	41.9	36.7
Married	37.3	34.7	38.3	40.8	41.3	36.0	36.5	36.5	37.4	36.8	37.4
Marriage-like relationship	12.5	12.8	D	D	15.7	D	12.0	D	14.3	9.9	10.8

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## Biological and biomedical sciences research doctorate recipients, statistical profile by sex and major field of doctorate: 2021

(Number, percent, and median years)

Characteristic	All biological and biomedical sciences fields	Biochemistry, biophysics, and molecular biology	Bioinformatics, biostatistics, and computational biology	Cell/ cellular biology and anatomy	Ecology, evolutionary biology, and epidemiology	Genetics and genomics	Microbiology and immunology	Neurobiology and neurosciences	Pharmacology and toxicology	Physiology, oncology, and cancer biology	Biological and biomedical sciences, other
Separated, divorced, widowed	1.6	1.5	D	D	2.5	D	3.1	D	0.0	2.2	1.5
Unknown	9.0	7.0	8.8	7.7	5.8	12.2	7.1	7.9	17.0	9.1	13.6
Has dependent age 18 or younger (%)	17.6	15.1	18.2	16.5	23.1	19.9	15.4	13.5	21.3	16.8	21.1
Has one or more functional limitations (%)	11.4	12.2	8.3	9.5	16.8	11.5	10.4	11.7	10.7	7.1	12.9
Age at doctorate (median years)	30.8	30.2	30.6	30.6	32.2	30.8	30.8	30.7	30.4	30.7	30.9
Bachelor's in same field as doctorate (%) <sup>b</sup>	62.7	60.3	34.1	81.4	63.3	70.1	81.4	57.2	56.6	53.8	67.2
Master's earned (%)	44.7	37.4	63.4	34.6	63.5	39.1	31.0	35.5	44.2	52.4	50.0
Master's earned at same doctorate institution (%)	38.4	44.6	49.7	32.0	33.3	45.6	31.5	47.7	28.1	39.9	28.0
Time to doctorate (median years)											
Years since earning bachelor's degree	8.0	7.4	7.9	7.7	9.0	8.0	8.0	8.2	7.6	8.0	8.0
From graduate school start	6.5	6.3	6.8	6.5	7.0	6.5	6.3	6.4	6.3	6.7	6.8
From doctoral program start <sup>c</sup>	5.8	5.8	5.4	5.9	5.7	6.0	5.6	5.8	5.3	5.3	5.4
Received tuition remission (%)	90.1	92.1	89.1	90.0	88.3	89.8	89.0	91.3	89.4	90.1	89.7
Female doctorate recipients (number)	4,312	630	234	346	589	209	549	556	164	341	694
Citizenship status (%)											
U.S. citizen or permanent resident	72.2	62.7	50.0	71.7	83.0	76.6	79.4	78.6	76.8	72.4	65.9
Temporary visa holder	23.9	34.4	46.2	23.4	14.3	21.1	17.7	17.4	18.3	22.9	27.8
Unknown	4.0	2.9	3.8	4.9	2.7	2.4	2.9	4.0	4.9	4.7	6.3
Marital status (%)											
Never married	38.8	40.2	46.6	43.4	34.5	42.1	33.7	39.4	42.7	39.9	37.2
Married	35.7	37.9	33.8	32.1	39.6	31.6	39.2	32.2	31.1	37.2	34.4
Marriage-like relationship	14.5	13.0	D	D	15.8	D	18.6	D	12.8	12.0	11.2
Separated, divorced, widowed	2.1	1.7	D	D	2.5	D	2.4	D	3.0	1.8	3.3
Unknown	9.0	7.1	7.7	7.8	7.6	9.1	6.2	9.9	10.4	9.1	13.8
Has dependent age 18 or younger (%)	13.8	14.2	15.4	14.7	20.1	12.1	12.0	8.6	10.9	14.2	13.6
Has one or more functional limitations (%)	12.3	13.2	11.2	9.2	12.3	13.5	13.9	13.9	15.8	8.8	11.1
Age at doctorate (median years)	30.2	29.8	29.6	30.0	32.1	29.7	29.8	30.0	29.8	30.2	30.3
Bachelor's in same field as doctorate (%) <sup>b</sup>	65.7	64.4	37.0	79.4	55.1	79.9	82.8	60.4	55.9	58.0	71.4
Master's earned (%)	45.3	37.2	67.0	35.4	66.1	34.7	33.6	38.9	44.1	44.0	51.2
Master's earned at same doctorate institution (%)	38.4	45.7	56.4	37.7	32.5	37.7	34.3	50.5	43.3	31.7	28.8
Time to doctorate (median years)											
Years since earning bachelor's degree	7.8	7.3	7.3	7.6	9.5	7.3	7.3	7.6	7.1	7.8	8.0
From graduate school start	6.3	6.3	6.3	6.3	7.7	6.3	6.0	6.2	5.9	6.2	6.8
From doctoral program start <sup>c</sup>	5.7	5.8	5.3	5.8	5.3	5.8	5.5	5.8	5.3	5.3	5.4
Received tuition remission (%)	88.3	89.3	84.8	88.5	87.3	87.1	87.5	90.4	87.9	90.3	87.7

\* = value between 0.00% and 0.05%; D = suppressed to avoid disclosure of confidential information.

<sup>a</sup> Includes respondents who did not report sex.

<sup>b</sup> A bachelor's degree is counted as in same field as doctorate if the fields of study of the doctorate recipient's first or most recent bachelor's degree and doctoral degree are both in the same broad field category.

<sup>c</sup> Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the doctoral institution in the same field of study or was a prerequisite to the doctorate; otherwise, it is based on doctoral program entry.

**Note(s):**

Due to rounding, percentages may not sum to 100. Beginning in 2021, a modified version of the 2020 Classification of Instructional Programs (CIP) codes was used in the survey data collection, and the new broad, major, and detailed fields were used in tables reporting only the most recent data year. Therefore, the field of doctorate data in 2021 may not be comparable to prior years; see the "Technical Notes" for more information, table A-4 for a summary of SED-CIP codes in the new SED field taxonomy, table A-5 for a full list of SED-CIP codes in the new field taxonomy, and table A-6 for the SED-CIP code crosswalk to the historical field taxonomy.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.