

Table 8-11

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

(Number, percent, and median years)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
All doctorate recipients (number) <sup>a</sup>	4,811	263	2,369	429	1,750
Sex (%)					
Male	67.5	61.6	57.8	69.7	80.9
Female	32.5	38.4	42.2	30.3	19.0
Unknown	*	0.0	0.0	0.0	0.1
Citizenship status (%)					
U.S. citizen or permanent resident	56.4	69.6	58.7	52.7	52.2
Temporary visa holder	39.5	27.4	36.9	45.5	43.4
Unknown	4.1	3.0	4.4	1.9	4.5
Marital status (%)					
Never married	46.6	54.4	44.2	51.5	47.5
Married	30.9	27.0	30.7	32.6	31.4
Marriage-like relationship	11.7	13.3	12.6	10.3	10.5
Separated, divorced, widowed	1.1	0.0	1.3	D	D
Unknown	9.7	5.3	11.2	D	D
Has dependent age 18 or younger (%)	10.8	5.2	11.0	8.9	12.0
Has one or more functional limitations (%)	10.3	12.4	10.6	10.4	9.6
Age at doctorate (median years)	29.2	28.9	28.9	28.7	29.6
Bachelor's in same field as doctorate (%) <sup>b</sup>	78.6	83.4	79.3	60.9	81.4
Master's earned (%)	52.7	75.9	39.6	49.9	67.2
Master's earned at same doctorate institution (%)	58.0	78.0	47.7	54.1	63.2
Time to doctorate (median years)					
Years since earning bachelor's degree	6.6	6.4	6.3	6.2	7.1
From graduate school start	5.9	6.0	5.8	5.7	6.3
From doctoral program start <sup>c</sup>	5.5	5.8	5.3	5.1	6.0
Received tuition remission (%)	90.7	89.6	92.8	87.8	88.9
Male doctorate recipients (number)	3,246	162	1,369	299	1,416
Citizenship status (%)					
U.S. citizen or permanent resident	55.4	67.9	57.5	50.8	52.9
Temporary visa holder	40.6	29.0	38.1	47.8	42.9
Unknown	4.0	3.1	4.5	1.3	4.2
Marital status (%)					
Never married	47.4	63.6	44.1	50.5	48.1
Married	30.9	22.8	30.6	33.1	31.6
Marriage-like relationship	11.2	8.6	12.3	11.0	10.3
Separated, divorced, widowed	0.8	0.0	0.9	D	D
Unknown	9.7	4.9	12.0	D	D
Has dependent age 18 or younger (%)	11.5	4.5	11.5	11.0	12.3
Has one or more functional limitations (%)	8.8	8.5	8.9	8.9	8.8
Age at doctorate (median years)	29.3	28.8	29.0	28.8	29.8
Bachelor's in same field as doctorate (%) <sup>b</sup>	78.6	82.7	79.1	61.8	81.4
Master's earned (%)	54.4	73.1	40.4	51.7	66.0
Master's earned at same doctorate institution (%)	57.8	76.1	45.5	54.7	63.2
Time to doctorate (median years)					
Years since earning bachelor's degree	6.7	6.3	6.4	6.3	7.1
From graduate school start	6.0	6.0	5.8	5.8	6.3
From doctoral program start <sup>c</sup>	5.8	5.8	5.3	5.2	6.0

**Table 8-11****Physical sciences research doctorate recipients, statistical profile by sex and major field of doctorate: 2021**

(Number, percent, and median years)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Received tuition remission (%)	90.8	92.3	92.9	87.7	89.4
Female doctorate recipients (number)	1,563	101	1,000	130	332
Citizenship status (%)					
U.S. citizen or permanent resident	58.4	72.3	60.3	56.9	49.1
Temporary visa holder	37.2	24.8	35.4	40.0	45.5
Unknown	4.4	3.0	4.3	3.1	5.4
Marital status (%)					
Never married	45.0	39.6	44.4	53.8	45.2
Married	31.0	33.7	30.9	31.5	30.4
Marriage-like relationship	12.7	20.8	12.9	8.5	11.4
Separated, divorced, widowed	1.7	0.0	1.7	0.0	2.7
Unknown	9.5	5.9	10.1	6.2	10.2
Has dependent age 18 or younger (%)	9.5	6.3	10.4	4.1	10.4
Has one or more functional limitations (%)	13.3	18.8	12.8	14.0	12.6
Age at doctorate (median years)	28.8	29.2	28.7	28.5	29.3
Bachelor's in same field as doctorate (%) <sup>b</sup>	78.4	84.5	79.5	58.9	81.2
Master's earned (%)	49.1	80.4	38.6	45.7	72.1
Master's earned at same doctorate institution (%)	58.2	80.8	51.0	52.5	63.4
Time to doctorate (median years)					
Years since earning bachelor's degree	6.3	6.4	6.1	6.0	7.0
From graduate school start	5.8	6.0	5.4	5.3	6.3
From doctoral program start <sup>c</sup>	5.3	5.8	5.3	5.0	5.8
Received tuition remission (%)	90.4	85.4	92.6	88.0	86.6

\* = 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 doctorate 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.