

TABLE 8-11

Physical sciences research doctorate recipients, statistical profile by sex and major field of doctorate: 2023

(Number, percent, and median years)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
All doctorate recipients (number) ^a	5,443	323	2,731	389	2,000
Sex (%)					
Male	66.0	67.8	56.8	63.8	78.9
Female	34.0	32.2	43.2	36.2	21.2
Unknown	*	0.0	*	0.0	0.0
Citizenship status (%)					
U.S. citizen or permanent resident	57.7	66.6	62.7	49.4	51.2
Temporary visa holder	38.5	30.3	34.0	49.1	43.8
Unknown	3.8	3.1	3.4	1.5	5.0
Marital status (%)					
Never married	50.8	54.2	48.8	55.3	52.2
Married	27.3	25.7	27.1	29.3	27.3
Marriage-like relationship	10.3	D	11.5	D	8.9
Separated, divorced, widowed	1.2	D	1.4	D	1.2
Unknown	10.3	6.8	11.2	6.7	10.4
Has dependent age 18 or younger (%)	9.5	5.7	9.6	9.6	10.0
Has one or more functional limitations (%)	13.9	15.1	14.1	17.9	12.5
Age at doctorate (median years)	29.3	28.9	29.0	28.9	29.7
Bachelor's in same field as doctorate (%) ^b	77.2	90.6	76.3	53.3	81.0
Master's earned (%)	50.3	69.7	38.7	50.9	62.6
Master's earned at same doctorate institution (%)	56.8	80.1	46.5	45.0	63.0
Time to doctorate (median years)					
Years since earning bachelor's degree	6.7	6.6	6.3	6.3	7.2
From graduate school start	6.0	6.0	5.8	5.8	6.5
From doctoral program start ^c	5.7	5.8	5.3	5.2	6.0
Received tuition remission (%)	91.4	89.1	92.5	87.5	91.2
Male doctorate recipients (number)	3,594	219	1,550	248	1,577
Citizenship status (%)					
U.S. citizen or permanent resident	55.7	65.8	61.3	47.6	50.0
Temporary visa holder	40.5	31.5	35.5	51.6	44.8
Unknown	3.9	2.7	3.2	0.8	5.2
Marital status (%)					
Never married	51.6	55.3	48.8	55.6	53.3
Married	27.5	28.8	27.6	32.3	26.6
Marriage-like relationship	9.2	D	10.5	D	D
Separated, divorced, widowed	1.1	D	1.3	D	D
Unknown	10.5	5.9	11.7	5.6	10.7
Has dependent age 18 or younger (%)	10.6	6.8	11.2	12.4	10.3
Has one or more functional limitations (%)	12.9	14.2	13.1	16.1	11.9
Age at doctorate (median years)	29.5	29.0	29.3	29.3	29.8
Bachelor's in same field as doctorate (%) ^b	77.6	90.0	76.9	52.9	80.5
Master's earned (%)	52.2	68.1	40.7	51.3	61.3
Master's earned at same doctorate institution (%)	55.7	81.1	43.6	40.7	61.6
Time to doctorate (median years)					
Years since earning bachelor's degree	7.0	6.5	6.6	6.6	7.2
From graduate school start	6.0	6.0	5.8	5.8	6.5
From doctoral program start ^c	5.8	5.8	5.3	5.3	6.0
Received tuition remission (%)	91.7	88.4	93.1	85.5	91.8

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Physical sciences research doctorate recipients, statistical profile by sex and major field of doctorate: 2023

(Number, percent, and median years)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Female doctorate recipients (number)	1,848	104	1,180	141	423
Citizenship status (%)					
U.S. citizen or permanent resident	61.7	68.3	64.4	52.5	55.6
Temporary visa holder	34.6	27.9	31.9	44.7	40.2
Unknown	3.7	3.8	3.6	2.8	4.3
Marital status (%)					
Never married	49.3	51.9	48.8	54.6	48.2
Married	26.7	19.2	26.4	24.1	30.0
Marriage-like relationship	12.6	D	12.7	D	D
Separated, divorced, widowed	1.4	D	1.4	D	D
Unknown	10.1	8.7	10.6	8.5	9.5
Has dependent age 18 or younger (%)	7.4	3.2	7.6	4.7	8.9
Has one or more functional limitations (%)	15.7	16.8	15.3	21.1	14.9
Age at doctorate (median years)	28.7	28.6	28.6	28.4	29.4
Bachelor's in same field as doctorate (%) ^b	76.5	92.0	75.6	54.0	82.7
Master's earned (%)	46.5	73.0	36.0	50.4	67.4
Master's earned at same doctorate institution (%)	59.2	78.1	50.8	52.9	67.9
Time to doctorate (median years)					
Years since earning bachelor's degree	6.3	6.6	6.2	6.1	7.0
From graduate school start	5.8	6.0	5.5	5.7	6.4
From doctoral program start ^c	5.3	5.8	5.3	5.1	5.9
Received tuition remission (%)	91.0	90.7	91.6	91.0	89.4

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

^a All doctorate recipients includes doctorate recipients who did not report sex.^b A bachelor's and doctoral degree are considered to be in the same field if doctorate recipient's first or most recent bachelor's degree is in the same broad field as their doctoral degree.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the same 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 new broad, major, and detailed fields are used in tables reporting data from 2021 to the present; see the field list in table A-4. Therefore, the field of doctorate data prior to 2021 may not be comparable to subsequent years. For more information about the 2021 taxonomy change, see the "Technical Notes."

Source(s):

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