

TABLE 8-1

Science and engineering research doctorate recipients, statistical profile by sex and broad field of doctorate: 2023

(Number, percent, and median years)

Characteristic	All fields	Science and engineering											
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Computer and information sciences	Engineering	Geosciences, atmospheric, and ocean sciences	Health sciences	Mathematics and statistics	Multidisciplinary/ interdisciplinary sciences	Physical sciences	Psychology	Social sciences
All doctorate recipients (number) ^a	57,862	45,973	1,278	9,724	2,297	10,724	1,216	2,746	2,056	1,704	5,443	3,793	4,992
Sex (%)													
Male	52.5	55.4	44.8	45.6	74.4	73.4	54.9	28.7	72.0	61.3	66.0	23.3	48.7
Female	47.5	44.6	55.2	54.4	25.6	26.6	45.0	71.3	28.0	38.7	34.0	76.6	51.2
Unknown	*	*	0.0	*	0.0	0.0	0.1	0.0	*	0.0	*	*	*
Citizenship status (%)													
U.S. citizen or permanent resident	61.5	58.8	60.9	72.0	35.7	42.4	63.6	71.1	45.2	48.5	57.7	83.8	61.4
Temporary visa holder	33.5	36.6	35.5	24.2	58.2	52.6	32.0	22.7	51.0	47.7	38.5	8.8	34.4
Unknown	5.0	4.7	3.6	3.8	6.1	5.0	4.4	6.2	3.8	3.8	3.8	7.4	4.2
Marital status (%)													
Never married	38.6	41.8	36.5	42.8	42.0	46.0	41.6	25.9	54.0	42.1	50.8	30.7	34.5
Married	37.2	34.6	39.3	33.9	35.7	33.5	33.1	47.9	24.9	36.2	27.3	35.3	40.9
Marriage-like relationship	9.3	9.8	9.1	12.5	6.1	7.3	13.2	6.6	9.0	8.3	10.3	13.4	10.8
Separated, divorced, widowed	3.0	2.4	2.4	1.9	2.4	1.3	2.7	5.3	1.5	2.7	1.2	4.0	4.2
Unknown	12.0	11.3	12.8	8.9	13.8	12.0	9.3	14.3	10.6	10.7	10.3	16.6	9.7
Has dependent age 18 or younger (%)	19.2	15.9	21.6	13.3	16.3	14.3	14.9	33.6	9.4	15.2	9.5	18.7	21.6
Has one or more functional limitations (%)	14.2	13.6	16.7	14.9	12.1	10.2	16.1	12.6	11.1	13.1	13.9	17.1	15.8
Age at doctorate (median years)	31.4	30.7	31.9	30.4	30.8	30.1	30.8	34.8	29.2	31.1	29.3	31.3	33.1
Bachelor's in same field as doctorate (%) ^b	60.6	64.3	48.4	64.2	38.8	78.4	49.8	46.4	80.6	14.0	77.2	70.9	55.2
Master's earned (%)	73.2	68.0	77.9	44.6	74.7	74.4	68.9	80.9	68.8	76.4	50.3	89.0	89.0
Master's earned at same doctorate institution (%)	44.6	48.6	36.5	38.5	50.1	51.2	45.2	32.1	53.2	48.6	56.8	65.4	46.2
Time to doctorate (median years)													
Years since earning bachelor's degree	8.6	8.0	9.0	7.8	8.2	7.4	8.1	11.4	7.0	8.3	6.7	8.6	10.2
From graduate school start	7.2	6.8	7.3	6.4	7.0	6.6	6.8	9.0	6.0	7.0	6.0	6.9	8.7
From doctoral program start ^c	5.7	5.6	5.0	5.8	5.7	5.3	5.7	5.0	5.3	5.3	5.7	5.9	6.0
Received tuition remission (%)	85.6	87.4	88.0	90.4	86.1	86.5	88.0	72.1	93.8	86.1	91.4	81.5	89.6
Male doctorate recipients (number)	30,356	25,480	572	4,433	1,710	7,873	668	789	1,480	1,044	3,594	885	2,432
Citizenship status (%)													
U.S. citizen or permanent resident	54.9	52.3	56.6	70.2	35.0	40.4	57.0	62.6	46.8	44.1	55.7	82.3	56.2
Temporary visa holder	40.2	43.1	39.9	25.7	59.6	55.0	38.2	31.1	48.9	52.2	40.5	8.9	39.5
Unknown	4.9	4.6	3.5	4.1	5.4	4.6	4.8	6.3	4.4	3.7	3.9	8.8	4.3
Marital status (%)													
Never married	42.1	44.9	36.4	44.1	44.2	46.9	43.1	31.1	56.6	45.7	51.6	31.5	35.4
Married	35.9	33.7	40.9	33.2	34.9	33.7	34.7	44.1	23.0	36.2	27.5	35.5	42.1
Marriage-like relationship	8.4	8.6	8.6	11.8	5.8	6.6	10.9	7.0	8.2	7.6	9.2	12.8	9.3

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Science and engineering research doctorate recipients, statistical profile by sex and broad field of doctorate: 2023

(Number, percent, and median years)

Characteristic	All fields	Science and engineering											
		Total	Agricultural sciences and natural resources	Biological and biomedical sciences	Computer and information sciences	Engineering	Geosciences, atmospheric, and ocean sciences	Health sciences	Mathematics and statistics	Multidisciplinary/ interdisciplinary sciences	Physical sciences	Psychology	Social sciences
Separated, divorced, widowed	1.9	1.7	1.2	1.6	2.3	1.1	2.2	2.9	1.1	1.5	1.1	3.1	3.2
Unknown	11.7	11.1	12.9	9.3	12.9	11.6	9.0	15.0	11.1	9.0	10.5	17.2	9.9
Has dependent age 18 or younger (%)	18.4	15.6	24.7	14.2	15.7	15.7	18.5	29.2	7.9	13.6	10.6	20.6	21.7
Has one or more functional limitations (%)	12.3	11.8	15.7	13.3	11.8	9.3	12.2	11.9	10.0	13.1	12.9	15.5	14.0
Age at doctorate (median years)	31.2	30.6	32.3	30.8	30.6	30.3	31.3	32.9	29.2	31.0	29.5	32.3	33.1
Bachelor's in same field as doctorate (%) ^b	63.4	66.0	50.8	62.3	39.7	80.1	50.6	37.2	80.5	14.5	77.6	66.0	58.9
Master's earned (%)	71.5	67.6	80.6	45.0	73.4	75.3	72.6	74.5	67.4	74.7	52.2	87.1	87.0
Master's earned at same doctorate institution (%)	44.8	48.0	36.7	36.5	50.7	50.6	43.9	32.2	51.3	50.1	55.7	62.6	43.6
Time to doctorate (median years)													
Years since earning bachelor's degree	8.3	7.9	9.1	8.0	8.1	7.6	8.3	9.9	6.8	8.1	7.0	8.9	10.0
From graduate school start	7.0	6.8	7.3	6.7	6.9	6.7	6.9	7.8	6.0	6.9	6.0	7.0	8.3
From doctoral program start ^c	5.7	5.6	5.0	5.8	5.7	5.3	5.5	5.0	5.3	5.6	5.8	5.9	5.9
Received tuition remission (%)	86.7	88.0	87.0	90.5	86.9	86.0	87.2	76.0	93.9	84.8	91.7	81.5	89.2
Female doctorate recipients (number)	27,499	20,486	706	5,290	587	2,851	547	1,957	575	660	1,848	2,907	2,558
Citizenship status (%)													
U.S. citizen or permanent resident	68.7	66.7	64.3	73.6	37.6	47.9	71.7	74.6	41.2	55.5	61.7	84.2	66.4
Temporary visa holder	26.2	28.4	32.0	22.9	54.2	46.1	24.5	19.3	56.5	40.6	34.6	8.8	29.5
Unknown	5.1	4.8	3.7	3.5	8.2	6.1	3.8	6.1	2.3	3.9	3.7	6.9	4.1
Marital status (%)													
Never married	34.7	37.9	36.5	41.8	35.8	43.5	39.9	23.9	47.5	36.4	49.3	30.5	33.5
Married	38.6	35.8	38.0	34.5	38.2	33.0	31.3	49.5	29.7	36.2	26.7	35.2	39.7
Marriage-like relationship	10.3	11.4	9.5	13.1	6.8	9.0	16.1	6.4	11.1	9.4	12.6	13.7	12.2
Separated, divorced, widowed	4.2	3.2	3.4	2.1	2.6	1.7	3.3	6.3	2.3	4.5	1.4	4.3	5.2
Unknown	12.2	11.6	12.6	8.5	16.7	12.8	9.5	14.0	9.4	13.5	10.1	16.4	9.4
Has dependent age 18 or younger (%)	20.0	16.3	19.0	12.6	18.1	10.3	10.5	35.3	13.3	17.7	7.4	18.2	21.4
Has one or more functional limitations (%)	16.2	15.7	17.4	16.3	13.0	12.6	20.9	13.0	14.0	13.2	15.7	17.5	17.5
Age at doctorate (median years)	31.7	30.7	31.6	30.1	31.3	29.6	30.4	35.8	29.4	31.2	28.7	31.1	33.0
Bachelor's in same field as doctorate (%) ^b	57.6	62.3	46.4	65.7	35.7	73.5	49.0	50.1	80.7	13.2	76.5	72.4	51.7
Master's earned (%)	75.0	68.5	75.6	44.3	78.9	71.7	64.3	83.5	72.3	79.2	46.5	89.6	90.8
Master's earned at same doctorate institution (%)	44.4	49.4	36.4	40.1	48.5	52.8	47.1	32.1	57.8	46.4	59.2	66.2	48.6
Time to doctorate (median years)													
Years since earning bachelor's degree	9.0	8.2	8.6	7.6	8.9	7.1	8.0	12.2	7.2	8.4	6.3	8.4	10.3
From graduate school start	7.4	6.8	7.3	6.3	7.7	6.3	6.8	9.3	6.1	7.3	5.8	6.8	8.8
From doctoral program start ^c	5.8	5.7	5.0	5.7	5.7	5.3	5.8	5.0	5.3	5.3	5.3	5.9	6.0
Received tuition remission (%)	84.4	86.7	88.8	90.3	83.7	87.9	89.0	70.5	93.5	88.3	91.0	81.5	90.0

* = value between 0.00% and 0.05%.

^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.