

Table 8-1

Science and engineering research doctorate recipients, statistical profile by sex and broad field of doctorate: 2021

(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	52,250	41,356	1,223	8,259	2,195	9,563	1,044	2,582	1,915	1,299	4,811	3,716	4,749
Sex (%)													
Male	53.7	56.6	49.2	47.8	76.0	73.7	55.8	31.2	72.1	58.7	67.5	27.0	49.7
Female	46.2	43.4	50.8	52.2	24.0	26.3	44.2	68.8	27.9	41.3	32.5	73.0	50.3
Unknown	*	*	0.0	*	0.0	*	0.0	0.0	0.0	0.1	*	0.0	0.1
Citizenship status (%)													
U.S. citizen or permanent resident	60.6	57.8	56.8	71.1	32.0	39.6	63.7	73.0	44.2	51.9	56.4	82.6	63.0
Temporary visa holder	33.8	36.9	39.0	25.0	60.8	55.1	32.2	20.4	51.5	41.9	39.5	8.3	31.8
Unknown	5.6	5.3	4.2	3.8	7.2	5.4	4.1	6.5	4.2	6.2	4.1	9.1	5.2
Marital status (%)													
Never married	35.2	38.4	30.8	39.1	38.8	43.8	38.4	26.1	49.4	37.7	46.6	27.7	30.6
Married	39.6	37.3	44.0	36.5	39.5	36.0	35.4	48.1	29.8	37.4	30.9	35.9	43.4
Marriage-like relationship	9.9	10.4	10.2	13.5	6.3	7.2	15.1	6.9	9.3	9.3	11.7	13.2	11.3
Separated, divorced, widowed	3.2	2.5	2.5	1.9	2.0	1.5	2.1	5.8	1.1	3.3	1.1	3.9	4.5
Unknown	12.2	11.5	12.5	9.0	13.4	11.5	8.9	13.1	10.3	12.2	9.7	19.3	10.1
Has dependent age 18 or younger (%)	21.3	18.0	24.2	15.6	21.0	16.5	15.0	32.9	11.5	20.6	10.8	18.6	24.1
Has one or more functional limitations (%)	11.3	10.8	11.1	11.9	9.9	8.2	11.1	10.5	10.1	10.8	10.3	13.1	13.2
Age at doctorate (median years)	31.4	30.8	31.7	30.4	31.3	30.2	30.7	34.5	29.4	31.6	29.2	31.2	33.1
Bachelor's in same field as doctorate (%) ^b	61.7	65.8	49.6	64.3	40.9	82.3	53.0	44.5	80.1	12.3	78.6	72.7	56.2
Master's earned (%)	75.1	70.1	78.3	45.0	77.6	76.6	69.9	80.3	72.4	78.9	52.7	91.0	90.0
Master's earned at same doctorate institution (%)	45.7	48.9	32.6	38.4	48.6	50.2	44.2	33.7	56.5	47.0	58.0	66.8	47.1
Time to doctorate (median years)													
Years since earning bachelor's degree	8.7	8.0	8.6	8.0	8.8	7.5	8.0	11.3	7.0	8.9	6.6	8.6	10.0
From graduate school start	7.3	6.8	7.3	6.3	7.3	6.7	6.8	8.9	6.1	7.6	5.9	6.9	8.4
From doctoral program start ^c	5.7	5.6	5.0	5.8	5.8	5.3	5.3	5.3	5.3	5.5	5.5	6.0	6.0
Received tuition remission (%)	84.5	86.2	85.4	89.2	85.1	85.7	88.4	70.9	93.5	84.5	90.7	80.8	87.3
Male doctorate recipients (number)	28,082	23,408	602	3,946	1,669	7,050	583	806	1,381	762	3,246	1,005	2,358
Citizenship status (%)													
U.S. citizen or permanent resident	54.2	51.6	52.3	70.0	30.7	37.6	59.2	65.5	44.0	46.2	55.4	84.2	57.9
Temporary visa holder	40.6	43.5	43.7	26.3	62.4	57.6	36.7	28.0	52.1	47.8	40.6	7.1	37.0
Unknown	5.2	4.8	4.0	3.6	6.9	4.8	4.1	6.5	3.9	6.0	4.0	8.8	5.0
Marital status (%)													
Never married	38.0	41.1	27.6	39.5	39.9	44.7	40.5	31.9	51.4	41.3	47.4	29.3	30.7
Married	39.5	37.2	49.0	37.3	38.9	36.6	37.2	45.8	28.4	37.9	30.9	38.4	44.8

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(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
Marriage-like relationship	9.0	9.2	9.5	12.5	6.4	6.5	12.0	6.7	8.5	7.7	11.2	12.2	10.9
Separated, divorced, widowed	2.0	1.7	1.5	1.6	1.7	1.3	1.5	2.4	1.2	2.5	0.8	2.2	3.5
Unknown	11.6	10.8	12.5	9.0	13.1	10.9	8.7	13.3	10.5	10.5	9.7	17.9	10.1
Has dependent age 18 or younger (%)	21.5	18.6	29.1	17.6	21.2	17.8	17.7	30.3	11.5	20.2	11.5	24.6	25.5
Has one or more functional limitations (%)	10.0	9.8	11.2	11.4	9.1	7.9	8.9	10.1	10.6	9.6	8.8	14.3	11.7
Age at doctorate (median years)	31.3	30.7	32.0	30.8	31.3	30.3	31.0	33.0	29.5	31.5	29.3	31.8	33.1
Bachelor's in same field as doctorate (%) ^b	64.5	67.7	52.9	62.7	41.7	83.8	55.0	36.0	79.7	12.8	78.6	69.6	58.4
Master's earned (%)	73.9	70.0	81.0	44.7	77.2	78.2	72.3	73.7	70.6	78.4	54.4	89.4	89.0
Master's earned at same doctorate institution (%)	45.9	48.6	29.7	38.4	48.8	50.1	43.0	35.1	54.3	47.1	57.8	65.9	45.6
Time to doctorate (median years)													
Years since earning bachelor's degree	8.3	8.0	8.6	8.0	8.6	7.6	8.0	10.0	7.0	8.4	6.7	8.6	9.8
From graduate school start	7.0	6.8	7.3	6.5	7.3	6.8	6.9	7.8	6.1	7.3	6.0	7.0	8.3
From doctoral program start ^c	5.7	5.5	4.9	5.8	5.8	5.3	5.3	5.3	5.3	5.7	5.8	5.9	5.8
Received tuition remission (%)	85.8	87.1	84.0	90.1	85.8	85.2	88.4	75.2	94.0	83.4	90.8	81.9	87.5
Female doctorate recipients (number)	24,156	17,939	621	4,312	526	2,511	461	1,776	534	536	1,563	2,711	2,388
Citizenship status (%)													
U.S. citizen or permanent resident	68.1	65.9	61.2	72.2	36.3	45.2	69.4	76.5	44.9	60.1	58.4	82.0	68.1
Temporary visa holder	25.8	28.3	34.5	23.9	55.5	48.0	26.5	17.0	50.0	33.6	37.2	8.8	26.7
Unknown	6.1	5.8	4.3	4.0	8.2	6.8	4.1	6.5	5.1	6.3	4.4	9.2	5.2
Marital status (%)													
Never married	31.9	34.9	34.0	38.8	35.2	41.2	35.8	23.5	44.2	32.6	45.0	27.2	30.6
Married	39.8	37.4	39.1	35.7	41.4	34.6	33.2	49.1	33.5	36.8	31.0	35.0	42.1
Marriage-like relationship	10.9	11.9	11.0	14.5	6.3	9.2	19.1	6.9	11.2	11.6	12.7	13.5	11.8
Separated, divorced, widowed	4.5	3.5	3.4	2.1	2.9	2.0	2.8	7.4	1.1	4.5	1.7	4.6	5.5
Unknown	12.9	12.2	12.6	9.0	14.3	13.0	9.1	13.1	9.9	14.6	9.5	19.8	10.1
Has dependent age 18 or younger (%)	21.1	17.3	19.4	13.8	20.6	12.8	11.5	34.1	11.6	21.1	9.5	16.3	22.8
Has one or more functional limitations (%)	12.7	12.0	10.9	12.3	12.4	9.0	13.9	10.8	8.6	12.6	13.3	12.7	14.6
Age at doctorate (median years)	31.7	30.8	31.4	30.2	31.4	29.8	30.2	35.5	29.3	31.6	28.8	31.0	33.1
Bachelor's in same field as doctorate (%) ^b	58.3	63.4	46.3	65.7	38.4	78.0	50.6	48.3	80.9	11.5	78.4	73.8	54.0
Master's earned (%)	76.4	70.4	75.6	45.3	78.9	71.8	67.0	83.3	77.1	79.8	49.1	91.6	91.1
Master's earned at same doctorate institution (%)	45.3	49.3	35.7	38.4	48.1	50.6	45.9	33.1	61.8	46.9	58.2	67.2	48.6
Time to doctorate (median years)													
Years since earning bachelor's degree	9.0	8.3	8.4	7.8	9.1	7.2	7.8	12.0	7.0	9.1	6.3	8.6	10.3
From graduate school start	7.6	6.9	7.0	6.3	7.4	6.3	6.7	9.6	6.2	7.8	5.8	6.9	8.7

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(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
From doctoral program start ^c	5.8	5.7	5.0	5.7	5.6	5.3	5.3	5.2	5.3	5.4	5.3	6.0	6.0
Received tuition remission (%)	83.0	85.0	86.8	88.3	82.8	87.1	88.5	68.9	92.2	86.1	90.4	80.4	87.0

* = value between 0.00% and 0.05%.

^a Includes respondents who did not report sex.^b 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.^c Time to doctorate from doctoral program start is based on master's degree entry if the master's degree was at the same 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.