



**Table 64****Statistical profile of doctorate recipients in engineering fields, by sex and field of study: 2020**

(Number, percent, and median years)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
From bachelor's	7.5	7.1	7.0	6.2	8.6	7.9	8.6	6.8	7.3	8.2
From graduate school start	6.8	6.6	6.3	5.7	7.7	7.3	7.8	6.1	6.8	7.3
From doctoral program start <sup>c</sup>	5.3	5.3	5.3	5.0	5.0	5.4	5.0	5.0	5.3	5.0
Male doctorate recipients (number)	7,882	329	653	695	586	1,630	209	638	1,373	1,769
Citizenship (%)										
U.S. citizen or permanent resident	38.4	55.9	63.4	48.5	27.6	28.4	25.4	45.6	35.3	36.2
Temporary visa holder	58.1	40.4	34.0	46.8	67.4	67.8	67.5	52.4	61.7	61.1
Unknown	3.4	3.6	2.6	4.7	4.9	3.8	7.2	2.0	3.1	2.7
Marital status (%)										
Never married	45.1	47.4	50.5	55.3	36.2	44.3	32.5	54.1	44.6	41.0
Married	39.0	34.0	35.1	28.8	46.4	40.1	47.8	29.5	39.3	44.3
Marriage-like relationship	4.1	D	D	D	3.2	3.0	D	D	D	3.7
Separated, divorced, widowed	1.2	D	D	D	1.5	1.5	D	D	D	1.4
Unknown	10.6	12.5	6.9	10.8	12.6	11.1	16.3	9.2	11.3	9.6
Bachelor's in same field as doctorate (%) <sup>b</sup>	80.7	82.7	75.5	84.5	82.3	85.3	71.8	70.4	88.3	74.7
Master's earned (%)	73.4	80.2	58.2	47.6	85.2	78.7	82.8	58.3	77.0	80.7

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Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Age at doctorate (median years)	30.3	29.9	29.8	29.0	31.4	30.6	31.7	29.6	30.3	30.8
Time to doctorate (median years)										
From bachelor's	7.6	7.0	7.0	6.3	8.4	7.9	9.0	7.0	7.4	8.2
From graduate school start	6.9	6.6	6.5	5.7	7.7	7.3	8.0	6.3	6.8	7.3
From doctoral program start <sup>c</sup>	5.3	5.3	5.3	5.0	5.0	5.4	5.0	5.0	5.3	5.0
Female doctorate recipients (number)	2,593	70	430	299	210	343	95	242	261	643
Citizenship (%)										
U.S. citizen or permanent resident	43.4	52.9	64.0	42.8	39.5	25.9	30.5	44.2	44.8	40.6
Temporary visa holder	52.9	42.9	33.0	52.5	56.2	69.7	62.1	53.3	52.1	56.3
Unknown	3.7	4.3	3.0	4.7	4.3	4.4	7.4	2.5	3.1	3.1
Marital status (%)										
Never married	46.0	47.1	50.5	51.5	34.3	40.8	43.2	54.1	45.2	44.5
Married	36.0	34.3	30.7	32.4	42.4	40.2	34.7	28.1	37.5	39.5

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(Number, percent, and median years)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Marriage-like relationship	5.2	D	D	D	6.2	2.6	D	D	D	4.2
Separated, divorced, widowed	1.9	D	D	D	3.8	1.7	D	D	D	2.6
Unknown	10.9	D	9.5	9.0	13.3	14.6	D	9.1	11.1	9.2
Bachelor's in same field as doctorate (%) <sup>b</sup>	73.1	70.0	70.0	83.3	80.5	79.9	53.7	66.5	85.8	65.0
Master's earned (%)	71.7	85.7	57.2	51.8	87.6	81.3	76.8	61.6	77.4	79.3
Age at doctorate (median years)	29.8	30.3	29.1	28.6	31.5	30.5	30.1	28.8	29.4	30.5
Time to doctorate (median years)										
From bachelor's	7.3	7.4	6.9	6.0	9.0	8.0	7.4	6.4	7.0	8.1
From graduate school start	6.6	6.8	6.1	5.5	7.8	7.3	6.8	6.0	6.3	7.3
From doctoral program start <sup>c</sup>	5.2	5.3	5.3	5.0	5.0	5.3	4.8	5.0	5.0	5.3

\* = 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 major field category, except for engineering and education fields where broad field categories need to be the same. See table A-6 in the technical notes for a listing of major fields and their constituent subfields based on the National Center for Science and Engineering Statistics' field of study taxonomy.<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 fine 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.

**Source(s):**

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