Table 9-1

Science and engineering research doctorate recipients, postgraduation plans by sex and broad field of doctorate: 2021

(Number and percent)

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
Doctorate recipients reporting postgraduation status (number)	47,433	37,827	1,108	7,726	1,978	8,754	981	2,328	1,769	1,178	4,478	3,149	4,378
Definite postdoctoral training plans	28.9	33.6	31.0	45.5	17.7	26.0	48.5	25.1	33.9	27.0	42.3	47.1	19.6
Definite employment plans	41.0	37.3	36.3	23.5	60.3	41.6	25.2	47.7	38.4	44.5	27.9	31.8	51.2
Seeking employment or study	26.9	26.0	30.4	24.3	20.5	30.3	25.8	24.1	25.6	26.2	27.7	18.5	26.5
Other status[a]	3.1	3.0	2.3	6.4	1.5	2.0	0.5	3.1	2.1	2.2	1.9	2.4	2.6
Definite postdoctoral training plans (%)[b]													
Postdoc fellowship or research associateship	94.7	94.6	96.8	94.4	95.1	95.8	99.2	88.9	98.0	95.3	98.4	85.2	97.2
Other training or unknown[c]	5.3	5.4	3.2	5.6	4.9	4.2	0.8	11.1	2.0	4.7	1.6	14.8	2.8
Definite employment plans (%)[d]													
Academe	38.4	29.4	33.1	24.4	26.9	15.6	30.0	47.7	33.7	27.5	13.2	38.2	51.7
In tenure track faculty position (%)	45.4	46.4	45.9	30.4	68.8	50.9	25.7	39.9	47.6	54.2	27.3	35.3	53.5
Not in tenure track position (%)	50.8	49.2	52.6	66.0	25.2	42.4	66.2	53.7	47.2	42.4	63.0	61.3	44.5
Government	7.9	9.1	14.7	8.5	3.5	7.3	26.7	8.7	4.0	7.1	5.2	11.1	16.0
Industry or business[e]	40.9	52.4	44.0	58.8	65.8	71.6	35.2	25.9	57.5	56.7	75.9	30.9	19.3
Nonprofit organization	6.5	6.0	4.7	5.8	2.5	3.5	4.9	14.5	2.9	5.7	3.2	9.7	9.1
Other or unknown[f]	6.2	3.1	3.5	2.5	1.3	2.0	3.2	3.2	1.9	3.1	2.5	10.1	3.9
Primary activity[g]													
Research and development	44.5	54.3	55.9	58.5	67.2	65.4	52.8	29.1	51.2	54.5	66.9	25.3	44.5
Teaching	25.5	17.5	17.6	13.7	15.9	7.7	16.5	32.5	26.8	17.6	9.9	21.9	29.4
Management or administration	9.4	5.1	7.4	4.2	1.9	2.5	4.8	13.5	0.8	4.9	2.9	7.1	9.2
Professional services and other	20.6	23.1	19.1	23.6	14.9	24.4	26.0	24.9	21.2	23.0	20.2	45.6	16.9
Secondary activity[g]													
Research and development	24.1	21.9	21.5	17.0	20.7	18.3	23.8	29.9	28.5	24.6	14.0	26.3	28.4
Teaching	13.6	10.6	12.5	5.0	11.8	6.9	8.2	16.5	6.7	11.7	2.4	13.9	21.7
Management or administration	12.1	12.7	17.0	19.1	7.5	11.5	10.0	15.7	7.8	9.6	15.0	13.0	10.9
Professional services and other	12.4	14.0	13.6	11.4	14.5	19.0	16.5	11.2	17.1	16.6	12.0	9.1	10.6
No secondary activity	37.8	40.8	35.4	47.6	45.5	44.3	41.6	26.7	39.9	37.5	56.6	37.6	28.4
Activity unknown	5.1	5.1	6.5	4.6	5.1	4.9	6.5	5.0	3.5	6.9	4.6	8.8	4.1
Postgraduation location (%)[h]													
United States[i]	89.7	90.1	88.2	93.6	90.1	90.5	88.9	93.0	82.0	90.9	89.3	96.8	80.6
Midwest	15.9	15.3	23.2	15.6	9.3	14.6	8.4	19.6	15.3	14.8	15.3	18.0	14.4
Northeast	20.1	20.6	8.6	26.0	20.7	16.5	16.2	19.4	21.8	19.7	22.9	24.4	18.4
South	27.4	25.7	32.2	26.4	18.2	25.3	27.5	34.7	19.9	22.3	20.0	29.1	28.0
West	25.8	27.9	23.6	25.2	41.4	33.5	36.0	18.8	24.6	33.4	30.8	24.8	19.1

Table 9-1

Science and engineering research doctorate recipients, postgraduation plans by sex and broad field of doctorate: 2021

(Number and percent)

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
Outside the United States	10.2	9.9	11.7	6.3	9.7	9.4	11.1	6.9	17.9	9.1	10.6	3.2	19.3
Location unknown	0.1	0.1	0.1	0.1	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1
Postgraduation location in same state as doctorate institution (%)	38.1	36.8	43.3	44.4	32.3	37.7	40.2	45.4	23.9	39.3	31.2	35.8	28.7
Male doctorate recipients reporting postgraduation status (number)	25,662	21,560	549	3,697	1,507	6,489	549	721	1,276	701	3,025	872	2,174
Definite postdoctoral training plans	29.3	32.7	31.0	46.2	17.4	25.9	47.5	30.7	36.5	24.0	43.8	42.7	19.2
Definite employment plans	41.0	38.3	38.8	23.1	61.3	42.5	27.0	43.0	34.6	46.2	26.2	35.3	54.0
Seeking employment or study	26.8	26.2	27.9	23.6	20.0	29.6	25.1	23.3	26.9	28.4	28.0	19.7	24.7
Other status[a]	2.8	2.7	2.4	7.0	1.3	1.9	0.4	2.9	2.0	1.4	1.8	2.2	2.0
Definite postdoctoral training plans (%)[b]													
Postdoc fellowship or research associateship	95.2	95.2	97.6	93.1	94.7	95.9	99.2	84.2	98.3	97.6	98.6	83.6	97.8
Other training or unknown[c]	4.8	4.8	2.4	6.9	5.3	4.1	0.8	15.8	1.7	2.4	1.4	16.4	2.2
Definite employment plans (%)[d]													
Academe	33.0	25.3	31.0	25.2	24.6	15.3	25.0	41.9	31.9	21.9	10.4	35.7	49.7
In tenure track faculty position (%)	50.1	50.8	47.0	32.6	68.7	51.5	21.6	53.8	46.8	62.0	24.4	34.5	58.0
Not in tenure track position (%)	45.4	44.3	50.0	62.8	24.7	41.3	67.6	40.8	47.5	35.2	65.9	62.7	39.6
Government	8.3	9.1	15.0	8.3	4.0	7.5	27.7	7.4	3.8	6.2	5.8	13.3	18.3
Industry or business[e]	48.5	58.5	47.4	60.1	67.6	72.1	D	36.1	D	64.2	77.9	35.1	20.2
Nonprofit organization	5.7	4.7	4.7	4.2	2.4	3.2	D	11.9	D	4.9	3.7	10.1	7.8
Other or unknown[f]	4.5	2.4	1.9	2.2	1.4	1.9	4.1	2.6	1.6	2.8	2.3	5.8	3.9
Primary activity[g]													
Research and development	51.8	60.4	61.0	62.1	69.5	66.9	56.8	42.2	53.5	55.7	70.0	26.2	48.0
Teaching	21.0	14.0	14.0	13.4	13.5	7.5	13.7	22.3	25.1	15.7	7.1	19.0	26.8
Management or administration	7.1	4.0	8.0	3.5	D	2.4	D	10.8	1.2	3.6	2.5	8.6	8.5
Professional services and other	20.0	21.6	17.0	21.1	D	23.2	D	24.7	20.2	24.9	20.4	46.2	16.7
Secondary activity[g]													
Research and development	22.4	20.6	20.0	17.0	18.8	18.5	22.3	27.4	29.1	25.6	12.6	26.5	26.8
Teaching	13.0	10.2	14.0	6.1	11.9	6.5	7.2	17.2	6.6	9.5	2.1	13.6	24.1
Management or administration	12.1	12.4	17.5	20.1	7.6	11.6	D	16.6	8.7	8.5	16.6	14.0	D
Professional services and other	14.5	16.0	16.0	13.0	15.4	19.4	D	11.8	18.1	16.1	14.1	11.8	D
No secondary activity	38.1	40.9	32.5	43.9	46.3	44.0	37.4	27.0	37.6	40.3	54.5	34.1	26.8
Activity unknown	5.1	5.2	6.1	5.5	5.4	5.1	6.1	4.5	3.6	5.9	5.2	9.4	4.1
Postgraduation location (%)[h]													
United States[i]	88.0	88.7	84.9	93.0	90.4	90.1	89.7	92.1	80.3	90.7	89.2	95.9	76.1
Midwest	15.5	15.0	23.2	15.5	9.0	15.3	8.3	19.2	14.5	14.6	15.0	18.5	14.5

Table 9-1

Science and engineering research doctorate recipients, postgraduation plans by sex and broad field of doctorate: 2021

(Number and percent)

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
Northeast	19.3	19.6	7.3	26.9	20.0	15.5	13.9	17.7	22.5	17.3	22.9	24.1	17.4
South	25.4	24.3	32.4	25.0	17.6	25.3	31.1	32.6	19.5	20.9	20.4	28.5	25.9
West	27.4	29.4	21.4	25.5	43.4	33.5	35.5	22.2	23.5	37.2	30.8	24.3	17.9
Outside the United States	11.9	11.2	14.9	6.8	9.4	9.8	10.3	7.7	19.6	9.3	10.6	4.1	23.8
Location unknown	0.1	0.1	0.3	0.1	0.3	0.1	0.0	0.2	0.1	0.0	0.1	0.0	0.1
Postgraduation location in same state as doctorate institution (%)	35.8	35.3	36.8	43.3	32.5	37.8	44.0	39.2	23.7	37.8	31.6	35.4	24.7
Female doctorate recipients reporting postgraduation status (number)	21,769	16,265	559	4,029	471	2,265	432	1,607	493	477	1,452	2,277	2,203
Definite postdoctoral training plans	28.5	34.8	31.1	45.0	18.7	26.5	49.8	22.7	27.0	31.4	39.3	48.8	20.1
Definite employment plans	41.1	36.0	33.8	23.9	57.1	38.9	22.9	49.8	48.3	41.9	31.5	30.4	48.5
Seeking employment or study	26.9	25.7	32.9	25.0	22.3	32.1	26.6	24.4	22.3	23.1	27.0	18.0	28.2
Other status[a]	3.5	3.4	2.1	5.8	1.9	2.5	0.7	3.2	2.4	3.4	2.1	2.5	3.1
Definite postdoctoral training plans (%)[b]													
Postdoc fellowship or research associateship	94.0	93.8	96.0	95.6	96.6	95.5	99.1	91.8	97.0	92.7	97.7	85.8	96.6
Other training or unknown[c]	6.0	6.2	4.0	4.4	3.4	4.5	0.9	8.2	3.0	7.3	2.3	14.2	3.4
Definite employment plans (%)[d]													
Academe	44.8	35.3	35.4	23.8	34.9	16.7	37.4	49.9	37.0	36.5	18.2	39.3	53.9
In tenure track faculty position (%)	41.4	41.9	44.8	28.4	69.1	49.0	29.7	35.3	48.9	46.6	30.1	35.7	49.0
Not in tenure track position (%)	55.5	54.2	55.2	69.0	26.6	45.6	64.9	57.9	46.6	49.3	60.2	60.7	49.5
Government	7.5	9.1	14.3	8.6	1.9	6.5	25.3	9.3	4.2	8.5	4.2	10.1	13.5
Industry or business[e]	31.9	43.7	40.2	57.7	59.5	70.1	D	21.9	D	44.5	72.4	29.0	18.2
Nonprofit organization	7.5	7.9	4.8	7.3	3.0	4.5	D	15.5	D	7.0	2.4	9.5	10.5
Other or unknown[f]	8.2	4.1	5.3	2.7	0.7	2.2	2.0	3.5	2.5	3.5	2.8	12.0	3.9
Primary activity[g]													
Research and development	35.9	45.7	50.0	55.3	59.7	60.7	46.7	24.0	47.0	52.5	61.6	25.0	40.6
Teaching	30.7	22.4	21.6	14.0	24.0	8.2	20.7	36.5	30.0	20.8	14.8	23.2	32.3
Management or administration	12.1	6.8	6.8	4.7	D	2.8	D	14.5	0.0	7.1	3.6	6.5	9.9
Professional services and other	21.3	25.2	21.6	25.9	D	28.2	D	24.9	23.0	19.7	20.0	45.3	17.2
Secondary activity[g]													
Research and development	26.2	23.9	23.3	16.9	27.1	17.8	26.1	30.9	27.4	23.0	16.4	26.2	30.1
Teaching	14.3	11.3	10.8	4.1	11.6	8.2	9.8	16.2	7.0	15.3	2.7	14.1	19.1
Management or administration	12.0	13.1	16.5	18.2	7.4	11.0	D	15.4	6.1	11.5	12.3	12.6	D
Professional services and other	10.0	11.2	10.8	9.9	11.2	17.8	D	10.9	15.2	17.5	8.4	7.9	D
No secondary activity	37.4	40.6	38.6	50.8	42.6	45.2	47.8	26.5	44.3	32.8	60.2	39.2	30.0
Activity unknown	5.1	5.0	6.9	3.8	4.1	4.3	7.1	5.3	3.4	8.5	3.7	8.5	4.0

Table 9-1

Science and engineering research doctorate recipients, postgraduation plans by sex and broad field of doctorate: 2021

(Number and percent)

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
Postgraduation location (%)[h]													
United States[i]	91.8	91.9	91.7	94.2	89.1	91.6	87.9	93.4	86.3	91.1	89.5	97.2	85.4
Midwest	16.3	15.8	23.1	15.7	10.4	12.6	8.6	19.8	17.3	15.1	15.8	17.8	14.3
Northeast	21.0	22.0	9.9	25.2	23.2	19.6	19.1	20.1	20.2	23.1	23.1	24.5	19.5
South	29.8	27.5	32.0	27.6	20.2	25.3	22.9	35.7	21.0	24.3	19.4	29.4	30.2
West	23.9	26.0	25.9	25.0	34.7	33.2	36.6	17.2	27.5	28.0	30.8	24.9	20.3
Outside the United States	8.2	8.1	8.3	5.8	10.6	8.3	12.1	6.5	13.7	8.9	10.5	2.8	14.6
Location unknown	0.1	*	0.0	*	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Postgraduation location in same state as doctorate institution (%)	40.8	38.8	50.1	45.4	31.4	37.3	35.4	48.2	24.5	41.4	30.4	36.0	32.8

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

[a] Includes doctorate recipients reporting: no plans to work or study, some other type of postgraduation plans, or definite plans for other full-time degree program.
[b] Excludes doctorate recipients reporting plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postdoctoral plans for study.
[c] Other includes doctorate recipients who reported definite postdoctoral plans for traineeship, internship or clinical residency, or other study.
[d] Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.
[e] Includes doctorate recipients reporting self-employment.
[f] Other is mainly composed of elementary and secondary schools.
[g] Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary or secondary work activity.
[h] Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.
[i] Includes cases with an unknown U.S. region of employment after doctorate, thus the percentages by regions will not sum to the value for United States; see the "Technical Notes" for states or territories included in regions.

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-CIPs code 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.