

Table 9-11. Physical sciences research doctorate recipients, postgraduation plans by sex and major field of doctorate: 2024

(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Doctorate recipients reporting postgraduation status (number)	4,952	327	2,507	348	1,770
Definite postdoctoral training plans	37.1	58.1	31.2	30.7	42.8
Definite employment plans	30.0	18.7	32.8	34.5	27.2
Seeking employment or study	31.1	22.9	33.8	32.8	28.5
Other status ^a	1.8	0.3	2.2	2.0	1.6
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	98.2	99.5	98.3	96.3	98.0
Other training or unknown ^c	1.8	0.5	1.7	3.7	2.0
Definite employment plans (%) ^d					
Academe	18.2	D	17.0	D	19.1
In tenure track faculty position (%)	22.6	D	22.9	D	22.8
Not in tenure track position (%)	68.9	58.3	70.7	85.7	66.3
Government	6.1	D	5.2	D	7.7
Industry or business ^e	71.0	34.4	74.1	84.2	67.2
Nonprofit organization	3.0	D	2.3	D	3.3
Other or unknown ^f	1.7	1.6	1.3	0.0	2.7
Primary activity ^g					
Research and development	67.2	52.5	69.0	74.6	64.2
Teaching	11.8	23.0	11.4	5.9	12.4
Management or administration	2.9	D	D	D	2.1
Professional services and other	18.1	23.0	16.1	16.9	21.2
Secondary activity ^g					
Research and development	13.7	23.0	10.3	12.7	18.6
Teaching	2.2	D	D	D	3.2
Management or administration	14.7	D	D	D	9.6
Professional services and other	11.5	14.8	7.8	15.3	16.5
No secondary activity	58.0	52.5	62.9	50.8	52.0
Activity unknown	2.6	0.0	2.7	1.7	2.9
Postgraduation location (%) ^h					
United States ⁱ	91.5	87.6	94.4	92.1	88.5
Midwest	17.1	13.9	18.4	17.2	16.1
Northeast	23.4	26.3	25.6	17.6	21.0
South	21.1	21.9	21.4	20.7	20.4
West	29.6	25.1	28.7	36.1	30.6
Outside the United States	8.4	12.4	5.5	7.9	11.3
Location unknown	0.1	0.0	0.1	0.0	0.2
Postgraduation location in same state as doctorate institution (%)	34.1	27.5	36.0	38.3	32.1
Male doctorate recipients reporting postgraduation status (number)	3,270	215	1,434	223	1,398
Definite postdoctoral training plans	38.7	56.7	33.3	31.4	42.6
Definite employment plans	29.4	17.7	31.9	37.2	27.3
Seeking employment or study	30.4	25.6	33.1	29.6	28.5
Other status ^a	1.6	0.0	1.8	1.8	1.6
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	98.7	99.2	99.2	97.1	98.5
Other training or unknown ^c	1.3	0.8	0.8	2.9	1.5
Definite employment plans (%) ^d					
Academe	17.7	D	D	D	18.3
In tenure track faculty position (%)	20.6	D	18.7	D	D

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(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Not in tenure track position (%)	71.2	D	D	87.5	D
Government	5.6	13.2	D	D	7.1
Industry or business ^e	72.6	34.2	75.9	86.7	69.4
Nonprofit organization	2.4	D	1.8	D	2.6
Other or unknown ^f	1.7	0.0	1.3	0.0	2.6
Primary activity ^g					
Research and development	69.7	60.5	72.9	77.8	65.1
Teaching	11.3	D	10.7	D	11.9
Management or administration	2.3	D	D	0.0	D
Professional services and other	16.7	D	13.4	17.3	D
Secondary activity ^g					
Research and development	14.0	18.4	10.3	12.3	18.4
Teaching	2.8	D	2.1	D	D
Management or administration	14.4	D	18.7	D	9.5
Professional services and other	13.1	D	8.7	D	17.0
No secondary activity	55.6	52.6	60.4	48.1	51.9
Activity unknown	3.3	0.0	3.9	2.4	3.1
Postgraduation location (%) ^h					
United States ⁱ	90.0	84.4	93.0	92.2	87.7
Midwest	16.7	13.8	18.0	18.3	15.7
Northeast	23.1	24.4	25.5	18.3	21.3
South	20.6	21.9	20.6	23.5	20.1
West	29.2	23.8	28.7	31.4	30.2
Outside the United States	9.8	15.6	6.9	7.8	12.1
Location unknown	0.1	0.0	0.1	0.0	0.2
Postgraduation location in same state as doctorate institution (%)	34.2	27.5	36.2	37.9	32.9
Female doctorate recipients reporting postgraduation status (number)	1,682	112	1,073	125	372
Definite postdoctoral training plans	34.0	60.7	28.4	29.6	43.5
Definite employment plans	31.2	20.5	34.0	29.6	26.6
Seeking employment or study	32.5	17.9	34.9	38.4	28.2
Other status ^a	2.3	0.9	2.6	2.4	1.6
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	97.0	100.0	97.0	94.6	96.3
Other training or unknown ^c	3.0	0.0	3.0	5.4	3.7
Definite employment plans (%) ^d					
Academe	19.1	30.4	D	D	22.2
In tenure track faculty position (%)	26.0	D	27.7	D	D
Not in tenure track position (%)	65.0	D	D	83.3	D
Government	6.9	D	D	0.0	10.1
Industry or business ^e	68.1	34.8	71.8	78.4	58.6
Nonprofit organization	4.2	D	3.0	D	6.1
Other or unknown ^f	1.7	4.3	1.4	0.0	3.0
Primary activity ^g					
Research and development	62.7	39.1	64.3	67.6	60.8
Teaching	12.5	D	12.2	D	14.4
Management or administration	4.1	0.0	4.2	D	D
Professional services and other	20.7	D	19.4	16.2	D
Secondary activity ^g					
Research and development	13.1	30.4	10.2	13.5	19.6

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(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Teaching	1.2	0.0	D	0.0	D
Management or administration	15.1	D	D	D	10.3
Professional services and other	8.5	D	6.6	D	14.4
No secondary activity	62.2	52.2	65.9	56.8	52.6
Activity unknown	1.1	0.0	1.1	0.0	2.0
Postgraduation location (%) ^h					
United States ⁱ	94.6	93.4	96.3	91.9	91.6
Midwest	18.0	14.3	19.0	14.9	17.6
Northeast	24.1	29.7	25.8	16.2	19.9
South	21.9	22.0	22.7	14.9	21.8
West	30.6	27.5	28.7	45.9	32.2
Outside the United States	5.4	6.6	3.7	8.1	8.4
Location unknown	0.0	0.0	0.0	0.0	0.0
Postgraduation location in same state as doctorate institution (%)	33.8	27.5	35.7	39.2	29.5

D = suppressed to avoid disclosure of confidential information.

^a Other status 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 Definite postdoctoral training plans excludes doctorate recipients reporting plans for other full-time degree program. Percentages are based on the number of doctorate recipients reporting definite postdoctoral plans for study.^c Other training includes doctorate recipients who reported definite postdoctoral plans for traineeship, internship or clinical residency, or other study.^d Percentages are based on the number of doctorate recipients reporting definite postgraduation plans for employment.^e Industry or business includes doctorate recipients reporting self-employment.^f Other is mainly composed of elementary and secondary schools.^g Percentages are based on the number of doctorate recipients reporting definite postgraduation plans for employment and primary or secondary work activity.^h Percentages are based on the number of doctorate recipients reporting definite postgraduation plans and type of plans.ⁱ United States includes doctorate recipients 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):**

A definite postgraduation commitment includes accepting new employment or a postdoctoral study (postdoc) position or returning to predoctoral employment, while postgraduation employment includes accepting new employment or returning to predoctoral employment that is not a postdoctoral study (postdoc) position. 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.