

TABLE 9-11

Physical sciences research doctorate recipients, postgraduation plans by sex and major field of doctorate: 2023

(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Doctorate recipients reporting postgraduation status (number)	4,983	308	2,472	374	1,829
Definite postdoctoral training plans	34.8	62.0	29.5	23.5	39.7
Definite employment plans	38.4	18.8	43.6	46.3	33.1
Seeking employment or study	25.2	17.2	25.4	29.1	25.4
Other status ^a	1.6	1.9	1.5	1.1	1.7
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	98.3	99.5	97.3	D	98.9
Other training or unknown ^c	1.7	0.5	2.7	D	1.1
Definite employment plans (%) ^d					
Academe	11.9	34.5	10.5	7.5	13.5
In tenure track faculty position (%)	19.7	D	22.1	D	18.3
Not in tenure track position (%)	75.0	D	74.3	D	75.6
Government	5.1	D	4.6	D	5.4
Industry or business ^e	78.8	46.6	81.1	83.2	76.7
Nonprofit organization	2.7	D	2.3	D	3.0
Other or unknown ^f	1.5	3.4	1.5	1.7	1.3
Primary activity ^g					
Research and development	72.6	61.4	73.4	76.5	71.2
Teaching	8.5	D	8.4	D	D
Management or administration	0.7	D	0.9	D	D
Professional services and other	18.2	21.1	17.3	17.3	19.6
Secondary activity ^g					
Research and development	9.1	D	D	9.3	13.5
Teaching	1.2	0.0	D	D	1.0
Management or administration	16.5	D	20.3	D	9.7
Professional services and other	8.8	15.8	6.5	9.9	11.9
No secondary activity	64.4	57.9	65.9	58.6	63.8
Activity unknown	3.4	1.7	3.1	6.4	3.3
Postgraduation location (%) ^h					
United States ⁱ	91.7	85.1	94.6	94.6	88.4
Midwest	14.3	10.4	16.5	14.6	12.0
Northeast	24.1	18.9	26.0	19.5	23.3
South	20.4	21.7	21.6	15.7	19.6
West	32.4	33.7	30.3	42.9	33.0
Outside the United States	8.3	14.9	5.4	5.4	11.6
Location unknown	0.0	0.0	0.0	0.0	0.0
Postgraduation location in same state as doctorate institution (%)	30.7	22.5	33.9	33.7	27.3
Male doctorate recipients reporting postgraduation status (number)	3,285	209	1,398	238	1,440
Definite postdoctoral training plans	36.8	61.7	32.0	26.9	39.5
Definite employment plans	36.6	19.6	41.8	42.0	33.1
Seeking employment or study	25.4	16.7	25.0	30.3	26.2
Other status ^a	1.2	1.9	1.2	0.8	1.3
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	98.6	99.2	97.5	D	99.1
Other training or unknown ^c	1.4	0.8	2.5	D	0.9
Definite employment plans (%) ^d					

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Physical sciences research doctorate recipients, postgraduation plans by sex and major field of doctorate: 2023

(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Academe	11.1	D	D	7.0	11.3
In tenure track faculty position (%)	16.5	D	D	0.0	18.5
Not in tenure track position (%)	76.7	81.8	75.4	85.7	75.9
Government	4.7	D	D	6.0	5.7
Industry or business ^e	80.7	53.7	83.2	85.0	79.0
Nonprofit organization	1.7	D	D	0.0	2.7
Other or unknown ^f	1.7	4.9	1.9	2.0	1.3
Primary activity ^g					
Research and development	75.2	D	76.0	D	73.5
Teaching	7.8	D	D	D	D
Management or administration	0.6	0.0	D	0.0	D
Professional services and other	16.5	17.5	14.6	15.1	18.9
Secondary activity ^g					
Research and development	9.7	20.0	6.0	9.7	13.3
Teaching	1.0	0.0	D	D	D
Management or administration	16.2	D	D	19.4	10.0
Professional services and other	10.3	22.5	7.3	D	D
No secondary activity	62.8	52.5	63.9	57.0	63.5
Activity unknown	3.8	2.4	3.8	7.0	3.4
Postgraduation location (%) ^h					
United States ⁱ	90.4	84.1	93.5	95.7	87.6
Midwest	14.1	10.6	16.3	15.9	12.2
Northeast	23.8	20.6	26.3	20.1	22.5
South	19.0	18.8	20.3	14.6	18.5
West	33.2	33.5	30.6	43.3	34.2
Outside the United States	9.6	15.9	6.5	4.3	12.4
Location unknown	0.0	0.0	0.0	0.0	0.0
Postgraduation location in same state as doctorate institution (%)	29.1	22.4	32.0	32.9	26.7
Female doctorate recipients reporting postgraduation status (number)	1,697	99	1,073	136	389
Definite postdoctoral training plans	31.0	62.6	26.4	17.6	40.4
Definite employment plans	42.0	17.2	45.9	53.7	33.4
Seeking employment or study	24.8	18.2	25.9	27.2	22.6
Other status ^a	2.2	2.0	1.9	1.5	3.6
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	97.7	D	96.8	D	98.1
Other training or unknown ^c	2.3	D	3.2	D	1.9
Definite employment plans (%) ^d					
Academe	13.3	D	D	8.2	21.5
In tenure track faculty position (%)	24.2	D	D	D	17.9
Not in tenure track position (%)	72.6	D	73.1	D	75.0
Government	5.6	D	D	D	4.6
Industry or business ^e	75.7	29.4	78.5	80.8	68.5
Nonprofit organization	4.2	D	D	D	3.8
Other or unknown ^f	1.1	0.0	1.0	1.4	1.5
Primary activity ^g					
Research and development	68.3	D	70.3	D	62.7
Teaching	9.8	D	D	7.2	15.1

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Physical sciences research doctorate recipients, postgraduation plans by sex and major field of doctorate: 2023

(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Management or administration	0.9	D	D	D	0.0
Professional services and other	21.1	29.4	20.6	20.3	22.2
Secondary activity ^g					
Research and development	8.1	D	D	8.7	14.3
Teaching	1.4	0.0	D	D	D
Management or administration	17.2	D	D	D	8.7
Professional services and other	6.3	0.0	5.6	D	D
No secondary activity	67.0	70.6	68.2	60.9	65.1
Activity unknown	2.7	0.0	2.2	5.5	3.1
Postgraduation location (%) ^h					
United States ⁱ	94.1	87.3	96.0	92.8	91.3
Midwest	14.8	10.1	16.8	12.4	11.5
Northeast	24.6	15.2	25.7	18.6	26.5
South	23.3	27.8	23.4	17.5	23.7
West	30.9	34.2	29.9	42.3	28.9
Outside the United States	5.9	12.7	4.0	7.2	8.7
Location unknown	0.0	0.0	0.0	0.0	0.0
Postgraduation location in same state as doctorate institution (%)	33.8	22.8	36.4	35.1	29.3

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.