

Table 9-11

Physical sciences research doctorate recipients, postgraduation plans by sex and major field of doctorate: 2021

(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Doctorate recipients reporting postgraduation status (number)	4,478	251	2,176	418	1,633
Definite postdoctoral training plans	42.3	61.0	39.4	34.9	45.3
Definite employment plans	27.9	16.3	31.0	29.7	25.0
Seeking employment or study	27.7	20.3	27.5	33.3	27.6
Other status ^a	1.9	2.4	2.0	2.2	1.7
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	98.4	99.3	97.6	98.6	99.1
Other training or unknown ^c	1.6	0.7	2.4	1.4	0.9
Definite employment plans (%) ^d					
Academe	13.2	31.7	13.3	8.9	12.5
In tenure track faculty position (%)	27.3	D	28.9	D	25.5
Not in tenure track position (%)	63.0	76.9	65.6	54.5	56.9
Government	5.2	0.0	4.7	6.5	6.1
Industry or business ^e	75.9	46.3	77.5	79.0	75.3
Nonprofit organization	3.2	D	2.2	D	4.2
Other or unknown ^f	2.5	D	2.2	D	2.0
Primary activity ^g					
Research and development	66.9	35.0	69.4	64.9	66.7
Teaching	9.9	D	11.1	D	D
Management or administration	2.9	D	3.1	D	D
Professional services and other	20.2	37.5	16.5	26.3	23.0
Secondary activity ^g					
Research and development	14.0	30.0	10.8	19.3	16.3
Teaching	2.4	0.0	2.3	D	D
Management or administration	15.0	D	18.9	18.4	D
Professional services and other	12.0	D	8.6	D	17.3
No secondary activity	56.6	55.0	59.4	45.6	55.3
Activity unknown	4.6	2.4	3.7	8.1	5.4
Postgraduation location (%) ^h					
United States ⁱ	89.3	86.6	92.6	88.5	85.5
Midwest	15.3	13.4	17.3	14.1	13.2
Northeast	22.9	22.2	25.4	19.6	20.6
South	20.0	21.6	20.3	21.1	19.2
West	30.8	29.4	29.2	33.7	32.5
Outside the United States	10.6	13.4	7.2	11.5	14.4
Location unknown	0.1	0.0	0.1	0.0	0.1
Postgraduation location in same state as doctorate institution (%)	31.2	30.9	32.8	37.0	27.6
Male doctorate recipients reporting postgraduation status (number)	3,025	154	1,257	291	1,323
Definite postdoctoral training plans	43.8	60.4	42.4	37.5	44.6
Definite employment plans	26.2	14.9	29.0	27.5	24.6
Seeking employment or study	28.0	21.4	26.7	33.3	28.9
Other status ^a	1.8	3.2	1.8	1.7	1.6
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	98.6	98.9	97.7	100.0	99.2
Other training or unknown ^c	1.4	1.1	2.3	0.0	0.8

Table 9-11

Physical sciences research doctorate recipients, postgraduation plans by sex and major field of doctorate: 2021

(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Definite employment plans (%) ^d					
Academe	10.4	D	9.3	D	10.5
In tenure track faculty position (%)	24.4	0.0	29.4	D	D
Not in tenure track position (%)	65.9	D	67.6	D	D
Government	5.8	0.0	D	D	D
Industry or business ^e	77.9	52.2	80.5	77.5	76.9
Nonprofit organization	3.7	D	D	D	D
Other or unknown ^f	2.3	D	2.2	D	1.5
Primary activity ^g					
Research and development	70.0	34.8	73.9	66.2	69.3
Teaching	7.1	D	7.5	D	D
Management or administration	2.5	0.0	2.9	D	D
Professional services and other	20.4	D	15.7	D	22.0
Secondary activity ^g					
Research and development	12.6	D	D	20.3	13.6
Teaching	2.1	0.0	D	D	2.3
Management or administration	16.6	D	D	21.6	D
Professional services and other	14.1	D	10.4	D	D
No secondary activity	54.5	65.2	56.2	39.2	55.3
Activity unknown	5.2	0.0	5.2	7.5	4.9
Postgraduation location (%) ^h					
United States ⁱ	89.2	91.4	92.6	87.8	85.9
Midwest	15.0	12.9	17.3	12.2	13.7
Northeast	22.9	22.4	25.9	18.5	20.9
South	20.4	25.0	19.6	24.3	19.7
West	30.8	31.0	29.5	32.8	31.6
Outside the United States	10.6	8.6	7.1	12.2	14.0
Location unknown	0.1	0.0	0.2	0.0	0.1
Postgraduation location in same state as doctorate institution (%)	31.6	33.6	34.2	35.4	27.9
Female doctorate recipients reporting postgraduation status (number)	1,452	97	919	127	309
Definite postdoctoral training plans	39.3	61.9	35.4	29.1	47.9
Definite employment plans	31.5	18.6	33.8	34.6	27.2
Seeking employment or study	27.0	18.6	28.6	33.1	22.3
Other status ^a	2.1	1.0	2.2	3.1	1.9
Definite postdoctoral training plans (%) ^b					
Postdoc fellowship or research associateship	97.7	100.0	97.2	94.6	98.6
Other training or unknown ^c	2.3	0.0	2.8	5.4	1.4
Definite employment plans (%) ^d					
Academe	18.2	D	18.0	D	20.2
In tenure track faculty position (%)	30.1	D	28.6	0.0	D
Not in tenure track position (%)	60.2	D	64.3	D	D
Government	4.2	0.0	D	D	D
Industry or business ^e	72.4	38.9	74.0	81.8	69.0
Nonprofit organization	2.4	D	D	D	D
Other or unknown ^f	2.8	5.6	2.3	4.5	3.6
Primary activity ^g					

Table 9-11**Physical sciences research doctorate recipients, postgraduation plans by sex and major field of doctorate: 2021**

(Number and percent)

Characteristic	All physical sciences fields	Astronomy and astrophysics	Chemistry	Materials sciences	Physics
Research and development	61.6	35.3	64.3	62.5	56.4
Teaching	14.8	D	15.1	D	D
Management or administration	3.6	D	3.3	D	D
Professional services and other	20.0	D	17.4	D	26.9
Secondary activity ^g					
Research and development	16.4	D	D	17.5	26.9
Teaching	2.7	0.0	D	0.0	D
Management or administration	12.3	0.0	D	12.5	D
Professional services and other	8.4	D	6.6	12.5	D
No secondary activity	60.2	41.2	63.0	57.5	55.1
Activity unknown	3.7	5.6	1.9	9.1	7.1
Postgraduation location (%) ^h					
United States ⁱ	89.5	79.5	92.6	90.1	84.1
Midwest	15.8	14.1	17.3	18.5	11.2
Northeast	23.1	21.8	24.7	22.2	19.4
South	19.4	16.7	21.2	13.6	17.2
West	30.8	26.9	28.8	35.8	35.8
Outside the United States	10.5	20.5	7.4	9.9	15.9
Location unknown	0.0	0.0	0.0	0.0	0.0
Postgraduation location in same state as doctorate institution (%)	30.4	26.9	30.8	40.7	26.7

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-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.