

Table 65. Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2016

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
All doctorate recipients (number) ^a	9,469	369	1,089	923	565	1,827	256	985	1,299	2,156
Postgraduation status (number) ^b										
Definite postgraduation study	1,618	75	304	182	103	201	26	204	216	307
Definite employment	3,228	140	234	303	175	728	109	270	446	823
Seeking employment or study	3,174	99	398	316	181	555	81	386	424	734
Other ^c	365	9	64	28	24	78	6	19	40	97
Definite postgraduation study (%) ^d										
Postdoc fellowship	35.9	33.3	52.0	33.0	30.1	33.8	46.2	29.4	35.6	29.3
Postdoc research associateship	62.8	65.3	45.7	65.9	69.9	65.2	46.2	70.6	63.0	69.4
Other or unknown ^e	1.3	1.3	2.3	1.1	0.0	1.0	7.7	0.0	1.4	1.3
Definite employment (%) ^f										
Academe	16.9	19.3	17.5	6.6	28.6	10.6	34.9	10.7	18.8	22.0
Government	8.1	27.1	3.4	2.6	D	7.6	D	7.0	8.5	8.0
Industry or business ^g	69.9	45.0	72.6	87.5	52.6	77.5	55.0	78.9	67.0	64.5
Nonprofit organization	3.0	6.4	4.7	2.0	D	2.7	D	2.2	2.7	3.0
Other or unknown ^h	2.1	2.1	1.7	1.3	5.1	1.6	0.0	1.1	2.9	2.4
Primary activity ⁱ										
R&D	73.6	78.6	69.0	79.2	45.5	84.7	62.0	79.8	75.3	66.3
Teaching	8.9	9.5	7.5	4.1	11.9	4.3	17.0	6.6	13.4	11.6
Management or administration	4.3	D	7.5	1.9	6.3	1.8	D	2.9	2.8	6.8
Professional services	9.5	D	13.5	8.9	30.1	5.8	D	9.1	5.9	11.2
Other	3.8	6.3	2.5	5.9	6.3	3.4	3.0	1.7	2.6	4.1

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Secondary activity ^j										
R&D	12.6	12.7	9.0	8.2	18.2	6.6	23.0	9.1	14.2	18.2
Teaching	6.7	5.6	4.0	3.0	13.3	5.2	22.0	2.5	5.4	9.1
Management or administration	18.7	23.8	30.5	23.8	18.2	14.0	8.0	23.6	20.1	16.1
Professional services	7.8	6.3	7.5	5.6	10.5	7.7	17.0	7.0	8.8	7.2
Other	1.7	3.2	1.5	2.6	2.1	0.9	0.0	1.7	2.3	1.7
No secondary activity	52.5	48.4	47.5	56.9	37.8	65.6	30.0	56.2	49.2	47.7
Activity unknown	11.1	10.0	14.5	11.2	18.3	10.4	8.3	10.4	13.0	8.7
Postgraduation location (%) ^k										
United States ^l	90.7	92.1	95.0	90.7	88.1	92.6	81.5	92.0	91.5	87.6
New England	7.4	6.0	13.2	8.0	5.0	5.9	5.2	6.1	7.1	7.3
Middle Atlantic	11.0	2.8	15.4	14.2	9.0	9.6	9.6	10.8	10.1	11.7
East North Central	12.6	14.4	11.7	13.4	14.0	9.9	14.1	14.3	19.0	9.4
West North Central	3.8	3.3	6.9	3.3	5.8	2.4	4.4	3.8	2.7	4.0
South Atlantic	13.1	19.1	16.4	10.5	15.1	11.1	20.0	10.3	12.1	13.8
East South Central	2.4	3.7	1.9	2.5	2.9	1.4	4.4	2.3	2.9	2.7
West South Central	7.3	5.6	4.8	10.7	14.7	6.9	6.7	4.9	6.6	7.2
Mountain	6.5	10.7	4.3	7.2	7.9	6.4	8.9	5.9	6.3	6.2
Pacific and insular	26.6	26.5	20.4	20.8	13.7	39.1	8.1	33.3	24.3	25.5
Not in United States	8.9	7.9	4.8	9.1	11.2	7.1	17.8	7.2	8.2	12.1
Location unknown	0.4	0.0	0.2	0.2	0.7	0.3	0.7	0.8	0.3	0.3
Male doctorate recipients (number)	7,277	313	687	626	438	1,532	185	723	1,097	1,676

Table 65. Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2016

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
Postgraduation status (number) ^b										
Definite postgraduation study	1,262	67	190	139	84	173	20	157	188	244
Definite employment	2,541	118	155	187	141	625	81	201	386	647
Seeking employment or study	2,378	D	245	221	D	451	56	278	350	562
Other ^c	274	9	40	18	D	66	D	12	35	72
Definite postgraduation study (%) ^d										
Postdoc fellowship	33.9	D	48.4	32.4	31.0	33.5	D	32.5	33.0	25.8
Postdoc research associateship	64.8	D	48.9	66.2	69.0	65.9	D	67.5	66.0	72.5
Other or unknown ^e	1.3	1.5	2.6	1.4	0.0	0.6	5.0	0.0	1.1	1.6
Definite employment (%) ^f										
Academe	16.0	D	18.7	D	25.5	10.2	D	11.9	17.1	19.9
Government	8.6	26.3	D	D	12.1	D	D	D	D	8.0
Industry or business ^g	70.6	45.8	71.6	90.9	55.3	77.3	54.3	77.1	68.7	67.1
Nonprofit organization	2.8	D	D	D	D	D	D	D	3.1	2.3
Other or unknown ^h	1.9	D	1.3	1.1	D	1.3	0.0	D	D	2.6
Primary activity ⁱ										
R&D	75.0	82.2	72.3	80.8	47.8	85.7	59.5	79.1	76.0	68.1
Teaching	8.2	D	5.4	D	9.6	3.9	D	D	12.5	10.9

Table 65. Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2016

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
Management or administration	4.5	D	D	D	D	D	9.5	3.8	D	6.8
Professional services	9.0	D	10.8	10.2	30.4	5.7	D	D	6.8	10.5
Other	3.2	4.7	D	5.4	D	D	2.7	2.2	D	3.7
Secondary activity ^j										
R&D	12.4	D	9.2	6.6	D	D	D	D	13.6	17.5
Teaching	6.5	6.5	6.2	D	D	4.8	20.3	3.3	D	8.0
Management or administration	19.5	D	33.8	26.9	15.7	15.1	D	25.8	21.4	16.6
Professional services	7.8	D	6.2	4.8	D	7.5	16.2	D	D	7.5
Other	1.7	3.7	1.5	D	2.6	D	0.0	2.2	2.4	1.5
No secondary activity	52.1	51.4	43.1	55.1	38.3	64.7	27.0	51.6	49.3	48.9
Activity unknown	11.1	9.3	16.1	10.7	18.4	10.7	8.6	9.5	12.7	9.0
Postgraduation location (%) ^k										
United States ^l	90.7	D	94.5	89.9	88.9	92.9	D	92.7	91.8	87.5
New England	7.1	D	12.5	6.1	6.2	D	D	D	7.0	7.3
Middle Atlantic	10.7	D	13.6	14.7	D	9.3	7.9	10.6	D	11.7
East North Central	13.0	16.8	12.2	12.3	13.8	10.5	12.9	14.5	20.4	9.7
West North Central	3.8	D	7.0	D	D	D	5.9	D	D	4.0
South Atlantic	12.9	17.8	15.1	11.7	14.2	11.4	19.8	11.2	12.0	13.0
East South Central	2.4	D	1.4	D	D	D	D	D	D	2.8
West South Central	7.0	D	4.1	9.8	14.7	7.0	D	3.9	5.9	7.4
Mountain	6.7	D	5.2	8.6	D	6.8	D	5.9	6.1	5.6

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Pacific and insular	27.0	27.0	23.5	20.9	D	37.6	D	33.5	23.5	26.0
Not in United States	9.0	D	5.2	10.1	11.1	6.9	D	6.7	7.8	12.1
Location unknown	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.6	0.3	0.3
Female doctorate recipients (number)	2,192	56	402	297	127	295	71	262	202	480
Postgraduation status (number) ^b										
Definite postgraduation study	356	8	114	43	19	28	6	47	28	63
Definite employment	687	22	79	116	34	103	28	69	60	176
Seeking employment or study	796	D	153	95	D	104	25	108	74	172
Other ^c	91	0	24	10	D	12	D	7	5	25
Definite postgraduation study (%) ^d										
Postdoc fellowship	43.0	D	57.9	34.9	26.3	35.7	D	19.1	53.6	42.9
Postdoc research associateship	55.6	D	40.4	65.1	73.7	60.7	D	80.9	42.9	57.1
Other or unknown ^e	1.4	0.0	1.8	0.0	0.0	3.6	16.7	0.0	3.6	0.0
Definite employment (%) ^f										
Academe	20.4	D	15.2	D	41.2	12.6	D	7.2	30.0	29.5
Government	6.0	31.8	D	D	D	D	0.0	D	D	8.0
Industry or business ^g	67.4	40.9	74.7	81.9	41.2	78.6	57.1	84.1	56.7	55.1
Nonprofit organization	3.5	D	D	D	D	D	D	D	0.0	5.7

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Other or unknown ^h	2.8	D	2.5	1.7	D	3.9	0.0	D	D	1.7
Primary activity ⁱ										
R&D	68.1	57.9	62.9	76.5	35.7	78.7	69.2	81.7	70.6	59.9
Teaching	11.3	D	11.4	D	21.4	6.4	D	D	19.6	14.2
Management or administration	3.8	D	D	D	D	D	D	0.0	D	6.8
Professional services	11.1	D	18.6	6.9	28.6	6.4	D	D	0.0	13.6
Other	5.7	15.8	D	6.9	D	D	3.8	0.0	D	5.6
Secondary activity ^j										
R&D	13.4	D	8.6	10.8	D	D	D	D	17.6	21.0
Teaching	7.5	0.0	0.0	D	D	7.4	26.9	0.0	D	13.0
Management or administration	15.7	D	24.3	18.6	28.6	7.4	D	16.7	11.8	14.2
Professional services	7.8	D	10.0	6.9	D	8.5	19.2	D	D	6.2
Other	1.6	0.0	1.4	D	0.0	D	0.0	0.0	2.0	2.5
No secondary activity	53.9	31.6	55.7	59.8	35.7	71.3	38.5	70.0	49.0	43.2
Activity unknown	10.9	13.6	11.4	12.1	17.6	8.7	7.1	13.0	15.0	8.0
Postgraduation location (%) ^k										
United States ^l	90.6	D	95.9	92.5	84.9	90.8	D	89.7	89.8	87.9
New England	8.3	D	14.5	11.9	0.0	D	D	D	8.0	7.1
Middle Atlantic	12.2	D	18.7	13.2	D	11.5	14.7	11.2	D	11.7
East North Central	10.8	0.0	10.9	15.7	15.1	6.1	17.6	13.8	10.2	8.4
West North Central	3.7	D	6.7	D	D	D	0.0	D	D	3.8
South Atlantic	14.0	26.7	18.7	8.2	18.9	9.2	20.6	7.8	12.5	16.7

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East South Central	2.3	D	2.6	D	D	D	D	D	D	2.1
West South Central	8.3	D	6.2	12.6	15.1	6.1	D	7.8	11.4	6.3
Mountain	5.8	D	2.6	4.4	D	3.8	D	6.0	8.0	8.4
Pacific and insular	25.1	23.3	15.0	20.8	D	48.1	D	32.8	29.5	23.4
Not in United States	8.7	D	4.1	6.9	11.3	8.4	D	8.6	10.2	12.1
Location unknown	0.7	0.0	0.0	0.6	3.8	0.8	2.9	1.7	0.0	0.0

D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.

^b Includes only respondents who reported postgraduation status.

^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.

^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.

^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.

^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.

^g Includes doctorate recipients who indicated self-employment.

^h "Other" is mainly composed of elementary and secondary schools.

ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.

^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.

^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.

^l Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.

NOTES: Due to rounding, percentages may not sum to 100. See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Earned Doctorates, 2016.