TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2017

(Number and percent)

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]	9,843	378	1,041	936	741	1,900	253	958	1,409	2,227
Postgraduation status (number)[b]										
Definite postgraduation study	2,093	63	338	242	169	316	21	238	284	422
Definite employment	3,510	162	216	281	247	845	106	277	482	894
Seeking employment or study	2,954	103	348	321	215	499	90	312	449	617
Other[c]	270	11	51	19	20	56	9	23	27	54
Definite postgraduation study (%)[d]										
Postdoc fellowship or research associateship	94.6	98.4	93.5	97.5	93.5	91.5	100.0	96.6	95.4	94.1
Other or unknown[e]	5.4	1.6	6.5	2.5	6.5	8.5	0.0	3.4	4.6	5.9
Definite employment (%)[f]										
Academe	17.1	13.0	23.6	8.9	27.9	11.5	40.6	8.3	18.7	20.4
Government	8.9	26.5	2.3	2.8	D	5.9	9.4	D	8.7	11.7
Industry or business[g]	69.9	52.5	67.6	84.7	59.5	78.0	43.4	82.3	68.7	64.0
Nonprofit organization	3.4	7.4	6.0	2.5	D	3.7	6.6	D	2.9	3.2
Other or unknown[h]	0.7	0.6	0.5	1.1	0.0	0.9	0.0	0.0	1.0	0.7
Primary activity[i]										
R&D	71.0	77.4	65.2	83.6	34.5	83.9	46.2	80.5	74.7	63.2
Teaching	9.8	9.0	10.3	4.5	15.9	6.2	24.0	5.2	12.9	11.1
Management or administration	4.3	4.5	5.4	2.2	9.9	1.1	11.5	2.2	1.5	7.2
Professional services	8.5	4.5	14.7	4.9	27.6	3.7	12.5	4.5	5.4	10.5
Other	6.5	4.5	4.4	4.9	12.1	5.0	5.8	7.5	5.4	8.1
Secondary activity[j]										
R&D	14.3	12.3	15.2	8.2	30.6	8.2	28.8	7.5	12.4	18.9
Teaching	7.3	5.2	5.4	4.9	D	5.4	20.2	D	6.5	10.4
Management or administration	11.4	18.7	14.7	19.4	8.6	8.4	D	D	10.2	10.0
Professional services	3.8	4.5	5.4	2.6	D	2.5	D	3.7	5.2	3.8
Other	2.9	3.9	2.9	4.5	2.2	1.6	1.9	5.6	2.2	3.3
No secondary activity	60.3	55.5	56.4	60.4	42.7	73.9	39.4	64.4	63.4	53.7
Activity unknown	4.3	4.3	5.6	4.6	6.1	5.1	1.9	3.6	4.8	2.9
Postgraduation location (%)[k]										
United States[l]	90.3	93.8	90.1	92.9	86.8	90.2	83.5	92.4	91.6	89.0
New England	7.9	7.6	13.9	8.4	4.3	7.3	7.1	6.8	9.8	6.2
Middle Atlantic	10.7	5.3	12.5	14.1	9.4	9.0	7.9	11.8	12.4	10.0
East North Central	11.5	D	9.4	9.4	12.0	10.5	D	12.6	16.7	9.7

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2017

(Number and percent)

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
West North Central	3.6	D	5.4	4.2	3.6	D	8.7	2.3	4.6	3.0
South Atlantic	13.8	19.1	16.1	12.0	16.6	9.1	20.5	13.2	14.1	15.2
East South Central	3.1	3.1	2.5	2.7	4.3	1.2	4.7	5.2	2.7	4.1
West South Central	6.7	5.3	6.0	9.0	11.3	5.5	7.9	4.9	5.5	7.3
Mountain	6.0	7.6	2.2	7.3	9.1	D	D	7.2	4.6	6.8
Pacific and insular	26.3	27.1	21.3	25.0	15.4	38.2	10.2	27.8	20.5	26.1
Not in United States	9.7	6.2	9.9	7.1	13.2	9.6	16.5	7.6	8.4	11.0
Location unknown	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Male doctorate recipients (number)	7,389	334	612	663	520	1,541	169	706	1,168	1,676
Postgraduation status (number)[b]										
Definite postgraduation study	1,609	D	207	189	130	263	D	181	239	326
Definite employment	2,753	D	135	191	169	712	D	210	420	699
Seeking employment or study	2,195	96	188	224	158	408	60	226	378	457
Other[c]	200	10	31	9	15	45	5	20	22	43
Definite postgraduation study (%)[d]										
Postdoc fellowship or research associateship	94.2	D	91.8	96.8	93.8	91.3	D	96.7	95.0	93.6
Other or unknown[e]	5.8	1.7	8.2	3.2	6.2	8.7	0.0	3.3	5.0	6.4
Definite employment (%)[f]										
Academe	15.3	11.3	18.5	D	27.8	10.8	35.5	D	18.6	17.6
Government	9.3	D	D	D	D	5.9	D	9.5	D	11.3
Industry or business[g]	71.4	52.5	74.1	84.8	60.9	78.8	46.1	82.9	68.3	67.4
Nonprofit organization	3.3	D	D	D	D	3.4	D	D	D	3.1
Other or unknown[h]	0.7	0.0	0.7	0.5	0.0	1.1	0.0	0.0	1.0	0.6
Primary activity[i]										
R&D	73.9	79.4	74.4	82.3	36.7	85.0	50.0	82.3	75.0	67.4
Teaching	8.2	D	D	D	13.9	5.9	21.6	D	12.0	8.7
Management or administration	4.1	D	D	D	10.1	D	D	D	D	7.2
Professional services	7.7	5.1	12.0	D	26.6	D	D	D	D	9.1
Other	6.1	D	3.2	7.2	12.7	4.0	8.1	6.9	D	7.5
Secondary activity[j]										
R&D	13.0	D	11.2	8.3	28.5	8.2	D	5.9	12.0	17.3
Teaching	7.2	D	D	4.4	10.8	5.2	20.3	D	D	9.9
Management or administration	11.8	D	18.4	D	D	9.1	8.1	16.7	D	9.9
Professional services	3.9	5.1	D	D	D	3.0	D	D	4.8	3.8
Other	2.9	4.4	4.0	5.0	1.9	1.5	1.4	5.4	2.5	3.2

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2017

(Number and percent)

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
No secondary activity	61.3	55.1	54.4	62.4	41.1	73.1	40.5	66.0	63.3	56.2
Activity unknown	4.4	3.5	7.4	5.2	6.5	5.3	2.6	3.3	4.8	2.7
Postgraduation location (%)[k]										
United States[l]	90.0	D	90.6	92.6	D	89.5	D	93.6	91.2	89.1
New England	7.3	D	12.9	7.4	4.3	6.6	D	6.4	10.0	6.0
Middle Atlantic	10.2	D	11.7	12.6	9.4	9.5	D	10.7	D	10.0
East North Central	11.7	16.9	9.1	8.9	11.0	10.7	11.1	13.0	17.5	9.8
West North Central	3.6	D	5.6	D	D	D	D	D	4.4	3.2
South Atlantic	13.6	18.9	16.4	11.6	17.1	9.1	21.1	14.1	14.0	14.6
East South Central	3.0	D	2.6	D	3.3	D	D	4.9	D	3.8
West South Central	6.9	D	7.0	D	10.0	5.5	D	5.1	5.3	7.3
Mountain	6.1	D	1.5	7.6	10.4	5.9	D	7.7	4.4	6.7
Pacific and insular	26.8	27.4	22.8	24.5	14.7	37.1	D	D	20.6	27.1
Not in United States	9.9	D	9.4	7.4	D	10.3	D	6.4	8.8	10.9
Location unknown	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Female doctorate recipients (number)	2,448	44	429	272	219	359	83	252	241	549
Postgraduation status (number)[b]										
Definite postgraduation study	484	D	131	53	39	53	D	57	45	96
Definite employment	757	D	81	90	78	133	D	67	62	195
Seeking employment or study	759	7	160	97	57	91	30	86	71	160
Other[c]	70	1	20	10	5	11	4	3	5	11
Definite postgraduation study (%)[d]										
Postdoc fellowship or research associateship	96.1	D	96.2	100.0	92.3	92.5	D	96.5	97.8	95.8
Other or unknown[e]	3.9	0.0	3.8	0.0	7.7	7.5	0.0	3.5	2.2	4.2
Definite employment (%)[f]										
Academe	23.6	23.8	32.1	D	28.2	15.0	53.3	D	19.4	30.3
Government	7.5	D	D	D	D	6.0	D	D	D	13.3
Industry or business[g]	64.1	52.4	56.8	84.4	56.4	73.7	36.7	80.6	71.0	51.8
Nonprofit organization	4.0	D	D	D	D	5.3	D	0.0	D	3.6
Other or unknown[h]	0.8	4.8	0.0	2.2	0.0	0.0	0.0	0.0	1.6	1.0
Primary activity[i]										
R&D	60.6	63.2	50.6	86.2	29.7	78.1	36.7	75.0	72.9	47.9
Teaching	15.5	D	D	D	20.3	7.8	30.0	D	18.6	19.7
Management or administration	4.7	D	D	D	9.5	D	D	D	D	6.9
Professional services	11.4	0.0	19.0	D	29.7	D	D	D	D	15.4

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2017

(Number and percent)

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
Other	7.8	D	6.3	0.0	10.8	10.2	0.0	9.4	D	10.1
Secondary activity[j]										
R&D	19.1	D	21.5	8.0	35.1	8.6	D	12.5	15.3	25.0
Teaching	7.8	D	D	5.7	D	6.3	20.0	D	D	12.2
Management or administration	10.0	D	8.9	D	D	4.7	D	D	D	10.6
Professional services	3.6	0.0	D	D	D	0.0	D	D	8.5	3.7
Other	2.9	0.0	1.3	3.4	2.7	2.3	3.3	6.3	0.0	3.7
No secondary activity	56.6	57.9	59.5	56.3	45.9	78.1	36.7	59.4	64.4	44.7
Activity unknown	3.8	9.5	2.5	3.3	5.1	3.8	0.0	4.5	4.8	3.6
Postgraduation location (%)[k]										
United States[l]	91.3	D	89.2	93.7	D	93.5	D	88.7	94.4	88.7
New England	10.0	D	15.6	11.2	4.3	11.3	D	8.1	8.4	7.2
Middle Atlantic	12.2	D	13.7	18.2	9.4	6.5	D	15.3	D	10.3
East North Central	10.8	D	9.9	10.5	14.5	9.7	D	11.3	12.1	9.6
West North Central	3.4	D	5.2	D	D	D	D	D	5.6	2.4
South Atlantic	14.3	20.8	15.6	13.3	15.4	9.1	18.9	10.5	15.0	17.2
East South Central	3.5	D	2.4	D	6.8	D	D	6.5	D	5.2
West South Central	6.2	D	4.2	D	14.5	5.4	D	4.0	6.5	7.2
Mountain	5.5	D	3.3	6.3	6.0	D	D	5.6	5.6	6.9
Pacific and insular	24.7	25.0	18.9	26.6	17.1	44.1	D	D	19.6	22.3
Not in United States	8.7	D	10.8	6.3	D	6.5	D	11.3	5.6	11.3
Location unknown	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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.

Note(s)

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2017

(Number and percent)

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(s)

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Earned Doctorates, 2017.