

Table 16. Doctorate recipients, by subfield of study and sex: 2016

Subfield of study	Total^a	Male	Female	% female
All fields	54,904	29,616	25,278	46.0
Life sciences	12,568	5,643	6,923	55.1
Agricultural sciences and natural resources	1,385	760	624	45.1
Agricultural economics	113	72	40	35.4
Agronomy, horticulture science, plant breeding, plant pathology, plant sciences-other	303	180	123	40.6
Animal nutrition, poultry science	63	40	23	36.5
Animal sciences, other	83	38	45	54.2
Environmental science	193	88	105	54.4
Fishing and fisheries sciences and management	47	26	21	44.7
Food science, food technology-other	163	75	88	54.0
Forest biology, forest management, wood science, forestry sciences-other	87	62	25	28.7
Natural resource and environmental policy	68	36	32	47.1
Natural resources and conservation, wildlife and range management	86	46	40	46.5
Soil chemistry, soil sciences-other	61	27	34	55.7
Agricultural sciences, aggregated	118	70	48	40.7
Biological and biomedical sciences	8,884	4,163	4,720	53.1
Anatomy, developmental biology	183	84	99	54.1
Bacteriology, parasitology	38	16	22	57.9
Biochemistry (biological sciences)	834	411	423	50.7
Bioinformatics	194	128	66	34.0
Biomedical sciences	331	140	191	57.7
Biometrics and biostatistics	198	107	91	46.0
Biophysics (biological sciences)	165	115	50	30.3
Botany, plant pathology, plant physiology	138	83	55	39.9
Cancer biology	439	179	260	59.2
Cell, cellular biology, and histology	261	120	141	54.0
Computational biology	133	98	35	26.3
Ecology	482	230	251	52.1
Endocrinology, human/animal pathology	60	29	31	51.7
Entomology	127	70	57	44.9
Environmental toxicology, toxicology	130	63	67	51.5
Epidemiology	343	92	251	73.2
Evolutionary biology	200	117	83	41.5
Genetics-human/animal, plant genetics	405	174	231	57.0
Immunology	402	192	210	52.2
Microbiology	467	204	263	56.3
Molecular biology, medicine	574	260	314	54.7
Neurosciences, neurobiology	997	485	512	51.4
Nutrition sciences	204	46	158	77.5
Pharmacology, human and animal	208	92	116	55.8
Physiology, human and animal	167	82	85	50.9
Structural biology	47	27	20	42.6
Virology	141	69	72	51.1
Wildlife biology	47	24	23	48.9
Zoology	38	17	21	55.3
Biological and biomedical sciences, general	773	335	438	56.7

Table 16. Doctorate recipients, by subfield of study and sex: 2016

Subfield of study	Total^a	Male	Female	% female
Biotechnology, biology/biomedical sciences-other	158	74	84	53.2
Health sciences	2,299	720	1,579	68.7
Environmental health, public health	455	114	341	74.9
Health and behavior	119	19	100	84.0
Health services research	121	36	85	70.2
Health systems administration	41	15	26	63.4
Kinesiology, exercise science	232	148	84	36.2
Medical physics, radiological science	94	62	32	34.0
Nursing science	481	36	445	92.5
Pharmaceutical sciences	274	145	129	47.1
Rehabilitation, therapeutic services	108	44	64	59.3
Speech-language pathology and audiology	115	19	96	83.5
Health sciences, aggregated	259	82	177	68.3
Physical sciences and earth sciences	6,252	4,286	1,963	31.4
Chemistry	2,704	1,713	991	36.6
Analytical chemistry	392	216	176	44.9
Chemical biology	120	66	54	45.0
Inorganic chemistry	343	223	120	35.0
Medicinal chemistry	72	48	24	33.3
Organic chemistry	564	387	177	31.4
Physical chemistry	379	254	125	33.0
Polymer chemistry	148	108	40	27.0
Theoretical chemistry	88	63	25	28.4
Chemistry, general	417	256	161	38.6
Chemistry, other	181	92	89	49.2
Geosciences, atmospheric, and ocean sciences	1,227	716	510	41.6
Atmospheric science and meteorology	245	150	95	38.8
Atmospheric physics, meteorology	78	52	26	33.3
Atmospheric chemistry, atmospheric sciences-general, atmospheric sciences-other	167	98	69	41.3
Geological sciences	617	369	247	40.0
Geochemistry, mineralogy	87	44	43	49.4
Geology	127	78	49	38.6
Geomorphology, geological sciences-general, geological sciences-other	223	122	101	45.3
Geophysics and seismology	138	101	36	26.1
Paleontology, stratigraphy	42	24	18	42.9
Ocean and marine sciences	365	197	168	46.0
Marine biology and biological oceanography	90	33	57	63.3
Oceanography, chemical and physical	79	48	31	39.2
Ocean/marine sciences, aggregated	196	116	80	40.8
Physics and astronomy	2,321	1,857	462	19.9
Astronomy and astrophysics	315	218	97	30.8
Astronomy	95	61	34	35.8
Astrophysics	211	150	61	28.9
Astronomy and astrophysics, other	9	7	2	22.2
Physics	2,006	1,639	365	18.2

Table 16. Doctorate recipients, by subfield of study and sex: 2016

Subfield of study	Total^a	Male	Female	% female
Acoustics, optics/photonics	242	205	37	15.3
Applied physics	229	180	49	21.4
Atomic physics, polymer physics	180	146	34	18.9
Biophysics (physics)	138	112	26	18.8
Condensed matter, low-temperature physics	350	303	47	13.4
Elementary particle physics	231	189	42	18.2
Nuclear physics	92	75	17	18.5
Plasma, high-temperature physics	79	68	11	13.9
Physics, general	356	275	79	22.2
Physics, other	109	86	23	21.1
Mathematics and computer sciences	3,957	2,998	959	24.2
Computer and information sciences	2,085	1,666	419	20.1
Computer science	1,651	1,363	288	17.4
Information science, systems	175	121	54	30.9
Computer and information sciences, general	161	116	45	28.0
Computer and information sciences, other	98	66	32	32.7
Mathematics and statistics	1,872	1,332	540	28.8
Algebra	83	64	19	22.9
Analysis and functional analysis	97	72	25	25.8
Applied mathematics, computing theory	488	348	140	28.7
Geometry, geometric analysis	52	46	6	11.5
Logic, topology/foundations	55	42	13	23.6
Number theory	48	34	14	29.2
Operations research, mathematics/statistics-general, mathematics/ statistics-other	784	568	216	27.6
Statistics (mathematics)	265	158	107	40.4
Psychology and social sciences	9,078	3,749	5,329	58.7
Psychology	3,946	1,138	2,808	71.2
Behavioral analysis	65	26	39	60.0
Clinical psychology	1,224	286	938	76.6
Cognitive neuroscience	162	71	91	56.2
Cognitive psychology and psycholinguistics	165	70	95	57.6
Community psychology	34	9	25	73.5
Counseling	316	84	232	73.4
Developmental and child psychology	236	40	196	83.1
Educational psychology (psychology)	108	26	82	75.9
Experimental psychology	144	64	80	55.6
Family psychology, human development and family studies	204	53	151	74.0
Health, medical psychology	53	15	38	71.7
Industrial and organizational psychology	217	91	126	58.1
Marriage and family therapy, counseling	77	21	56	72.7
Neuropsychology, physiological psychology	69	23	46	66.7
School psychology (psychology)	129	21	108	83.7
Social psychology	219	87	132	60.3
Psychology, general	302	92	210	69.5
Psychology, aggregated	222	59	163	73.4

Table 16. Doctorate recipients, by subfield of study and sex: 2016

Subfield of study	Total^a	Male	Female	% female
Social sciences	5,132	2,611	2,521	49.1
Anthropology	460	171	289	62.8
Anthropology, cultural	290	109	181	62.4
Anthropology, physical and biological	80	26	54	67.5
Anthropology, general	90	36	54	60.0
Economics	1,238	820	418	33.8
Econometrics, economics	1,179	777	402	34.1
Natural resources and environmental economics (social sciences)	59	43	16	27.1
Political science and government	745	462	283	38.0
Sociology	615	259	356	57.9
Other social sciences	2,074	899	1,175	56.7
American, U.S. studies	111	44	67	60.4
Applied linguistics	81	26	55	67.9
Area, ethnic, cultural, and gender studies	261	85	176	67.4
Criminal justice and corrections	93	46	47	50.5
Criminology	104	48	56	53.8
Demography, gerontology, statistics, urban affairs, social sciences-general, social sciences-other	382	156	226	59.2
Geography	246	139	107	43.5
Health policy analysis	61	18	43	70.5
International relations, international affairs	137	80	57	41.6
Linguistics	237	93	144	60.8
Public policy analysis	230	103	127	55.2
Urban, city, community and regional planning	131	61	70	53.4
Engineering	9,469	7,277	2,192	23.1
Aerospace, aeronautical, and astronautical engineering	369	313	56	15.2
Bioengineering and biomedical engineering	1,089	687	402	36.9
Chemical engineering	923	626	297	32.2
Civil engineering	565	438	127	22.5
Electrical, electronics, and communications engineering	1,827	1,532	295	16.1
Industrial and manufacturing engineering	256	185	71	27.7
Materials science engineering	985	723	262	26.6
Mechanical engineering	1,299	1,097	202	15.6
Other engineering	2,156	1,676	480	22.3
Computer engineering	402	341	61	15.2
Environmental, environmental health engineering	216	121	95	44.0
Nuclear engineering	131	113	18	13.7
Robotics	120	113	7	5.8
Structural engineering	116	95	21	18.1
Systems engineering	113	85	28	24.8
Other engineering, aggregated	1,058	808	250	23.6
Education	5,153	1,550	3,603	69.9
Education administration	829	306	523	63.1
Educational administration and supervision	148	57	91	61.5
Educational and human resource studies, development	63	17	46	73.0
Educational leadership	559	216	343	61.4

Table 16. Doctorate recipients, by subfield of study and sex: 2016

Subfield of study	Total^a	Male	Female	% female
Urban education and leadership	59	16	43	72.9
Education research	2,386	719	1,667	69.9
Counseling education, counseling and guidance	276	79	197	71.4
Curriculum and instruction	380	97	283	74.5
Educational assessment, testing, measurement	66	26	40	60.6
Educational policy analysis	173	56	117	67.6
Educational psychology (education)	220	51	169	76.8
Educational statistics, research methods	76	29	47	61.8
Educational/instructional technology, media design	250	103	147	58.8
Higher education evaluation and research	451	171	280	62.1
International education	57	15	42	73.7
School psychology (education)	117	19	98	83.8
Social and philosophical foundations of education	63	26	37	58.7
Special education	257	47	210	81.7
Teacher education	181	43	138	76.2
Teaching fields	1,167	315	852	73.0
English as a second or foreign language	70	18	52	74.3
Health education	70	13	57	81.4
Literacy and reading education	137	13	124	90.5
Mathematics education	182	65	117	64.3
Music education	87	42	45	51.7
Physical education and coaching	38	20	18	47.4
Science education	133	38	95	71.4
Teaching fields, aggregated	450	106	344	76.4
Other education	590	167	423	71.7
Education, general	368	98	270	73.4
Other education, aggregated	222	69	153	68.9
Humanities and arts	5,484	2,639	2,843	51.8
Foreign languages and literature	599	228	371	61.9
French, Italian	141	43	98	69.5
Germanic language and literature	67	29	38	56.7
Latin American languages and literature	96	44	52	54.2
Spanish language and literature	127	47	80	63.0
Other aggregated languages	168	65	103	61.3
History	1,147	621	526	45.9
American history, United States and Canada	391	224	167	42.7
Asian history	73	35	38	52.1
European history	207	112	95	45.9
History, science and technology and society	66	34	32	48.5
Latin American history	77	32	45	58.4
Middle, Near East history	62	39	23	37.1
History, general	155	81	74	47.7
History, aggregated	116	64	52	44.8
Letters	1,533	600	933	60.9
American literature, United States and Canada	342	133	209	61.1
Classics	109	61	48	44.0

Table 16. Doctorate recipients, by subfield of study and sex: 2016

Subfield of study	Total^a	Male	Female	% female
Comparative literature	173	65	108	62.4
English language	127	39	88	69.3
English literature, British and Commonwealth	414	147	267	64.5
Rhetoric and composition	212	71	141	66.5
Speech and rhetorical studies	39	27	12	30.8
Letters, aggregated	117	57	60	51.3
Other humanities and arts	2,205	1,190	1,013	45.9
Archaeology (humanities)	166	81	85	51.2
Art history, criticism, and conservation	278	68	209	75.2
Drama, theater arts	87	34	53	60.9
Film, cinema, video studies	73	44	29	39.7
Music	60	40	20	33.3
Musicology and ethnomusicology	127	47	80	63.0
Music performance	91	41	50	54.9
Music theory and composition	92	68	24	26.1
Philosophy, ethics	493	322	171	34.7
Religion/religious studies, Jewish/Judaic studies	281	165	116	41.3
Theology, religious education	212	157	54	25.5
Other humanities, aggregated	245	123	122	49.8
Other ^b	2,943	1,474	1,466	49.8
Business management and administration	1,510	933	576	38.1
Accounting	177	102	75	42.4
Business administration and management	263	167	96	36.5
Finance	251	196	55	21.9
Human resources development	197	98	99	50.3
Management information systems, business statistics	107	81	25	23.4
Marketing management and research	140	68	72	51.4
Other aggregated business fields	375	221	154	41.1
Communication	673	261	410	60.9
Communication research	183	60	122	66.7
Mass communication, media studies	211	92	119	56.4
Communication, general	143	47	96	67.1
Communication, aggregated	136	62	73	53.7
Non-S&E fields not elsewhere classified	760	280	480	63.2
Architecture and environmental design	99	47	52	52.5
Family, consumer sciences and human sciences	39	8	31	79.5
Parks, sports, recreation, leisure and fitness	83	45	38	45.8
Public administration	143	70	73	51.0
Social work	294	60	234	79.6
Fields not elsewhere classified, aggregated	102	50	52	51.0

S&E = science and engineering.

^a Includes 10 respondents who did not report sex.

^b Non-science and engineering fields.

NOTE: See table A-5 in the technical notes for a listing of aggregated fields and their constituent fine fields.

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