

Table 3-2. Research doctorate recipients, by detailed field of doctorate and sex: 2024

(Number)

Field of doctorate	Total ^a	Male	Female	% female
All fields	58,131	29,885	28,245	48.6
Science and engineering	46,394	25,241	21,152	45.6
Agricultural sciences and natural resources	1,309	601	708	54.1
Agricultural, animal, plant, and veterinary sciences	866	394	472	54.5
Agronomy and crop science	71	39	32	45.1
Animal sciences	198	88	110	55.6
Food science and technology	158	56	102	64.6
Plant sciences	152	90	62	40.8
Soil sciences	84	35	49	58.3
Veterinary biomedical and clinical sciences	74	34	40	54.1
Agricultural, animal, plant, and veterinary sciences nec	129	52	77	59.7
Natural resources and conservation	443	207	236	53.3
Environmental science	149	65	84	56.4
Environmental/ natural resources management and policy	73	33	40	54.8
Forestry	68	39	29	42.6
Natural resources conservation and research	71	32	39	54.9
Natural resources and conservation nec	82	38	44	53.7
Biological and biomedical sciences	9,797	4,308	5,488	56.0
Biochemistry, biophysics, and molecular biology	1,515	765	750	49.5
Biochemistry	454	217	237	52.2
Biochemistry and molecular biology	339	160	179	52.8
Biophysics	228	149	79	34.6
Molecular biology	245	119	126	51.4
Biochemistry, biophysics, and molecular biology nec	249	120	129	51.8
Bioinformatics, biostatistics, and computational biology	736	397	339	46.1
Bioinformatics	186	118	68	36.6
Biostatistics	274	112	162	59.1
Computational biology	158	99	59	37.3
Bioinformatics, biostatistics, and computational biology nec	118	68	50	42.4
Biological and biomedical sciences, general	908	391	517	56.9
Biology/ biological sciences, general	534	226	308	57.7
Biomedical sciences, general	374	165	209	55.9
Cell/ cellular biology and anatomy	792	342	449	56.7
Cell/ cellular and molecular biology	627	267	359	57.3
Developmental biology and embryology	99	43	56	56.6
Cell/ cellular biology and anatomy nec	66	32	34	51.5
Ecology, evolutionary biology, and epidemiology	1,154	409	745	64.6
Ecology	244	106	138	56.6
Ecology and evolutionary biology	303	131	172	56.8
Epidemiology	376	85	291	77.4
Epidemiology and biostatistics	46	14	32	69.6
Evolutionary biology	82	39	43	52.4
Ecology, evolutionary biology, and epidemiology nec	103	34	69	67.0
Genetics and genomics	471	213	258	54.8
Genetics, general	133	61	72	54.1
Genome sciences and genomics	106	57	49	46.2
Human/ medical genetics	66	25	41	62.1
Molecular genetics	92	36	56	60.9
Genetics and genomics nec	74	34	40	54.1
Microbiology and immunology	1,092	436	656	60.1
Immunology	357	144	213	59.7
Microbiology and immunology	282	117	165	58.5
Microbiology, general	258	94	164	63.6

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(Number)

Field of doctorate	Total ^a	Male	Female	% female
Virology	91	41	50	54.9
Microbiology and immunology nec	104	40	64	61.5
Neurobiology and neurosciences	1,238	543	695	56.1
Cognitive neuroscience	113	51	62	54.9
Neurobiology	54	22	32	59.3
Neuroscience	904	390	514	56.9
Neurobiology and neurosciences nec	167	80	87	52.1
Pharmacology and toxicology	377	138	239	63.4
Pharmacology	183	73	110	60.1
Toxicology	91	27	64	70.3
Pharmacology and toxicology nec	103	38	65	63.1
Physiology, oncology, and cancer biology	848	377	471	55.5
Biomechanics	94	56	38	40.4
Exercise physiology and kinesiology	99	57	42	42.4
Oncology and cancer biology	333	138	195	58.6
Physiology, general	84	35	49	58.3
Physiology, oncology, and cancer biology nec	238	91	147	61.8
Biological and biomedical sciences, other	666	297	369	55.4
Botany and plant biology	70	32	38	54.3
Entomology	129	65	64	49.6
Plant pathology and phytopathology	83	36	47	56.6
Plant physiology and biology nec	71	36	35	49.3
Zoology and animal biology	104	31	73	70.2
Biological and biomedical sciences nec	209	97	112	53.6
Computer and information sciences	2,595	1,922	673	25.9
Computer science	1,772	1,350	422	23.8
Computer science	1,772	1,350	422	23.8
Computer and information sciences, other	823	572	251	30.5
Artificial intelligence	295	244	51	17.3
Computer and information sciences, general	132	94	38	28.8
Computer systems networking and telecommunications	93	73	20	21.5
Informatics and information technology	133	75	58	43.6
Information sciences/ studies	107	43	64	59.8
Computer and information sciences nec	63	43	20	31.7
Engineering	10,544	7,610	2,934	27.8
Aerospace, aeronautical, astronautical, and space engineering	597	493	104	17.4
Aerospace, aeronautical, astronautical, and space engineering, general	218	183	35	16.1
Mechanical and aerospace engineering	218	188	30	13.8
Aerospace, aeronautical, astronautical, and space engineering nec	161	122	39	24.2
Biological, biomedical, and biosystems engineering	1,295	721	574	44.3
Bioengineering and biomedical engineering	1,203	672	531	44.1
Biological/ biosystems engineering and biomedical technology	92	49	43	46.7
Chemical and petroleum engineering	1,247	849	398	31.9
Chemical and biomolecular engineering	217	142	75	34.6
Chemical engineering	850	579	271	31.9
Petroleum engineering	98	77	21	21.4
Chemical and petroleum engineering nec	82	51	31	37.8
Civil, environmental, and transportation engineering	1,247	832	415	33.3
Civil engineering	341	255	86	25.2
Civil and environmental engineering	475	281	194	40.8
Environmental/ environmental health engineering	60	24	36	60.0
Geotechnical and geoenvironmental engineering	69	51	18	26.1
Structural engineering	115	92	23	20.0

Table 3-2. Research doctorate recipients, by detailed field of doctorate and sex: 2024

(Number)

Field of doctorate	Total ^a	Male	Female	% female
Transportation and highway engineering	94	68	26	27.7
Civil, environmental, and transportation engineering nec	93	61	32	34.4
Electrical and computer engineering	2,022	1,641	381	18.8
Computer engineering	252	202	50	19.8
Electrical and computer engineering	1,311	1,069	242	18.5
Electrical and electronics engineering	400	323	77	19.3
Electrical and computer engineering nec	59	47	12	20.3
Engineering technologies	415	314	101	24.3
Electrical and electronic engineering technologies	98	79	19	19.4
Electromechanical technologies	88	74	14	15.9
Environmental control technologies	57	33	24	42.1
Engineering technologies nec	172	128	44	25.6
Industrial engineering and operations research	609	415	194	31.9
Industrial engineering	160	104	56	35.0
Industrial and systems engineering	168	115	53	31.5
Operations research	164	109	55	33.5
Systems and manufacturing engineering	117	87	30	25.6
Materials and mining engineering	853	593	260	30.5
Materials engineering	99	69	30	30.3
Materials science and engineering	710	494	216	30.4
Materials and mining engineering nec	44	30	14	31.8
Mechanical engineering	1,524	1,228	296	19.4
Mechanical engineering, general	1,391	1,123	268	19.3
Mechanical engineering nec	133	105	28	21.1
Engineering, other	735	524	211	28.7
Agricultural and natural resources engineering	79	53	26	32.9
Engineering mechanics, physics, and science	135	105	30	22.2
Nanotechnology, nanoscience, and nanoengineering	122	92	30	24.6
Nuclear engineering	157	124	33	21.0
Engineering nec	242	150	92	38.0
Geosciences, atmospheric, and ocean sciences	1,204	605	599	49.8
Geological and earth sciences	685	354	331	48.3
Geochemistry	53	23	30	56.6
Geology	86	42	44	51.2
Geology/ earth science, general	111	58	53	47.7
Geophysics and seismology	105	75	30	28.6
Hydrology and water resources science	88	49	39	44.3
Geological and earth sciences nec	242	107	135	55.8
Ocean, marine, and atmospheric sciences	519	251	268	51.6
Atmospheric sciences and meteorology, general	109	69	40	36.7
Atmospheric sciences and meteorology nec	107	58	49	45.8
Climatology, atmospheric chemistry/ physics	57	26	31	54.4
Marine biology and biological oceanography	103	36	67	65.0
Marine sciences	72	25	47	65.3
Oceanography, chemical/ physical	71	37	34	47.9
Health sciences	2,874	860	2,014	70.1
Nursing and nursing science	583	67	516	88.5
Nursing education	85	10	75	88.2
Nursing science	345	44	301	87.2
Nursing specialties and practice	153	13	140	91.5
Pharmacy and pharmaceutical sciences	472	223	249	52.8
Medicinal and pharmaceutical chemistry	88	47	41	46.6
Pharmaceutical sciences	261	121	140	53.6

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(Number)

Field of doctorate	Total ^a	Male	Female	% female
Pharmacy, pharmaceutical sciences, and administration nec	123	55	68	55.3
Public health	809	244	565	69.8
Environmental health	78	30	48	61.5
Health services research	107	38	69	64.5
Health/ medical physics	70	42	28	40.0
Public health education and promotion	96	19	77	80.2
Public health, general	218	57	161	73.9
Public health nec	240	58	182	75.8
Health sciences, other	1,010	326	684	67.7
Communication disorders sciences	126	24	102	81.0
Exercise science and kinesiology	134	62	72	53.7
Health sciences, general	71	21	50	70.4
Marriage and family therapy/ counseling	65	15	50	76.9
Medical clinical sciences	90	28	62	68.9
Medical, biomedical, and health informatics	69	45	24	34.8
Mental health, counseling, and therapy services and sciences	87	19	68	78.2
Rehabilitation and therapeutic sciences	158	51	107	67.7
Health sciences nec	210	61	149	71.0
Mathematics and statistics	2,004	1,384	620	30.9
Applied mathematics	442	284	158	35.7
Applied mathematics, general	235	143	92	39.1
Computational and applied mathematics	151	107	44	29.1
Applied mathematics nec	56	34	22	39.3
Mathematics	921	672	249	27.0
Algebra and number theory	79	62	17	21.5
Mathematics, general	728	523	205	28.2
Mathematics nec	114	87	27	23.7
Statistics	641	428	213	33.2
Applied statistics, general	45	30	15	33.3
Mathematics and statistics	95	78	17	17.9
Statistics	449	294	155	34.5
Statistics nec	52	26	26	50.0
Multidisciplinary/ interdisciplinary sciences	1,623	993	630	38.8
Interdisciplinary computer sciences	549	407	142	25.9
Computer science and engineering	218	164	54	24.8
Electrical engineering and computer science	213	173	40	18.8
Interdisciplinary computer sciences nec	118	70	48	40.7
Multidisciplinary/ interdisciplinary sciences, other	1,074	586	488	45.4
Behavioral and cognitive sciences	118	55	63	53.4
Computational science and engineering	105	74	31	29.5
Data mining and machine learning	220	174	46	20.9
Data science and data analytics	112	63	49	43.8
History/ philosophy of science, technology, and society	58	27	31	53.4
Nutrition sciences	125	21	104	83.2
Polymer science and engineering	68	50	18	26.5
Multidisciplinary/ interdisciplinary sciences nec	268	122	146	54.5
Physical sciences	5,367	3,543	1,824	34.0
Astronomy and astrophysics	340	225	115	33.8
Astronomy	117	82	35	29.9
Astrophysics	127	83	44	34.6
Astronomy and astrophysics nec	96	60	36	37.5
Chemistry	2,738	1,569	1,169	42.7
Analytical chemistry	363	178	185	51.0

Table 3-2. Research doctorate recipients, by detailed field of doctorate and sex: 2024

(Number)

Field of doctorate	Total ^a	Male	Female	% female
Chemical biology	197	100	97	49.2
Chemistry, general	645	337	308	47.8
Inorganic chemistry	297	188	109	36.7
Organic chemistry	519	335	184	35.5
Physical chemistry	267	187	80	30.0
Polymer chemistry	85	45	40	47.1
Theoretical and computational chemistry	207	130	77	37.2
Chemistry nec	158	69	89	56.3
Materials sciences	357	227	130	36.4
Materials science	167	118	49	29.3
Materials chemistry and materials sciences nec	190	109	81	42.6
Physics	1,932	1,522	410	21.2
Applied physics	165	124	41	24.8
Atomic/ molecular physics	83	71	12	14.5
Condensed matter and materials physics	317	269	48	15.1
Elementary particle physics	163	125	38	23.3
Nuclear physics	85	68	17	20.0
Optics/ optical sciences	128	97	31	24.2
Physics and astronomy	236	173	63	26.7
Physics, general	421	325	96	22.8
Plasma and high-temperature physics	73	60	13	17.8
Theoretical and mathematical physics	118	104	14	11.9
Physics and physical sciences nec	143	106	37	25.9
Psychology	3,951	969	2,982	75.5
Clinical psychology	1,159	227	932	80.4
Clinical child psychology	60	6	54	90.0
Clinical psychology	1,099	221	878	79.9
Counseling and applied psychology	1,464	359	1,105	75.5
Applied behavior analysis	57	12	45	78.9
Counseling psychology	412	107	305	74.0
Educational psychology	240	55	185	77.1
Industrial and organizational psychology	200	78	122	61.0
School psychology	258	37	221	85.7
Counseling and applied psychology nec	297	70	227	76.4
Research and experimental psychology	816	247	569	69.7
Behavioral neuroscience	107	32	75	70.1
Cognitive psychology and psycholinguistics	99	34	65	65.7
Developmental and child psychology	109	19	90	82.6
Experimental psychology	107	36	71	66.4
Social psychology	185	61	124	67.0
Research and experimental psychology nec	209	65	144	68.9
Psychology, other	512	136	376	73.4
Human development	155	28	127	81.9
Psychology, general	295	86	209	70.8
Psychology nec	62	22	40	64.5
Social sciences	5,126	2,446	2,680	52.3
Anthropology	395	130	265	67.1
Anthropology, general	113	44	69	61.1
Cultural anthropology	177	62	115	65.0
Physical and biological anthropology	69	15	54	78.3
Anthropology nec	36	9	27	75.0
Area, ethnic, cultural, gender, and group studies	457	178	279	61.1
American studies	60	23	37	61.7

Table 3-2. Research doctorate recipients, by detailed field of doctorate and sex: 2024

(Number)

Field of doctorate	Total ^a	Male	Female	% female
Area studies	214	108	106	49.5
Ethnic studies	95	29	66	69.5
Area, ethnic, cultural, gender, and group studies nec	88	18	70	79.5
Economics	1,385	888	497	35.9
Agricultural economics	97	47	50	51.5
Applied economics	141	88	53	37.6
Development economics and international development	42	26	16	38.1
Econometrics and quantitative economics	227	154	73	32.2
Economics, general	768	505	263	34.2
Environmental/ natural resource economics	58	32	26	44.8
Economics nec	52	36	16	30.8
Political science and government	674	392	282	41.8
Political science and government, general	562	333	229	40.7
Political science and government nec	112	59	53	47.3
Public policy analysis	434	174	260	59.9
Education policy analysis	125	46	79	63.2
Health policy analysis	60	21	39	65.0
Public policy analysis, general	112	55	57	50.9
Public policy nec	137	52	85	62.0
Sociology, demography, and population studies	638	216	422	66.1
Sociology, general	555	181	374	67.4
Sociology, demography, and population studies nec	83	35	48	57.8
Social sciences, other	1,143	468	675	59.1
Applied linguistics	77	36	41	53.2
Archeology	91	34	57	62.6
Criminology	111	30	81	73.0
Geography and cartography	204	87	117	57.4
International relations and national security studies	131	81	50	38.2
Linguistics	220	101	119	54.1
Social sciences nec	309	99	210	68.0
Non-science and engineering	11,737	4,644	7,093	60.4
Business	1,356	723	633	46.7
Business administration and management	441	231	210	47.6
Business management and administration	226	117	109	48.2
Organizational leadership	92	42	50	54.3
Business administration and management nec	123	72	51	41.5
Business, other	915	492	423	46.2
Accounting and accounting-related	150	81	69	46.0
Finance and financial management	185	121	64	34.6
Management information systems	93	63	30	32.3
Management sciences	91	50	41	45.1
Marketing	136	53	83	61.0
Organizational behavior studies	81	38	43	53.1
Business nec	179	86	93	52.0
Education	3,941	1,073	2,868	72.8
Education leadership and administration	1,162	368	794	68.3
Educational leadership and administration, general	466	146	320	68.7
Higher education and community college administration	469	157	312	66.5
Education leadership and administration nec	227	65	162	71.4
Education research	1,222	309	913	74.7
Curriculum and instruction	405	89	316	78.0
Educational assessment, evaluation, and research methods	212	65	147	69.3
Educational/ instructional technology and media design	205	63	142	69.3

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(Number)

Field of doctorate	Total ^a	Male	Female	% female
Higher education evaluation and research	53	13	40	75.5
Student counseling and personnel services	275	58	217	78.9
Education research nec	72	21	51	70.8
Teacher education and teaching fields	1,110	264	846	76.2
Adult, continuing, and workforce education and development	59	23	36	61.0
Bilingual, multilingual, and multicultural education	66	15	51	77.3
Language and literacy education	98	15	83	84.7
Mathematics teacher education	53	16	37	69.8
Music teacher education	65	34	31	47.7
Special education and teaching	259	44	215	83.0
STEM educational methods	86	28	58	67.4
Teacher education, science and engineering	72	21	51	70.8
Teacher education, specific levels and methods	216	41	175	81.0
Teacher education, specific subject areas	136	27	109	80.1
Education, other	447	132	315	70.5
Education, general	319	107	212	66.5
Education nec	128	25	103	80.5
Humanities	3,305	1,635	1,670	50.5
English language and literature, letters	1,017	365	652	64.1
American literature (United States)	108	35	73	67.6
Creative writing	89	34	55	61.8
English language and literature, general	403	152	251	62.3
English literature (British and Commonwealth)	119	47	72	60.5
Rhetoric, composition, and writing studies	205	62	143	69.8
English language and literature nec	93	35	58	62.4
Foreign languages, literatures, and linguistics	539	234	305	56.6
Comparative literature	108	41	67	62.0
Hispanic/ Latin American languages, literatures, and linguistics	84	44	40	47.6
Romance languages, literatures, and linguistics	99	41	58	58.6
Spanish language and literature	77	30	47	61.0
Foreign languages, literatures, and linguistics nec	171	78	93	54.4
History	719	386	333	46.3
American history (United States)	229	124	105	45.9
European history	112	61	51	45.5
History, general	179	94	85	47.5
History, regional focus	126	73	53	42.1
History nec	73	34	39	53.4
Philosophy and religious studies	631	403	228	36.1
Philosophy	438	278	160	36.5
Religion/ religious studies	135	81	54	40.0
Philosophy and religious studies nec	58	44	14	24.1
Humanities, other	399	247	152	38.1
Bible/ biblical studies	84	69	15	17.9
Humanities and humanistic studies	125	45	80	64.0
Theological and ministerial studies	190	133	57	30.0
Visual and performing arts	874	374	500	57.2
Performing arts	518	281	237	45.8
Dance, drama, theatre arts, and stagecraft	92	25	67	72.8
Music performance	133	75	58	43.6
Music theory and composition	89	69	20	22.5
Musicology and ethnomusicology	106	55	51	48.1
Music nec	98	57	41	41.8
Visual arts, media studies, and design	356	93	263	73.9

Table 3-2. Research doctorate recipients, by detailed field of doctorate and sex: 2024

(Number)

Field of doctorate	Total ^a	Male	Female	% female
Art history, criticism, and conservation	210	42	168	80.0
Film, cinema, and media studies	88	37	51	58.0
Visual arts, media studies, and design nec	58	14	44	75.9
Other non-science and engineering	2,261	839	1,422	62.9
Communication and journalism	649	218	431	66.4
Applied communication, advertising, and public relations	106	28	78	73.6
Communication and media studies	142	57	85	59.9
Communication, general	190	59	131	68.9
Mass communication/ media studies	107	43	64	59.8
Communication and journalism nec	104	31	73	70.2
Multidisciplinary/ interdisciplinary studies	386	166	220	57.0
Classical and ancient studies	108	62	46	42.6
Interdisciplinary leadership/ leadership studies	149	60	89	59.7
Multidisciplinary/ interdisciplinary studies nec	129	44	85	65.9
Public administration and social services	534	167	367	68.7
Public administration	199	89	110	55.3
Social work and human services	335	78	257	76.7
Non-science and engineering, other	692	288	404	58.4
Architecture and architectural studies	137	56	81	59.1
City/ urban, community, and regional planning	90	40	50	55.6
Family, consumer, and human sciences	123	20	103	83.7
Homeland security and protective services	141	74	67	47.5
Law/ legal studies and research	97	55	42	43.3
Parks, recreation, leisure, fitness, and sport studies and management	73	27	46	63.0
Other non-science and engineering nec	31	16	15	48.4

nec = not elsewhere classified; STEM = science, technology, engineering, and mathematics.

^a Total includes doctorate recipients who did not report sex.**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 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.