

TABLE 3-1

Research doctorate recipients, by detailed field of doctorate: 2021–23

(Number)

Field of doctorate	2021	2022	2023
All fields	52,160	57,448	57,862
Science and engineering	41,188	45,847	45,973
Agricultural sciences and natural resources	1,222	1,304	1,278
Agricultural, animal, plant, and veterinary sciences	806	857	856
Agronomy and crop science	69	68	76
Animal sciences	159	174	173
Food science and technology	175	156	178
Plant sciences	152	162	149
Soil sciences	79	100	86
Veterinary biomedical and clinical sciences	78	77	93
Agricultural, animal, plant, and veterinary sciences nec	94	120	101
Natural resources and conservation	416	447	422
Environmental science	117	145	132
Environmental/ natural resources management and policy	78	72	63
Forestry	74	69	69
Natural resources conservation and research	74	72	81
Natural resources and conservation nec	73	89	77
Biological and biomedical sciences	8,243	9,375	9,724
Biochemistry, biophysics, and molecular biology	1,346	1,554	1,509
Biochemistry	416	465	440
Biochemistry and molecular biology	263	325	311
Biophysics	234	251	254
Molecular biology	260	274	268
Biochemistry, biophysics, and molecular biology nec	173	239	236
Bioinformatics, biostatistics, and computational biology	562	688	735
Bioinformatics	136	169	181
Biostatistics	223	260	283
Computational biology	106	154	151
Bioinformatics, biostatistics, and computational biology nec	97	105	120
Biological and biomedical sciences, general	660	845	907
Biology/ biological sciences, general	330	471	522
Biomedical sciences, general	330	374	385
Cell/ cellular biology and anatomy	655	685	761
Cell/ cellular and molecular biology	480	523	583
Developmental biology and embryology	103	114	96
Cell/ cellular biology and anatomy nec	72	48	82
Ecology, evolutionary biology, and epidemiology	981	1,121	1,144
Ecology	227	238	246
Ecology and evolutionary biology	243	270	277
Epidemiology	296	386	382
Epidemiology and biostatistics	54	45	39
Evolutionary biology	68	83	84
Ecology, evolutionary biology, and epidemiology nec	93	99	116
Genetics and genomics	397	436	477
Genetics, general	121	122	128
Genome sciences and genomics	72	97	116
Human/ medical genetics	62	81	71
Molecular genetics	71	66	77
Genetics and genomics nec	71	70	85
Microbiology and immunology	972	1,088	1,092
Immunology	303	343	342

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Field of doctorate	2021	2022	2023
Microbiology and immunology	215	265	271
Microbiology, general	257	270	275
Virology	107	123	111
Microbiology and immunology nec	90	87	93
Neurobiology and neurosciences	1,013	1,177	1,200
Cognitive neuroscience	102	131	114
Neurobiology	138	79	68
Neuroscience	685	823	877
Neurobiology and neurosciences nec	88	144	141
Pharmacology and toxicology	311	386	409
Pharmacology	131	164	186
Toxicology	106	125	95
Pharmacology and toxicology nec	74	97	128
Physiology, oncology, and cancer biology	711	764	821
Biomechanics	77	69	85
Exercise physiology and kinesiology	76	95	103
Oncology and cancer biology	314	318	336
Physiology, general	75	99	78
Physiology, oncology, and cancer biology nec	169	183	219
Biological and biomedical sciences, other	635	631	669
Botany and plant biology	62	45	59
Entomology	114	134	124
Plant pathology and phytopathology	119	98	105
Plant physiology and biology nec	60	70	67
Zoology and animal biology	96	84	88
Biological and biomedical sciences nec	184	200	226
Computer and information sciences	2,194	2,188	2,297
Computer science	1,545	1,485	1,605
Computer science	1,545	1,485	1,605
Computer and information sciences, other	649	703	692
Artificial intelligence	167	205	211
Computer and information sciences, general	109	129	108
Computer systems networking and telecommunications	113	116	91
Informatics and information technology	88	94	105
Information sciences/ studies	103	92	119
Computer and information sciences nec	69	67	58
Engineering	9,577	10,753	10,724
Aerospace, aeronautical, astronautical, and space engineering	372	586	584
Aerospace, aeronautical, astronautical, and space engineering, general	257	220	235
Mechanical and aerospace engineering	na	213	207
Aerospace, aeronautical, astronautical, and space engineering nec	115	153	142
Biological, biomedical, and biosystems engineering	1,070	1,236	1,313
Bioengineering and biomedical engineering	977	1,135	1,222
Biological/ biosystems engineering and biomedical technology	93	101	91
Chemical and petroleum engineering	1,202	1,253	1,245
Chemical and biomolecular engineering	189	205	211
Chemical engineering	801	883	862
Petroleum engineering	132	102	103
Chemical and petroleum engineering nec	80	63	69
Civil, environmental, and transportation engineering	1,011	1,314	1,279
Civil engineering	571	330	342

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Research doctorate recipients, by detailed field of doctorate: 2021–23

(Number)

Field of doctorate	2021	2022	2023
Civil and environmental engineering	na	501	505
Environmental/ environmental health engineering	93	65	58
Geotechnical and geoenvironmental engineering	76	87	82
Structural engineering	127	131	133
Transportation and highway engineering	76	112	81
Civil, environmental, and transportation engineering nec	68	88	78
Electrical and computer engineering	2,047	2,130	2,119
Computer engineering	264	263	256
Electrical and computer engineering	1,205	1,359	1,359
Electrical and electronics engineering	512	433	436
Electrical and computer engineering nec	66	75	68
Engineering technologies	452	360	402
Electrical and electronic engineering technologies	80	55	71
Electromechanical technologies	59	90	90
Environmental control technologies	148	58	70
Engineering technologies nec	165	157	171
Industrial engineering and operations research	604	655	627
Industrial engineering	325	210	174
Industrial and systems engineering	na	128	134
Operations research	160	183	186
Systems and manufacturing engineering	119	134	133
Materials and mining engineering	670	925	912
Materials engineering	193	85	102
Materials science and engineering	429	783	762
Materials and mining engineering nec	48	57	48
Mechanical engineering	1,501	1,542	1,552
Mechanical engineering, general	1,413	1,437	1,472
Mechanical engineering nec	88	105	80
Engineering, other	648	752	691
Engineering mechanics, physics, and science	111	166	105
Nanotechnology	60	54	47
Nuclear engineering	155	163	162
Engineering nec	322	369	377
Geosciences, atmospheric, and ocean sciences	1,044	1,165	1,216
Geological and earth sciences	613	658	682
Geochemistry	60	42	47
Geology	109	79	91
Geology/ earth science, general	103	121	142
Geophysics and seismology	102	118	105
Hydrology and water resources science	81	89	96
Geological and earth sciences nec	158	209	201
Ocean, marine, and atmospheric sciences	431	507	534
Atmospheric sciences and meteorology, general	94	120	111
Atmospheric sciences and meteorology nec	47	95	123
Climatology, atmospheric chemistry/ physics	60	67	67
Marine biology and biological oceanography	89	97	92
Marine sciences	57	63	66
Oceanography, chemical/ physical	84	65	75
Health sciences	2,577	2,799	2,746
Nursing and nursing science	601	617	638
Nursing education	88	81	84

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(Number)

Field of doctorate	2021	2022	2023
Nursing science	358	381	396
Nursing specialties and practice	155	155	158
Pharmacy and pharmaceutical sciences	408	460	442
Medicinal and pharmaceutical chemistry	64	75	74
Pharmaceutical sciences	243	281	262
Pharmacy, pharmaceutical sciences, and administration nec	101	104	106
Public health	696	792	766
Environmental health	66	68	70
Health services research	86	118	105
Health/ medical physics	71	68	72
Public health education and promotion	94	111	112
Public health, general	179	211	203
Public health nec	200	216	204
Health sciences, other	872	930	900
Communication disorders sciences	127	134	109
Exercise science and kinesiology	92	102	90
Health sciences, general	65	61	61
Marriage and family therapy/ counseling	58	68	54
Medical clinical sciences	60	75	67
Medical, biomedical, and health informatics	60	75	59
Mental health, counseling, and therapy services and sciences	91	93	100
Rehabilitation and therapeutic sciences	120	149	159
Health sciences nec	199	173	201
Mathematics and statistics	1,906	2,143	2,056
Applied mathematics	475	478	490
Applied mathematics, general	265	275	267
Computational and applied mathematics	141	140	165
Applied mathematics nec	69	63	58
Mathematics	814	978	890
Algebra and number theory	69	75	71
Mathematics, general	639	763	687
Mathematics nec	106	140	132
Statistics	617	687	676
Applied statistics, general	55	70	58
Mathematics and statistics	128	101	70
Statistics	401	469	484
Statistics nec	33	47	64
Multidisciplinary/ interdisciplinary sciences	1,271	1,787	1,704
Interdisciplinary computer sciences	447	626	583
Computer science and engineering	118	230	188
Electrical engineering and computer science	224	276	250
Interdisciplinary computer sciences nec	105	120	145
Multidisciplinary/ interdisciplinary sciences, other	824	1,161	1,121
Behavioral and cognitive sciences	79	89	117
Computational science and engineering	104	111	132
Data mining and machine learning	na	259	234
Data science and data analytics	106	94	86
History/ philosophy of science, technology, and society	67	67	68
Nanoscience/ nanoscale science	57	53	33
Nutrition sciences	137	129	128
Multidisciplinary/ interdisciplinary sciences nec	274	359	323

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Research doctorate recipients, by detailed field of doctorate: 2021–23

(Number)

Field of doctorate	2021	2022	2023
Physical sciences	4,807	5,428	5,443
Astronomy and astrophysics	263	289	323
Astronomy	71	109	107
Astrophysics	113	115	133
Astronomy and astrophysics nec	79	65	83
Chemistry	2,366	2,782	2,731
Analytical chemistry	320	366	344
Chemical biology	151	163	191
Chemistry, general	494	582	611
Inorganic chemistry	282	324	266
Organic chemistry	454	612	566
Physical chemistry	293	315	294
Polymer chemistry	121	98	81
Theoretical and computational chemistry	108	159	202
Chemistry nec	143	163	176
Materials sciences	429	385	389
Materials science	276	176	188
Materials chemistry and materials sciences nec	153	209	201
Physics	1,749	1,972	2,000
Applied physics	132	161	124
Atomic/ molecular physics	89	87	103
Condensed matter and materials physics	359	433	365
Elementary particle physics	166	151	164
Nuclear physics	79	104	91
Optics/ optical sciences	120	138	135
Physics and astronomy	193	232	280
Physics, general	337	401	430
Plasma and high-temperature physics	57	51	67
Theoretical and mathematical physics	99	101	117
Physics and physical sciences nec	118	113	124
Psychology	3,696	3,861	3,793
Clinical psychology	1,243	1,130	1,203
Clinical child psychology	52	55	53
Clinical psychology	1,191	1,075	1,150
Counseling and applied psychology	1,337	1,416	1,293
Applied behavior analysis	59	44	49
Counseling psychology	366	388	366
Educational psychology	229	245	247
Industrial and organizational psychology	181	197	171
School psychology	260	241	223
Counseling and applied psychology nec	242	301	237
Research and experimental psychology	651	852	803
Behavioral neuroscience	87	105	82
Cognitive psychology and psycholinguistics	106	100	111
Developmental and child psychology	78	114	103
Experimental psychology	98	130	111
Social psychology	143	221	189
Research and experimental psychology nec	139	182	207
Psychology, other	465	463	494
Human development	141	145	155
Psychology, general	256	265	283

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(Number)

Field of doctorate	2021	2022	2023
Psychology nec	68	53	56
Social sciences	4,651	5,044	4,992
Anthropology	387	409	379
Anthropology, general	78	102	99
Cultural anthropology	187	198	161
Physical and biological anthropology	72	75	69
Anthropology nec	50	34	50
Area, ethnic, cultural, gender, and group studies	383	442	452
Area studies	224	244	266
Ethnic studies	81	102	103
Area, ethnic, cultural, gender, and group studies nec	78	96	83
Economics	1,315	1,391	1,393
Agricultural economics	76	97	90
Applied economics	134	131	130
Development economics and international development	54	50	41
Econometrics and quantitative economics	146	179	202
Economics, general	801	826	815
Environmental/ natural resource economics	55	50	62
Economics nec	49	58	53
Political science and government	581	676	665
Political science and government, general	488	551	556
Political science and government nec	93	125	109
Public policy analysis	400	433	407
Education policy analysis	132	130	111
Health policy analysis	52	53	45
Public policy analysis, general	158	120	113
Public policy nec	58	130	138
Sociology, demography, and population studies	578	624	627
Sociology, general	501	553	556
Sociology, demography, and population studies nec	77	71	71
Social sciences, other	1,007	1,069	1,069
Applied linguistics	74	70	70
Archeology	83	105	91
Criminology	97	118	135
Geography and cartography	223	220	213
International relations and national security studies	104	129	115
Linguistics	203	192	194
Social sciences nec	223	235	251
Non-science and engineering	10,972	11,601	11,889
Business	1,344	1,398	1,510
Business administration and management	459	444	493
Business management and administration	235	297	312
Organizational leadership	117	54	68
Business administration and management nec	107	93	113
Business, other	885	954	1,017
Accounting and accounting-related	135	159	163
Finance and financial management	194	208	219
Management information systems	88	92	82
Management sciences	72	77	88
Marketing	119	146	145
Organizational behavior studies	103	94	100

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(Number)

Field of doctorate	2021	2022	2023
Business nec	174	178	220
Education	3,698	3,882	3,988
Education leadership and administration	1,073	1,150	1,179
Educational leadership and administration, general	491	478	501
Higher education and community college administration	391	436	452
Education leadership and administration nec	191	236	226
Education research	1,203	1,178	1,253
Curriculum and instruction	425	407	413
Educational assessment, evaluation, and research methods	222	218	203
Educational/ instructional technology and media design	155	170	199
Higher education evaluation and research	61	60	62
Student counseling and personnel services	266	245	283
Education research nec	74	78	93
Teacher education and teaching fields	1,007	1,094	1,098
Adult, continuing, and workforce education and development	66	64	61
Bilingual, multilingual, and multicultural education	76	62	72
Mathematics teacher education	75	49	73
Music teacher education	73	73	78
Special education and teaching	234	257	246
STEM educational methods	70	83	75
Teacher education, science and engineering	63	74	55
Teacher education, specific levels and methods	152	187	202
Teacher education, specific subject areas	198	245	236
Education, other	415	460	458
Education, general	267	323	324
Education nec	148	137	134
Humanities	3,108	3,367	3,358
English language and literature, letters	949	1,062	1,039
American literature (United States)	129	138	113
Creative writing	68	75	103
English language and literature, general	361	396	398
English literature (British and Commonwealth)	131	161	141
Rhetoric, composition, and writing studies	191	217	199
English language and literature nec	69	75	85
Foreign languages, literatures, and linguistics	505	538	571
Comparative literature	118	91	129
Hispanic/ Latin American languages, literatures, and linguistics	70	92	97
Romance languages, literatures, and linguistics	72	104	97
Spanish language and literature	79	92	97
Foreign languages, literatures, and linguistics nec	166	159	151
History	684	731	733
American history (United States)	222	245	240
European history	88	120	109
History, general	168	144	175
History, regional focus	133	145	139
History nec	73	77	70
Philosophy and religious studies	598	643	619
Philosophy	406	433	415
Religion/ religious studies	125	140	143
Philosophy and religious studies nec	67	70	61
Humanities, other	372	393	396

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Research doctorate recipients, by detailed field of doctorate: 2021–23

(Number)

Field of doctorate	2021	2022	2023
Bible/ biblical studies	71	90	99
Humanities and humanistic studies	62	79	98
Theological and ministerial studies	239	224	199
Visual and performing arts	770	835	824
Performing arts	490	489	487
Dance, drama, theatre arts, and stagecraft	82	85	83
Music performance	127	117	122
Music theory and composition	86	92	94
Musicology and ethnomusicology	116	112	109
Music nec	79	83	79
Visual arts, media studies, and design	280	346	337
Art history, criticism, and conservation	167	208	185
Film, cinema, and media studies	62	74	84
Visual arts, media studies, and design nec	51	64	68
Other non-science and engineering	2,052	2,119	2,209
Communications and journalism	521	586	635
Applied communication, advertising, and public relations	94	103	87
Communication and media studies	161	145	167
Communication, general	85	166	194
Mass communication/ media studies	95	94	94
Communications and journalism nec	86	78	93
Multidisciplinary/ interdisciplinary studies	303	372	380
Classical and ancient studies	91	100	126
Interdisciplinary leadership/ leadership studies	na	108	110
Multidisciplinary/ interdisciplinary studies nec	212	164	144
Public administration and social services	489	467	505
Public administration	175	178	169
Social work and human services	314	289	336
Non-science and engineering, other	739	694	689
Architecture and architectural studies	133	99	118
City/ urban, community, and regional planning	102	103	103
Family, consumer, and human sciences	139	128	132
Homeland security and protective services	169	154	138
Law/ legal studies and research	79	71	73
Parks, recreation, leisure, fitness, and sport studies and management	87	113	93
Other non-science and engineering nec	30	26	32

na = not applicable; data were not collected at this level of detail in 2021.

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

Note(s):

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.