

TABLE 4

**Research doctorate recipients, by new broad, major, and detailed field of doctorate: 2021**

(Number and percent)

Field of doctorate	Field level <sup>a</sup>	Number	Percent
All fields	-	52,250	100.0
Science and engineering	Area	41,356	79.2
Agricultural sciences and natural resources	Broad	1,223	2.3
Agricultural, animal, plant, and veterinary sciences	Major	807	1.5
Agronomy and crop science	Detailed	69	0.1
Animal sciences	Detailed	160	0.3
Food science and technology	Detailed	175	0.3
Plant sciences	Detailed	152	0.3
Soil sciences	Detailed	79	0.2
Veterinary biomedical and clinical sciences	Detailed	78	0.1
Agricultural, animal, plant, and veterinary sciences nec	Detailed	94	0.2
Natural resources and conservation	Major	416	0.8
Environmental science	Detailed	117	0.2
Environmental/ natural resources management and policy	Detailed	78	0.1
Forestry	Detailed	74	0.1
Natural resources conservation and research	Detailed	74	0.1
Natural resources and conservation nec	Detailed	73	0.1
Biological and biomedical sciences	Broad	8,259	15.8
Biochemistry, biophysics, and molecular biology	Major	1,348	2.6
Biochemistry	Detailed	417	0.8
Biochemistry and molecular biology	Detailed	263	0.5
Biophysics	Detailed	206	0.4
Molecular biology	Detailed	260	0.5
Biochemistry, biophysics, and molecular biology nec	Detailed	202	0.4
Bioinformatics, biostatistics, and computational biology	Major	563	1.1
Bioinformatics	Detailed	136	0.3
Biostatistics	Detailed	224	0.4
Computational biology	Detailed	106	0.2
Bioinformatics, biostatistics, and computational biology nec	Detailed	97	0.2
Cell/ cellular biology and anatomy	Major	657	1.3
Cell/ cellular and molecular biology	Detailed	482	0.9
Developmental biology and embryology	Detailed	103	0.2
Cell/ cellular biology and anatomy nec	Detailed	72	0.1
Ecology, evolutionary biology, and epidemiology	Major	984	1.9
Ecology	Detailed	227	0.4
Ecology and evolutionary biology	Detailed	243	0.5
Epidemiology	Detailed	298	0.6
Epidemiology and biostatistics	Detailed	54	0.1
Evolutionary biology	Detailed	68	0.1
Ecology, evolutionary biology, and epidemiology nec	Detailed	94	0.2
Genetics and genomics	Major	398	0.8
Genetics, general	Detailed	121	0.2
Genome sciences and genomics	Detailed	72	0.1
Human/ medical genetics	Detailed	62	0.1
Molecular genetics	Detailed	72	0.1
Genetics nec	Detailed	71	0.1
Microbiology and immunology	Major	974	1.9
Immunology	Detailed	303	0.6
Microbiology and immunology	Detailed	217	0.4
Microbiology, general	Detailed	257	0.5

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Virology	Detailed	107	0.2
Microbiology and immunology nec	Detailed	90	0.2
Neurobiology and neurosciences	Major	1,014	1.9
Cognitive neuroscience	Detailed	102	0.2
Neurobiology and anatomy	Detailed	94	0.2
Neuroscience	Detailed	686	1.3
Neurobiology and neurosciences nec	Detailed	132	0.3
Pharmacology and toxicology	Major	311	0.6
Pharmacology	Detailed	131	0.3
Toxicology	Detailed	106	0.2
Pharmacology and toxicology nec	Detailed	74	0.1
Physiology, oncology and cancer biology	Major	713	1.4
Biomechanics	Detailed	77	0.1
Exercise physiology and kinesiology	Detailed	76	0.1
Oncology and cancer biology	Detailed	315	0.6
Physiology, general	Detailed	76	0.1
Physiology, oncology and cancer biology nec	Detailed	169	0.3
Biological and biomedical sciences, other	Major	1,297	2.5
Biology/ biological sciences, general	Detailed	331	0.6
Biomedical sciences, general	Detailed	331	0.6
Botany and plant biology	Detailed	62	0.1
Entomology	Detailed	114	0.2
Plant pathology and phytopathology	Detailed	119	0.2
Plant physiology and biology nec	Detailed	60	0.1
Zoology and animal biology	Detailed	96	0.2
Biological and biomedical sciences nec	Detailed	184	0.4
Computer and information sciences	Broad	2,195	4.2
Computer science	Major	1,545	3.0
Computer science	Detailed	1,545	3.0
Computer and information sciences, other	Major	650	1.2
Artificial intelligence	Detailed	167	0.3
Computer and information sciences, general	Detailed	110	0.2
Computer systems networking and telecommunications	Detailed	113	0.2
Informatics and information technology	Detailed	88	0.2
Information science/ studies	Detailed	103	0.2
Computer and information sciences nec	Detailed	69	0.1
Engineering	Broad	9,563	18.3
Biological, biomedical, and biosystems engineering	Major	1,071	2.0
Bioengineering and biomedical engineering	Detailed	978	1.9
Biological and biosystems engineering and biomedical technology	Detailed	93	0.2
Chemical and petroleum engineering	Major	1,292	2.5
Chemical and biomolecular engineering	Detailed	189	0.4
Chemical engineering	Detailed	803	1.5
Petroleum engineering	Detailed	132	0.3
Chemical and petroleum engineering nec	Detailed	168	0.3
Civil, environmental, and transportation engineering	Major	1,020	2.0
Civil engineering	Detailed	571	1.1
Environmental/ environmental health engineering	Detailed	93	0.2
Geotechnical and geoenvironmental engineering	Detailed	76	0.1
Structural engineering	Detailed	135	0.3

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Transportation and highway engineering	Detailed	76	0.1
Civil, environmental, and transportation engineering nec	Detailed	69	0.1
Electrical and computer engineering	Major	2,047	3.9
Computer engineering	Detailed	264	0.5
Electrical and computer engineering	Detailed	1,205	2.3
Electrical and electronics engineering	Detailed	512	1.0
Electrical and computer engineering nec	Detailed	66	0.1
Engineering technologies	Major	452	0.9
Electrical and electronic engineering technologies	Detailed	80	0.2
Electromechanical technologies	Detailed	59	0.1
Environmental control technologies	Detailed	148	0.3
Engineering technologies nec	Detailed	165	0.3
Industrial engineering and operations research	Major	604	1.2
Industrial engineering	Detailed	325	0.6
Operations research	Detailed	160	0.3
Systems and manufacturing engineering	Detailed	119	0.2
Materials and mining engineering	Major	672	1.3
Materials engineering	Detailed	194	0.4
Materials science and engineering	Detailed	429	0.8
Materials and mining engineering nec	Detailed	49	0.1
Mechanical engineering	Major	1,413	2.7
Mechanical engineering, general	Detailed	1,413	2.7
Engineering, other	Major	992	1.9
Aerospace, aeronautical, astronautical, and space engineering	Detailed	350	0.7
Engineering mechanics, physics, and science	Detailed	111	0.2
Nanotechnology	Detailed	61	0.1
Nuclear engineering	Detailed	156	0.3
Engineering nec	Detailed	314	0.6
Geosciences, atmospheric, and ocean sciences	Broad	1,044	2.0
Geological and earth sciences	Major	613	1.2
Geochemistry	Detailed	60	0.1
Geology	Detailed	109	0.2
Geology/ earth science, general	Detailed	104	0.2
Geophysics and seismology	Detailed	101	0.2
Hydrology and water resources science	Detailed	81	0.2
Geological and earth sciences nec	Detailed	158	0.3
Ocean/ marine sciences and atmospheric science	Major	431	0.8
Atmospheric sciences and meteorology, general	Detailed	94	0.2
Climatology, atmospheric chemistry and physics	Detailed	60	0.1
Marine biology and biological oceanography	Detailed	89	0.2
Marine sciences	Detailed	57	0.1
Oceanography, chemical and physical	Detailed	84	0.2
Atmospheric sciences and meteorology nec	Detailed	47	0.1
Health sciences	Broad	2,582	4.9
Nursing and nursing science	Major	603	1.2
Nursing education	Detailed	89	0.2
Nursing science	Detailed	357	0.7
Nursing specialties and practice	Detailed	157	0.3
Pharmacy and pharmaceutical sciences	Major	408	0.8
Medicinal and pharmaceutical chemistry	Detailed	64	0.1

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Pharmaceutical sciences	Detailed	243	0.5
Pharmacy, pharmaceutical sciences, and administration nec	Detailed	101	0.2
Public health	Major	696	1.3
Environmental health	Detailed	66	0.1
Health services research	Detailed	86	0.2
Health/ medical physics	Detailed	70	0.1
Public health education and promotion	Detailed	95	0.2
Public health, general	Detailed	179	0.3
Public health nec	Detailed	200	0.4
Health sciences, other	Major	875	1.7
Communication disorders sciences	Detailed	127	0.2
Exercise science and kinesiology	Detailed	92	0.2
Health sciences, general	Detailed	66	0.1
Marriage and family therapy/ counseling	Detailed	58	0.1
Medical clinical science	Detailed	60	0.1
Medical, biomedical, and health informatics	Detailed	61	0.1
Mental health, counseling, and therapy services and sciences	Detailed	91	0.2
Rehabilitation and therapeutic sciences	Detailed	121	0.2
Health sciences nec	Detailed	199	0.4
Mathematics and statistics	Broad	1,915	3.7
Applied mathematics	Major	475	0.9
Applied mathematics, general	Detailed	265	0.5
Computational and applied mathematics	Detailed	141	0.3
Applied mathematics nec	Detailed	69	0.1
Mathematics	Major	827	1.6
Algebra and number theory	Detailed	69	0.1
Mathematics, general	Detailed	640	1.2
Mathematics nec	Detailed	118	0.2
Statistics	Major	613	1.2
Applied statistics, general	Detailed	56	0.1
Mathematics and statistics	Detailed	90	0.2
Statistics	Detailed	402	0.8
Statistics nec	Detailed	65	0.1
Multidisciplinary/ interdisciplinary sciences	Broad	1,299	2.5
Interdisciplinary computer sciences	Major	448	0.9
Computer science and engineering	Detailed	119	0.2
Electrical engineering and computer science	Detailed	224	0.4
Interdisciplinary computer sciences nec	Detailed	105	0.2
Multidisciplinary/ interdisciplinary sciences, other	Major	851	1.6
Behavioral and cognitive sciences	Detailed	79	0.2
Computational science and engineering	Detailed	104	0.2
Data science and data analytics	Detailed	106	0.2
History/ philosophy of science, technology and society	Detailed	68	0.1
Nanoscience/ nanoscale science	Detailed	57	0.1
Nutrition sciences	Detailed	138	0.3
Multidisciplinary/ interdisciplinary sciences nec	Detailed	299	0.6
Physical sciences	Broad	4,811	9.2
Astronomy and astrophysics	Major	263	0.5
Astronomy	Detailed	71	0.1
Astrophysics	Detailed	113	0.2

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Astronomy and astrophysics nec	Detailed	79	0.2
Chemistry	Major	2,369	4.5
Analytical chemistry	Detailed	321	0.6
Chemical biology	Detailed	151	0.3
Chemistry, general	Detailed	495	0.9
Inorganic chemistry	Detailed	283	0.5
Organic chemistry	Detailed	454	0.9
Physical chemistry	Detailed	293	0.6
Polymer chemistry	Detailed	121	0.2
Theoretical chemistry	Detailed	108	0.2
Chemistry nec	Detailed	143	0.3
Materials sciences	Major	429	0.8
Materials science	Detailed	276	0.5
Materials chemistry and materials science nec	Detailed	153	0.3
Physics	Major	1,750	3.3
Applied physics	Detailed	133	0.3
Atomic/ molecular physics	Detailed	89	0.2
Condensed matter and materials physics	Detailed	358	0.7
Elementary particle physics	Detailed	166	0.3
Nuclear physics	Detailed	79	0.2
Optics/ optical sciences	Detailed	120	0.2
Physics and astronomy	Detailed	193	0.4
Physics, general	Detailed	339	0.6
Plasma and high-temperature physics	Detailed	57	0.1
Theoretical and mathematical physics	Detailed	99	0.2
Physics and physical sciences nec	Detailed	117	0.2
Psychology	Broad	3,716	7.1
Clinical psychology	Major	1,256	2.4
Clinical child psychology	Detailed	52	0.1
Clinical psychology	Detailed	1,204	2.3
Counseling and applied psychology	Major	1,338	2.6
Applied behavior analysis	Detailed	59	0.1
Counseling psychology	Detailed	365	0.7
Educational psychology	Detailed	229	0.4
Industrial and organizational psychology	Detailed	181	0.3
School psychology	Detailed	259	0.5
Counseling and applied psychology nec	Detailed	245	0.5
Research and experimental psychology	Major	651	1.2
Behavioral neuroscience	Detailed	87	0.2
Cognitive psychology and psycholinguistics	Detailed	106	0.2
Developmental and child psychology	Detailed	78	0.1
Experimental psychology	Detailed	98	0.2
Social psychology	Detailed	143	0.3
Research and experimental psychology nec	Detailed	139	0.3
Psychology, other	Major	471	0.9
Human development	Detailed	142	0.3
Psychology, general	Detailed	261	0.5
Psychology nec	Detailed	68	0.1
Social sciences	Broad	4,749	9.1
Anthropology	Major	388	0.7

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Anthropology, general	Detailed	80	0.2
Cultural anthropology	Detailed	186	0.4
Physical and biological anthropology	Detailed	71	0.1
Anthropology nec	Detailed	51	0.1
Area, ethnic, cultural, gender, and group studies	Major	383	0.7
Area studies	Detailed	224	0.4
Ethnic studies	Detailed	81	0.2
Area, ethnic, cultural, gender, and group studies nec	Detailed	78	0.1
Economics	Major	1,317	2.5
Agricultural economics	Detailed	76	0.1
Applied economics	Detailed	134	0.3
Development economics and international development	Detailed	54	0.1
Econometrics and quantitative economics	Detailed	145	0.3
Economics, general	Detailed	802	1.5
Environmental/ natural resource economics	Detailed	54	0.1
Economics nec	Detailed	52	0.1
Political science and government	Major	581	1.1
Political science and government, general	Detailed	488	0.9
Political science and government nec	Detailed	93	0.2
Public policy analysis	Major	399	0.8
Education policy analysis	Detailed	131	0.3
Health policy analysis	Detailed	52	0.1
Public policy analysis, general	Detailed	158	0.3
Public policy nec	Detailed	58	0.1
Sociology, demography, and population studies	Major	578	1.1
Sociology, general	Detailed	501	1.0
Sociology, demography, and population studies nec	Detailed	77	0.1
Social sciences, other	Major	1,103	2.1
Applied linguistics	Detailed	74	0.1
Archeology	Detailed	83	0.2
Criminal justice and corrections	Detailed	126	0.2
Criminology	Detailed	97	0.2
Geography and cartography	Detailed	223	0.4
International relations and national security studies	Detailed	105	0.2
Linguistics	Detailed	203	0.4
Social sciences nec	Detailed	192	0.4
Non-science and engineering	Area	10,894	20.8
Business	Broad	1,340	2.6
Business administration and management	Major	456	0.9
Business management and administration	Detailed	235	0.4
Organizational leadership	Detailed	117	0.2
Business administration and management nec	Detailed	104	0.2
Business, other	Major	884	1.7
Accounting and accounting-related	Detailed	135	0.3
Finance and financial management	Detailed	192	0.4
Management information systems	Detailed	88	0.2
Management sciences	Detailed	73	0.1
Marketing	Detailed	119	0.2
Organizational behavior studies	Detailed	103	0.2
Business nec	Detailed	174	0.3

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Education	Broad	3,711	7.1
Education leadership and administration	Major	1,082	2.1
Educational leadership and administration, general	Detailed	500	1.0
Higher education and community college administration	Detailed	391	0.7
Education leadership and administration nec	Detailed	191	0.4
Education research	Major	1,204	2.3
Curriculum and instruction	Detailed	425	0.8
Educational assessment, evaluation, and research methods	Detailed	222	0.4
Educational/ instructional technology and media design	Detailed	155	0.3
Higher education evaluation and research	Detailed	61	0.1
Student counseling and personnel services	Detailed	267	0.5
Education research nec	Detailed	74	0.1
Teacher education	Major	1,010	1.9
Adult, continuing, and workforce education and development	Detailed	66	0.1
Bilingual, multilingual, and multicultural education	Detailed	77	0.1
Mathematics teacher education	Detailed	75	0.1
Music teacher education	Detailed	73	0.1
Special education and teaching	Detailed	235	0.4
STEM educational methods	Detailed	70	0.1
Teacher education, science and engineering	Detailed	68	0.1
Teacher education, specific levels and methods	Detailed	154	0.3
Teacher education; specific subject areas	Detailed	192	0.4
Education, other	Major	415	0.8
Education, general	Detailed	268	0.5
Education nec	Detailed	147	0.3
Humanities	Broad	3,076	5.9
English language and literature, letters	Major	933	1.8
American literature (United States)	Detailed	113	0.2
Creative writing	Detailed	68	0.1
English language and literature, general	Detailed	362	0.7
English literature (British and commonwealth)	Detailed	131	0.3
Rhetoric and composition, and writing studies	Detailed	190	0.4
English language and literature nec	Detailed	69	0.1
Foreign languages, literatures, and linguistics	Major	505	1.0
Comparative literature	Detailed	118	0.2
Hispanic/ Latin American languages, literatures, and linguistics	Detailed	70	0.1
Romance languages, literatures, and linguistics	Detailed	72	0.1
Spanish language and literature	Detailed	79	0.2
Foreign languages, literatures, and linguistics nec	Detailed	166	0.3
History	Major	672	1.3
American history (United States)	Detailed	209	0.4
European history	Detailed	88	0.2
History, general	Detailed	169	0.3
History, regional focus	Detailed	133	0.3
History nec	Detailed	73	0.1
Philosophy and religious studies	Major	592	1.1
Philosophy	Detailed	399	0.8
Religion/ religious studies	Detailed	126	0.2
Philosophy and religious studies nec	Detailed	67	0.1
Humanities, other	Major	374	0.7

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Bible/ biblical studies	Detailed	71	0.1
Humanities and humanistic studies	Detailed	62	0.1
Theological and ministerial studies	Detailed	241	0.5
Visual and performing arts	Broad	771	1.5
Performing arts	Major	491	0.9
Dance, drama, theatre arts and stagecraft	Detailed	82	0.2
Music performance	Detailed	128	0.2
Music theory and composition	Detailed	86	0.2
Musicology and ethnomusicology	Detailed	79	0.2
Music nec	Detailed	116	0.2
Visual arts, media studies, and design	Major	280	0.5
Art history, criticism and conservation	Detailed	167	0.3
Film, cinema, and media studies	Detailed	62	0.1
Visual arts, media studies/ design, and arts management nec	Detailed	51	0.1
Other non-science and engineering	Broad	1,996	3.8
Communications and journalism	Major	520	1.0
Applied communication, advertising, and public relations	Detailed	94	0.2
Communication and media studies	Detailed	160	0.3
Communication, general	Detailed	85	0.2
Mass communication/ media studies	Detailed	95	0.2
Communications and journalism nec	Detailed	86	0.2
Multidisciplinary/ interdisciplinary studies	Major	331	0.6
Classical and ancient studies	Detailed	91	0.2
Multidisciplinary/ interdisciplinary studies nec	Detailed	240	0.5
Public administration and social services	Major	490	0.9
Public administration	Detailed	202	0.4
Social work and human services	Detailed	288	0.6
Non-science and engineering, other	Major	655	1.3
Architecture and architectural studies	Detailed	134	0.3
City/ urban, community, and regional planning	Detailed	101	0.2
Family, consumer sciences and human sciences	Detailed	140	0.3
Homeland security and protective services	Detailed	50	0.1
Law, legal studies and research	Detailed	80	0.2
Parks, recreation, leisure, fitness, and sport studies and management	Detailed	87	0.2
Other non-science and engineering nec	Detailed	63	0.1

CIP = Classification of Instructional Programs; nec = not elsewhere classified; STEM = science, technology, engineering, and mathematics.

<sup>a</sup> Field level provides information about the fields that are nested together. There are four levels of field aggregation: area, broad field, major field, and detailed field.

**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 the new broad, major, and detailed fields were used in tables reporting only the most recent data year. Therefore, the field of doctorate data in 2021 may not be comparable to prior years. See table A-1 for a full list of SED-CIP codes in the new field taxonomy, table A-2 for a summary of the new SED field of taxonomy, and table A-3 for the SED-CIP code crosswalk to the historical field taxonomy.

**Source(s):**

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