

TABLE 1-3  
Research doctorate recipients, by trend major field of doctorate: Selected years, 1993–2023  
(Number and percent)

| Field of doctorate                                       | 1993   |         | 1998   |         | 2003   |         | 2008   |         | 2013   |         | 2018   |         | 2023   |         |
|--|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|
|  | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All fields   | 39,800 | 100.0   | 42,636 | 100.0   | 40,762 | 100.0   | 48,776 | 100.0   | 52,703 | 100.0   | 55,078 | 100.0   | 57,862 | 100.0   |
| Science and engineering                                  | 26,486 | 66.5    | 28,636 | 67.2    | 26,759 | 65.6    | 34,765 | 71.3    | 39,084 | 74.2    | 42,144 | 76.5    | 45,533 | 78.7    |
| Agricultural sciences and natural resources              | 1,235  | 3.1     | 1,315  | 3.1     | 1,226  | 3.0     | 1,252  | 2.6     | 1,391  | 2.6     | 1,499  | 2.7     | 1,477  | 2.6     |
| Agricultural sciences                                    | 939    | 2.4     | 981    | 2.3     | 845    | 2.1     | 782    | 1.6     | 873    | 1.7     | 960    | 1.7     | 1,007  | 1.7     |
| Natural resources and conservation                       | 296    | 0.7     | 334    | 0.8     | 381    | 0.9     | 470    | 1.0     | 518    | 1.0     | 539    | 1.0     | 470    | 0.8     |
| Biological and biomedical sciences                       | 5,212  | 13.1    | 6,011  | 14.1    | 5,927  | 14.5    | 8,145  | 16.7    | 8,707  | 16.5    | 8,782  | 15.9    | 9,575  | 16.5    |
| Biochemistry and biophysics                              | 949    | 2.4     | 966    | 2.3     | 933    | 2.3     | 1,066  | 2.2     | 1,005  | 1.9     | 963    | 1.7     | 893    | 1.5     |
| Biology and biomedical sciences, general                 | 305    | 0.8     | 399    | 0.9     | 375    | 0.9     | 418    | 0.9     | 657    | 1.2     | 888    | 1.6     | 1,328  | 2.3     |
| Bioinformatics, biostatistics, and computational biology | 74     | 0.2     | 75     | 0.2     | 84     | 0.2     | 269    | 0.6     | 426    | 0.8     | 580    | 1.1     | 794    | 1.4     |
| Cellular and developmental biology, and anatomy          | 364    | 0.9     | 462    | 1.1     | 460    | 1.1     | 586    | 1.2     | 597    | 1.1     | 427    | 0.8     | 225    | 0.4     |
| Ecology, evolutionary biology, and epidemiology          | 297    | 0.7     | 458    | 1.1     | 578    | 1.4     | 922    | 1.9     | 1,030  | 2.0     | 1,059  | 1.9     | 1,118  | 1.9     |
| Genetics and genomics                                    | 172    | 0.4     | 197    | 0.5     | 226    | 0.6     | 413    | 0.8     | 396    | 0.8     | 363    | 0.7     | 459    | 0.8     |
| Microbiology and immunology                              | 633    | 1.6     | 657    | 1.5     | 645    | 1.6     | 1,007  | 2.1     | 1,142  | 2.2     | 1,042  | 1.9     | 1,092  | 1.9     |
| Molecular biology  | 582    | 1.5     | 736    | 1.7     | 615    | 1.5     | 786    | 1.6     | 646    | 1.2     | 596    | 1.1     | 851    | 1.5     |
| Neurobiology and neurosciences                           | 276    | 0.7     | 413    | 1.0     | 474    | 1.2     | 883    | 1.8     | 1,016  | 1.9     | 1,033  | 1.9     | 1,086  | 1.9     |
| Pharmacology and toxicology                              | 374    | 0.9     | 410    | 1.0     | 397    | 1.0     | 461    | 0.9     | 418    | 0.8     | 361    | 0.7     | 409    | 0.7     |
| Physiology, pathology, and cancer biology                | 417    | 1.0     | 378    | 0.9     | 337    | 0.8     | 657    | 1.3     | 723    | 1.4     | 690    | 1.3     | 608    | 1.1     |
| Biology and biomedical sciences, other                   | 769    | 1.9     | 860    | 2.0     | 803    | 2.0     | 677    | 1.4     | 651    | 1.2     | 780    | 1.4     | 712    | 1.2     |
| Computer and information sciences                        | 880    | 2.2     | 927    | 2.2     | 866    | 2.1     | 1,787  | 3.7     | 1,843  | 3.5     | 2,000  | 3.6     | 2,687  | 4.6     |
| Computer science   | 825    | 2.1     | 821    | 1.9     | 699    | 1.7     | 1,499  | 3.1     | 1,568  | 3.0     | 1,628  | 3.0     | 1,937  | 3.3     |
| Computer and information sciences, other                 | 55     | 0.1     | 106    | 0.2     | 167    | 0.4     | 288    | 0.6     | 275    | 0.5     | 372    | 0.7     | 750    | 1.3     |
| Engineering  | 5,698  | 14.3    | 5,922  | 13.9    | 5,279  | 13.0    | 7,863  | 16.1    | 9,000  | 17.1    | 10,164 | 18.5    | 11,403 | 19.7    |
| Aerospace, aeronautical, and astronautical engineering   | 228    | 0.6     | 241    | 0.6     | 200    | 0.5     | 266    | 0.5     | 348    | 0.7     | 383    | 0.7     | 586    | 1.0     |
| Bioengineering and biomedical engineering                | 171    | 0.4     | 208    | 0.5     | 281    | 0.7     | 762    | 1.6     | 1,039  | 2.0     | 1,133  | 2.1     | 1,302  | 2.3     |
| Chemical and petroleum engineering                       | 737    | 1.9     | 777    | 1.8     | 649    | 1.6     | 966    | 2.0     | 977    | 1.9     | 1,168  | 2.1     | 1,245  | 2.2     |
| Civil, environmental, and transportation engineering     | 624    | 1.6     | 650    | 1.5     | 673    | 1.7     | 866    | 1.8     | 1,023  | 1.9     | 1,178  | 2.1     | 1,368  | 2.4     |
| Electrical and computer engineering                      | 1,543  | 3.9     | 1,595  | 3.7     | 1,465  | 3.6     | 2,300  | 4.7     | 2,345  | 4.4     | 2,393  | 4.3     | 2,653  | 4.6     |
| Industrial engineering and operations research           | 349    | 0.9     | 359    | 0.8     | 340    | 0.8     | 439    | 0.9     | 474    | 0.9     | 492    | 0.9     | 578    | 1.0     |
| Materials and mining engineering                         | 559    | 1.4     | 586    | 1.4     | 488    | 1.2     | 678    | 1.4     | 872    | 1.7     | 1,018  | 1.8     | 1,159  | 2.0     |
| Mechanical engineering                                   | 902    | 2.3     | 936    | 2.2     | 752    | 1.8     | 1,082  | 2.2     | 1,336  | 2.5     | 1,610  | 2.9     | 1,653  | 2.9     |
| Engineering, other                                       | 585    | 1.5     | 570    | 1.3     | 431    | 1.1     | 504    | 1.0     | 586    | 1.1     | 789    | 1.4     | 859    | 1.5     |
| Geosciences, atmospheric, and ocean sciences             | 721    | 1.8     | 766    | 1.8     | 682    | 1.7     | 865    | 1.8     | 989    | 1.9     | 1,185  | 2.2     | 1,231  | 2.1     |
| Geological sciences                                      | 454    | 1.1     | 470    | 1.1     | 348    | 0.9     | 458    | 0.9     | 489    | 0.9     | 591    | 1.1     | 592    | 1.0     |
| Ocean, marine, and atmospheric sciences                  | 267    | 0.7     | 296    | 0.7     | 334    | 0.8     | 407    | 0.8     | 500    | 0.9     | 594    | 1.1     | 639    | 1.1     |
| Health sciences  | 1,016  | 2.6     | 1,285  | 3.0     | 1,353  | 3.3     | 1,689  | 3.5     | 2,109  | 4.0     | 2,473  | 4.5     | 2,435  | 4.2     |

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|---|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|
|   | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Nursing science                               | 373    | 0.9     | 399    | 0.9     | 413    | 1.0     | 504    | 1.0     | 510    | 1.0     | 584    | 1.1     | 554    | 1.0     |
| Pharmaceutical sciences                       | 146    | 0.4     | 156    | 0.4     | 118    | 0.3     | 277    | 0.6     | 332    | 0.6     | 344    | 0.6     | 358    | 0.6     |
| Public health                                 | 191    | 0.5     | 208    | 0.5     | 259    | 0.6     | 298    | 0.6     | 501    | 1.0     | 702    | 1.3     | 682    | 1.2     |
| Health sciences, other                        | 306    | 0.8     | 522    | 1.2     | 563    | 1.4     | 610    | 1.3     | 766    | 1.5     | 843    | 1.5     | 841    | 1.5     |
| Mathematics and statistics                    | 1,146  | 2.9     | 1,177  | 2.8     | 993    | 2.4     | 1,400  | 2.9     | 1,817  | 3.4     | 2,022  | 3.7     | 2,167  | 3.7     |
| Applied mathematics                           | 188    | 0.5     | 265    | 0.6     | 223    | 0.5     | 360    | 0.7     | 455    | 0.9     | 455    | 0.8     | 460    | 0.8     |
| Mathematics                                   | 366    | 0.9     | 405    | 0.9     | 322    | 0.8     | 507    | 1.0     | 641    | 1.2     | 524    | 1.0     | 231    | 0.4     |
| Statistics                                    | 228    | 0.6     | 204    | 0.5     | 191    | 0.5     | 303    | 0.6     | 364    | 0.7     | 412    | 0.7     | 574    | 1.0     |
| Mathematics and statistics, other             | 364    | 0.9     | 303    | 0.7     | 257    | 0.6     | 230    | 0.5     | 357    | 0.7     | 631    | 1.1     | 902    | 1.6     |
| Physical sciences                             | 3,681  | 9.2     | 3,800  | 8.9     | 3,289  | 8.1     | 4,081  | 8.4     | 4,595  | 8.7     | 5,144  | 9.3     | 5,460  | 9.4     |
| Astronomy and astrophysics                    | 145    | 0.4     | 206    | 0.5     | 167    | 0.4     | 249    | 0.5     | 301    | 0.6     | 351    | 0.6     | 603    | 1.0     |
| Chemistry                                     | 2,137  | 5.4     | 2,216  | 5.2     | 2,041  | 5.0     | 2,246  | 4.6     | 2,484  | 4.7     | 2,807  | 5.1     | 3,001  | 5.2     |
| Physics                                       | 1,399  | 3.5     | 1,378  | 3.2     | 1,081  | 2.7     | 1,586  | 3.3     | 1,810  | 3.4     | 1,986  | 3.6     | 1,856  | 3.2     |
| Psychology                                    | 3,420  | 8.6     | 3,673  | 8.6     | 3,277  | 8.0     | 3,357  | 6.9     | 3,592  | 6.8     | 3,821  | 6.9     | 3,899  | 6.7     |
| Clinical psychology                           | 1,373  | 3.4     | 1,344  | 3.2     | 1,193  | 2.9     | 1,142  | 2.3     | 1,140  | 2.2     | 1,260  | 2.3     | 1,208  | 2.1     |
| Counseling and applied psychology             | 833    | 2.1     | 855    | 2.0     | 813    | 2.0     | 880    | 1.8     | 965    | 1.8     | 1,003  | 1.8     | 1,001  | 1.7     |
| Research and experimental psychology          | 711    | 1.8     | 861    | 2.0     | 757    | 1.9     | 850    | 1.7     | 969    | 1.8     | 952    | 1.7     | 1,003  | 1.7     |
| Psychology, other                             | 503    | 1.3     | 613    | 1.4     | 514    | 1.3     | 485    | 1.0     | 518    | 1.0     | 606    | 1.1     | 687    | 1.2     |
| Social sciences                               | 3,477  | 8.7     | 3,760  | 8.8     | 3,867  | 9.5     | 4,326  | 8.9     | 5,041  | 9.6     | 5,054  | 9.2     | 5,199  | 9.0     |
| Anthropology                                  | 342    | 0.9     | 425    | 1.0     | 472    | 1.2     | 483    | 1.0     | 550    | 1.0     | 424    | 0.8     | 389    | 0.7     |
| Economics                                     | 930    | 2.3     | 1,001  | 2.3     | 932    | 2.3     | 1,091  | 2.2     | 1,183  | 2.2     | 1,244  | 2.3     | 1,290  | 2.2     |
| Political science and government              | 507    | 1.3     | 662    | 1.6     | 661    | 1.6     | 628    | 1.3     | 803    | 1.5     | 734    | 1.3     | 665    | 1.1     |
| Public policy analysis                        | 98     | 0.2     | 96     | 0.2     | 145    | 0.4     | 196    | 0.4     | 348    | 0.7     | 323    | 0.6     | 299    | 0.5     |
| Sociology, demography, and population studies | 535    | 1.3     | 579    | 1.4     | 612    | 1.5     | 624    | 1.3     | 663    | 1.3     | 695    | 1.3     | 627    | 1.1     |
| Social sciences, other                        | 1,065  | 2.7     | 997    | 2.3     | 1,045  | 2.6     | 1,304  | 2.7     | 1,494  | 2.8     | 1,634  | 3.0     | 1,929  | 3.3     |
| Non-science and engineering                   | 13,314 | 33.5    | 14,000 | 32.8    | 14,003 | 34.4    | 14,011 | 28.7    | 13,619 | 25.8    | 12,934 | 23.5    | 12,329 | 21.3    |
| Business                                      | 1,281  | 3.2     | 1,175  | 2.8     | 1,036  | 2.5     | 1,421  | 2.9     | 1,551  | 2.9     | 1,473  | 2.7     | 1,560  | 2.7     |
| Education                                     | 6,689  | 16.8    | 6,569  | 15.4    | 6,651  | 16.3    | 6,561  | 13.5    | 4,934  | 9.4     | 4,818  | 8.7     | 4,562  | 7.9     |
| Education leadership and administration       | 2,123  | 5.3     | 2,066  | 4.8     | 2,362  | 5.8     | 2,238  | 4.6     | 965    | 1.8     | 895    | 1.6     | 735    | 1.3     |
| Education research                            | 2,446  | 6.1     | 2,584  | 6.1     | 2,720  | 6.7     | 2,640  | 5.4     | 2,703  | 5.1     | 2,500  | 4.5     | 2,324  | 4.0     |
| Teacher education and teaching fields         | 1,371  | 3.4     | 1,296  | 3.0     | 956    | 2.3     | 1,186  | 2.4     | 1,001  | 1.9     | 1,055  | 1.9     | 1,020  | 1.8     |
| Education, other                              | 749    | 1.9     | 623    | 1.5     | 613    | 1.5     | 497    | 1.0     | 265    | 0.5     | 368    | 0.7     | 483    | 0.8     |
| Humanities and arts                           | 4,372  | 11.0    | 5,308  | 12.4    | 5,226  | 12.8    | 4,688  | 9.6     | 5,662  | 10.7    | 5,139  | 9.3     | 4,453  | 7.7     |
| Letters                                       | 1,328  | 3.3     | 1,599  | 3.8     | 1,416  | 3.5     | 1,420  | 2.9     | 1,606  | 3.0     | 1,439  | 2.6     | 1,322  | 2.3     |
| Foreign languages and literature              | 575    | 1.4     | 643    | 1.5     | 623    | 1.5     | 627    | 1.3     | 701    | 1.3     | 617    | 1.1     | 440    | 0.8     |

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|---|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|
|   | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| History                                   | 689    | 1.7     | 946    | 2.2     | 895    | 2.2     | 923    | 1.9     | 1,095  | 2.1     | 948    | 1.7     | 763    | 1.3     |
| Philosophy and religious studies          | 531    | 1.3     | 737    | 1.7     | 696    | 1.7     | 733    | 1.5     | 828    | 1.6     | 758    | 1.4     | 614    | 1.1     |
| Music and performing arts                 | 704    | 1.8     | 788    | 1.8     | 959    | 2.4     | 423    | 0.9     | 591    | 1.1     | 486    | 0.9     | 471    | 0.8     |
| Humanities and arts, other                | 545    | 1.4     | 595    | 1.4     | 637    | 1.6     | 562    | 1.2     | 841    | 1.6     | 891    | 1.6     | 843    | 1.5     |
| Other non-science and engineering         | 972    | 2.4     | 948    | 2.2     | 1,090  | 2.7     | 1,341  | 2.7     | 1,472  | 2.8     | 1,504  | 2.7     | 1,754  | 3.0     |
| Communication                             | 321    | 0.8     | 373    | 0.9     | 415    | 1.0     | 557    | 1.1     | 645    | 1.2     | 630    | 1.1     | 631    | 1.1     |
| Public administration and social services | 354    | 0.9     | 339    | 0.8     | 394    | 1.0     | 452    | 0.9     | 457    | 0.9     | 496    | 0.9     | 535    | 0.9     |
| Non-science and engineering, other        | 297    | 0.7     | 236    | 0.6     | 281    | 0.7     | 332    | 0.7     | 370    | 0.7     | 378    | 0.7     | 588    | 1.0     |

**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; the trend fields were constructed using the SED-CIP code crosswalk in table A-6. Therefore, the field of doctorate data prior to 2021 may not be comparable to subsequent years. For more information about the field taxonomy changes, see the "Technical Notes."

**Source(s):**  
National Center for Science and Engineering Statistics, Survey of Earned Doctorates.