

Table 51**Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2020**

(Number)

| Citizenship status and field | All recipients | Recipients with definite commitments | Location of definite commitments | | | | | | |
|---|----------------|--------------------------------------|----------------------------------|--------------------|---------------------|----------------------------------|--------------------|--------|---------|
| | | | United States | | | | | Abroad | Unknown |
| | | | Total | Postdoctoral study | Academic employment | Industry employment ^a | Other ^b | | |
| All doctorate recipients ^c | 55,283 | 35,289 | 31,845 | 12,289 | 7,744 | 7,831 | 3,981 | 3,430 | 14 |
| Life sciences | 12,561 | 7,784 | 7,141 | 4,172 | 1,091 | 1,274 | 604 | 640 | 3 |
| Agricultural sciences and natural resources | 1,472 | 919 | 765 | 354 | 159 | 135 | 117 | 153 | 1 |
| Biological and biomedical sciences | 8,418 | 5,181 | 4,855 | 3,268 | 431 | 914 | 242 | 325 | 1 |
| Health sciences | 2,671 | 1,684 | 1,521 | 550 | 501 | 225 | 245 | 162 | 1 |
| Physical sciences and earth sciences | 6,247 | 4,047 | 3,648 | 2,104 | 252 | 1,062 | 230 | 399 | 0 |
| Chemistry | 2,763 | 1,692 | 1,571 | 867 | 104 | 536 | 64 | 121 | 0 |
| Geosciences, atmospheric sciences, and ocean sciences | 1,243 | 845 | 741 | 463 | 70 | 115 | 93 | 104 | 0 |
| Physics and astronomy | 2,241 | 1,510 | 1,336 | 774 | 78 | 411 | 73 | 174 | 0 |
| Mathematics and computer sciences | 4,392 | 3,088 | 2,719 | 738 | 525 | 1,287 | 169 | 365 | 4 |
| Computer and information sciences | 2,361 | 1,687 | 1,497 | 282 | 271 | 848 | 96 | 188 | 2 |
| Mathematics and statistics | 2,031 | 1,401 | 1,222 | 456 | 254 | 439 | 73 | 177 | 2 |
| Psychology and social sciences | 8,946 | 6,042 | 5,399 | 2,245 | 1,608 | 693 | 853 | 641 | 2 |
| Psychology | 3,879 | 2,655 | 2,573 | 1,544 | 417 | 302 | 310 | 82 | 0 |
| Anthropology | 448 | 246 | 206 | 71 | 85 | 11 | 39 | 40 | 0 |
| Economics | 1,216 | 920 | 693 | 128 | 234 | 194 | 137 | 227 | 0 |
| Political science and government | 637 | 444 | 386 | 126 | 175 | 31 | 54 | 57 | 1 |
| Sociology | 607 | 428 | 384 | 106 | 212 | 25 | 41 | 43 | 1 |
| Other social sciences | 2,159 | 1,349 | 1,157 | 270 | 485 | 130 | 272 | 192 | 0 |
| Engineering | 10,476 | 6,607 | 5,985 | 2,149 | 394 | 2,952 | 490 | 618 | 4 |
| Aerospace, aeronautical, and astronautical engineering | 399 | 263 | 245 | 75 | 28 | 87 | 55 | 18 | 0 |
| Bioengineering and biomedical engineering | 1,083 | 631 | 590 | 310 | 29 | 225 | 26 | 40 | 1 |
| Chemical engineering | 994 | 598 | 551 | 221 | 11 | 305 | 14 | 46 | 1 |
| Civil engineering | 796 | 461 | 395 | 161 | 39 | 141 | 54 | 65 | 1 |
| Electrical, electronics, and communications engineering | 1,973 | 1,348 | 1,225 | 293 | 58 | 788 | 86 | 122 | 1 |
| Industrial and manufacturing engineering | 304 | 186 | 157 | 30 | 36 | 79 | 12 | 29 | 0 |
| Materials science engineering | 880 | 513 | 473 | 214 | 10 | 222 | 27 | 40 | 0 |
| Mechanical engineering | 1,634 | 1,007 | 918 | 377 | 61 | 415 | 65 | 89 | 0 |
| Other engineering | 2,413 | 1,600 | 1,431 | 468 | 122 | 690 | 151 | 169 | 0 |
| Education | 4,716 | 3,110 | 2,907 | 281 | 1,433 | 198 | 995 | 203 | 0 |
| Education administration | 927 | 645 | 624 | 13 | 246 | 31 | 334 | 21 | 0 |
| Education research | 2,312 | 1,543 | 1,442 | 184 | 749 | 124 | 385 | 101 | 0 |

Table 51

Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2020

(Number)

| Citizenship status and field | All recipients | Recipients with definite commitments | Location of definite commitments | | | | | | |
|--|----------------|--------------------------------------|----------------------------------|--------------------|---------------------|----------------------------------|--------------------|--------|---------|
| | | | United States | | | | | Abroad | Unknown |
| | | | Total | Postdoctoral study | Academic employment | Industry employment ^a | Other ^b | | |
| Teacher education | 113 | 66 | 59 | D | 33 | D | 20 | 7 | 0 |
| Teaching fields | 940 | 603 | 544 | 55 | 301 | 25 | 163 | 59 | 0 |
| Other education | 424 | 253 | 238 | D | 104 | D | 93 | 15 | 0 |
| Humanities and arts | 4,939 | 2,604 | 2,320 | 421 | 1,328 | 138 | 433 | 284 | 0 |
| Foreign languages and literature | 564 | 302 | 264 | 37 | 185 | 11 | 31 | 38 | 0 |
| History | 887 | 509 | 452 | 115 | 221 | 26 | 90 | 57 | 0 |
| Letters | 1,392 | 714 | 659 | 94 | 446 | 38 | 81 | 55 | 0 |
| Other humanities and arts | 2,096 | 1,079 | 945 | 175 | 476 | 63 | 231 | 134 | 0 |
| Other ^d | 3,006 | 2,007 | 1,726 | 179 | 1,113 | 227 | 207 | 280 | 1 |
| Business management and administration | 1,466 | 1,049 | 881 | 46 | 646 | 123 | 66 | 167 | 1 |
| Communication | 593 | 381 | 342 | 46 | 239 | 35 | 22 | 39 | 0 |
| Non-S&E fields nec | 947 | 577 | 503 | 87 | 228 | 69 | 119 | 74 | 0 |
| U.S. citizen or permanent resident | 34,492 | 22,933 | 22,176 | 7,935 | 6,242 | 4,300 | 3,699 | 753 | 4 |
| Life sciences | 8,707 | 5,537 | 5,386 | 2,941 | 959 | 926 | 560 | 149 | 2 |
| Agricultural sciences and natural resources | 796 | 527 | 500 | 171 | 131 | 92 | 106 | 27 | 0 |
| Biological and biomedical sciences | 6,008 | 3,744 | 3,643 | 2,373 | 378 | 673 | 219 | 100 | 1 |
| Health sciences | 1,903 | 1,266 | 1,243 | 397 | 450 | 161 | 235 | 22 | 1 |
| Physical sciences and earth sciences | 3,741 | 2,471 | 2,342 | 1,249 | 210 | 670 | 213 | 129 | 0 |
| Chemistry | 1,696 | 1,048 | 1,019 | 508 | 84 | 365 | 62 | 29 | 0 |
| Geosciences, atmospheric sciences, and ocean sciences | 811 | 577 | 542 | 315 | 63 | 81 | 83 | 35 | 0 |
| Physics and astronomy | 1,234 | 846 | 781 | 426 | 63 | 224 | 68 | 65 | 0 |
| Mathematics and computer sciences | 1,736 | 1,242 | 1,171 | 299 | 308 | 430 | 134 | 70 | 1 |
| Computer and information sciences | 808 | 597 | 569 | 97 | 131 | 267 | 74 | 27 | 1 |
| Mathematics and statistics | 928 | 645 | 602 | 202 | 177 | 163 | 60 | 43 | 0 |
| Psychology and social sciences | 6,605 | 4,747 | 4,592 | 1,941 | 1,329 | 527 | 795 | 155 | 0 |
| Psychology | 3,317 | 2,482 | 2,443 | 1,455 | 399 | 284 | 305 | 39 | 0 |
| Anthropology | 366 | 205 | 185 | 58 | 79 | 10 | 38 | 20 | 0 |
| Economics | 459 | 377 | 359 | 69 | 111 | D | D | 18 | 0 |
| Political science and government | 460 | 335 | 320 | 90 | 150 | D | D | 15 | 0 |
| Sociology | 488 | 353 | 344 | 87 | 193 | D | D | 9 | 0 |
| Other social sciences | 1,515 | 995 | 941 | 182 | 397 | 105 | 257 | 54 | 0 |
| Engineering | 4,154 | 2,762 | 2,701 | 817 | 211 | 1,261 | 412 | 60 | 1 |
| Aerospace, aeronautical, and astronautical engineering | 221 | 163 | D | 36 | D | 57 | 51 | D | 0 |

Table 51**Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2020**

(Number)

| Citizenship status and field | All recipients | Recipients with definite commitments | Location of definite commitments | | | | | | |
|---|----------------|--------------------------------------|----------------------------------|--------------------|---------------------|----------------------------------|--------------------|--------|---------|
| | | | United States | | | | | Abroad | Unknown |
| | | | Total | Postdoctoral study | Academic employment | Industry employment ^a | Other ^b | | |
| Bioengineering and biomedical engineering | 689 | 397 | 387 | 178 | 19 | 167 | 23 | 10 | 0 |
| Chemical engineering | 465 | 304 | 295 | D | D | 161 | 13 | 9 | 0 |
| Civil engineering | 245 | 155 | 148 | 38 | 19 | 49 | 42 | 6 | 1 |
| Electrical, electronics, and communications engineering | 552 | 413 | 404 | 72 | 28 | 238 | 66 | 9 | 0 |
| Industrial and manufacturing engineering | 82 | 45 | D | D | 8 | 22 | 10 | D | 0 |
| Materials science engineering | 398 | 253 | 243 | D | D | 127 | 25 | 10 | 0 |
| Mechanical engineering | 601 | 408 | D | D | 42 | 174 | 55 | D | 0 |
| Other engineering | 901 | 624 | 614 | 158 | 63 | 266 | 127 | 10 | 0 |
| Education | 3,896 | 2,760 | 2,730 | 237 | 1,337 | 180 | 976 | 30 | 0 |
| Education administration | 818 | 622 | 616 | D | D | 31 | 332 | 6 | 0 |
| Education research | 1,872 | 1,343 | 1,328 | D | 694 | D | 372 | 15 | 0 |
| Teacher education | 94 | D | D | D | D | D | 20 | 0 | 0 |
| Teaching fields | 751 | D | 498 | D | 268 | D | 159 | D | 0 |
| Other education | 361 | 238 | D | 25 | D | D | 93 | D | 0 |
| Humanities and arts | 3,915 | 2,196 | 2,075 | 336 | 1,189 | 133 | 417 | 121 | 0 |
| Foreign languages and literature | 349 | 200 | 187 | 20 | 129 | 11 | 27 | 13 | 0 |
| History | 746 | 431 | 405 | D | 199 | D | 88 | 26 | 0 |
| Letters | 1,165 | 648 | 625 | D | 424 | D | 79 | 23 | 0 |
| Other humanities and arts | 1,655 | 917 | 858 | D | 437 | D | 223 | 59 | 0 |
| Other ^d | 1,738 | 1,218 | 1,179 | 115 | 699 | 173 | 192 | 39 | 0 |
| Business management and administration | 709 | 517 | 492 | 21 | 329 | 87 | 55 | 25 | 0 |
| Communication | 412 | 276 | 269 | 33 | 187 | 29 | 20 | 7 | 0 |
| Non-S&E fields nec | 617 | 425 | 418 | 61 | 183 | 57 | 117 | 7 | 0 |
| Temporary visa holder | 18,482 | 12,223 | 9,558 | 4,317 | 1,479 | 3,504 | 258 | 2,660 | 5 |
| Life sciences | 3,430 | 2,222 | 1,734 | 1,219 | 130 | 345 | 40 | 488 | 0 |
| Agricultural sciences and natural resources | 633 | 389 | 264 | 183 | 28 | 43 | 10 | 125 | 0 |
| Biological and biomedical sciences | 2,176 | 1,420 | 1,197 | 885 | 52 | 239 | 21 | 223 | 0 |
| Health sciences | 621 | 413 | 273 | 151 | 50 | 63 | 9 | 140 | 0 |
| Physical sciences and earth sciences | 2,311 | 1,560 | 1,291 | 846 | 42 | 388 | 15 | 269 | 0 |
| Chemistry | 994 | 641 | 549 | 357 | 20 | 170 | 2 | 92 | 0 |
| Geosciences, atmospheric sciences, and ocean sciences | 391 | 266 | 198 | 147 | 7 | 34 | 10 | 68 | 0 |
| Physics and astronomy | 926 | 653 | 544 | 342 | 15 | 184 | 3 | 109 | 0 |
| Mathematics and computer sciences | 2,475 | 1,825 | 1,531 | 438 | 215 | 849 | 29 | 291 | 3 |

Table 51**Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2020**

(Number)

| Citizenship status and field | All recipients | Recipients with definite commitments | Location of definite commitments | | | | | | |
|---|----------------|--------------------------------------|----------------------------------|--------------------|---------------------|----------------------------------|--------------------|--------|---------|
| | | | United States | | | | | Abroad | Unknown |
| | | | Total | Postdoctoral study | Academic employment | Industry employment ^a | Other ^b | | |
| Computer and information sciences | 1,452 | 1,078 | 918 | 185 | 138 | 575 | 20 | 159 | 1 |
| Mathematics and statistics | 1,023 | 747 | 613 | 253 | 77 | 274 | 9 | 132 | 2 |
| Psychology and social sciences | 1,832 | 1,271 | 786 | 296 | 272 | 164 | 54 | 485 | 0 |
| Psychology | 257 | 165 | 122 | 83 | 18 | 18 | 3 | 43 | 0 |
| Anthropology | 63 | 40 | 20 | 13 | 6 | 0 | 1 | 20 | 0 |
| Economics | 691 | 536 | 327 | 59 | 119 | D | D | 209 | 0 |
| Political science and government | 152 | 107 | 65 | 36 | 24 | D | D | 42 | 0 |
| Sociology | 101 | 72 | 38 | 18 | 18 | D | D | 34 | 0 |
| Other social sciences | 568 | 351 | 214 | 87 | 87 | 25 | 15 | 137 | 0 |
| Engineering | 5,955 | 3,819 | 3,264 | 1,328 | 181 | 1,681 | 74 | 553 | 2 |
| Aerospace, aeronautical, and astronautical engineering | 163 | 97 | D | 38 | D | 28 | 4 | D | 0 |
| Bioengineering and biomedical engineering | 364 | 234 | 203 | 132 | 10 | 58 | 3 | 30 | 1 |
| Chemical engineering | 482 | 292 | 256 | D | D | 144 | 1 | 36 | 0 |
| Civil engineering | 513 | 304 | 246 | 123 | 19 | 92 | 12 | 58 | 0 |
| Electrical, electronics, and communications engineering | 1,344 | 929 | 815 | 221 | 30 | 545 | 19 | 113 | 1 |
| Industrial and manufacturing engineering | 200 | 140 | D | D | 28 | 57 | 1 | D | 0 |
| Materials science engineering | 463 | 259 | 229 | D | D | 95 | 2 | 30 | 0 |
| Mechanical engineering | 983 | 595 | D | D | 19 | 240 | 9 | D | 0 |
| Other engineering | 1,443 | 969 | 812 | 309 | 58 | 422 | 23 | 157 | 0 |
| Education | 661 | 347 | 175 | 44 | 95 | 18 | 18 | 172 | 0 |
| Education administration | 59 | 21 | 7 | D | D | 0 | 1 | 14 | 0 |
| Education research | 387 | 199 | 113 | D | 54 | D | 13 | 86 | 0 |
| Teacher education | 18 | D | D | 0 | D | D | 0 | 7 | 0 |
| Teaching fields | 163 | D | 46 | D | 33 | D | 4 | D | 0 |
| Other education | 34 | 15 | D | D | D | 0 | 0 | D | 0 |
| Humanities and arts | 742 | 400 | 238 | 83 | 135 | 5 | 15 | 162 | 0 |
| Foreign languages and literature | 185 | 100 | 75 | 15 | 56 | 0 | 4 | 25 | 0 |
| History | 120 | 77 | 46 | D | 21 | D | 2 | 31 | 0 |
| Letters | 131 | 65 | 33 | D | 21 | D | 2 | 32 | 0 |
| Other humanities and arts | 306 | 158 | 84 | D | 37 | D | 7 | 74 | 0 |
| Other ^d | 1,076 | 779 | 539 | 63 | 409 | 54 | 13 | 240 | 0 |
| Business management and administration | 658 | 524 | 383 | 25 | 312 | 36 | 10 | 141 | 0 |
| Communication | 154 | 105 | 73 | 13 | 52 | 6 | 2 | 32 | 0 |

Table 51**Definite postgraduation commitments of doctorate recipients, by citizenship status and major field of study: 2020**

(Number)

| Citizenship status and field | All recipients | Recipients with definite commitments | Location of definite commitments | | | | | | |
|------------------------------|----------------|--------------------------------------|----------------------------------|--------------------|---------------------|----------------------------------|--------------------|--------|---------|
| | | | United States | | | | | Abroad | Unknown |
| | | | Total | Postdoctoral study | Academic employment | Industry employment ^a | Other ^b | | |
| Non-S&E fields nec | 264 | 150 | 83 | 25 | 45 | 12 | 1 | 67 | 0 |

D = suppressed to avoid disclosure of confidential information.

nec = not elsewhere classified; S&E = science and engineering.

^a Includes doctorate recipients who indicated self-employment.^b Includes doctorate recipients who indicated government, nonprofit, elementary or secondary school, or other employment and those with unknown employment.^c Includes respondents who did not report citizenship status.^d Includes other non-S&E fields not shown separately.**Note(s):**

See table A-6 in the technical notes for a listing of major fields and their constituent subfields. Definite postgraduate commitment includes doctorate recipients reporting definite postgraduation commitments for employment or postdoctoral study.

Source(s):

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