

Table 15**Doctorate recipients, by sex and major field of study: 2010–19**

(Number and percent)

| Sex and field | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | % change 2010–19 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------|
| All doctorate recipients ^a | 48,028 | 48,909 | 50,943 | 52,703 | 53,986 | 54,886 | 54,809 | 54,554 | 55,103 | 55,703 | 16.0 |
| Life sciences | 11,319 | 11,535 | 11,964 | 12,207 | 12,484 | 12,493 | 12,539 | 12,554 | 12,757 | 12,781 | 12.9 |
| Agricultural sciences and natural resources | 1,100 | 1,206 | 1,255 | 1,324 | 1,338 | 1,434 | 1,379 | 1,493 | 1,443 | 1,491 | 35.5 |
| Biological and biomedical sciences | 8,046 | 8,152 | 8,322 | 8,354 | 8,868 | 8,783 | 8,863 | 8,566 | 8,783 | 8,702 | 8.2 |
| Health sciences | 2,173 | 2,177 | 2,387 | 2,529 | 2,278 | 2,276 | 2,297 | 2,495 | 2,531 | 2,588 | 19.1 |
| Physical sciences and earth sciences | 4,995 | 5,271 | 5,419 | 5,584 | 5,910 | 5,916 | 6,251 | 6,082 | 6,332 | 6,585 | 31.8 |
| Chemistry | 2,304 | 2,432 | 2,416 | 2,484 | 2,673 | 2,666 | 2,703 | 2,699 | 2,809 | 2,941 | 27.6 |
| Geosciences, atmospheric sciences, and ocean sciences | 862 | 852 | 941 | 989 | 1,098 | 1,057 | 1,227 | 1,169 | 1,185 | 1,274 | 47.8 |
| Physics and astronomy | 1,829 | 1,987 | 2,062 | 2,111 | 2,139 | 2,193 | 2,321 | 2,214 | 2,338 | 2,370 | 29.6 |
| Mathematics and computer sciences | 3,223 | 3,273 | 3,496 | 3,660 | 3,862 | 3,818 | 3,954 | 3,842 | 4,024 | 4,240 | 31.6 |
| Computer and information sciences | 1,633 | 1,667 | 1,793 | 1,843 | 1,988 | 2,003 | 2,082 | 1,998 | 2,001 | 2,228 | 36.4 |
| Mathematics and statistics | 1,590 | 1,606 | 1,703 | 1,817 | 1,874 | 1,815 | 1,872 | 1,844 | 2,023 | 2,012 | 26.5 |
| Psychology and social sciences | 7,882 | 8,220 | 8,498 | 8,580 | 8,748 | 9,073 | 9,037 | 9,036 | 8,879 | 9,071 | 15.1 |
| Psychology | 3,420 | 3,576 | 3,599 | 3,592 | 3,724 | 3,776 | 3,910 | 3,926 | 3,823 | 3,936 | 15.1 |
| Anthropology | 507 | 553 | 547 | 550 | 523 | 492 | 460 | 446 | 424 | 445 | -12.2 |
| Economics | 1,073 | 1,121 | 1,243 | 1,183 | 1,196 | 1,255 | 1,236 | 1,239 | 1,245 | 1,247 | 16.2 |
| Political science and government | 728 | 685 | 724 | 803 | 775 | 859 | 745 | 743 | 734 | 707 | -2.9 |
| Sociology | 639 | 656 | 633 | 636 | 678 | 741 | 613 | 683 | 668 | 633 | -0.9 |
| Other social sciences | 1,515 | 1,629 | 1,752 | 1,816 | 1,852 | 1,950 | 2,073 | 1,999 | 1,985 | 2,103 | 38.8 |
| Engineering | 7,578 | 8,032 | 8,469 | 9,000 | 9,626 | 9,875 | 9,459 | 9,776 | 10,166 | 10,303 | 36.0 |
| Aerospace, aeronautical, and astronautical engineering | 252 | 262 | 307 | 348 | 386 | 361 | 370 | 379 | 383 | 379 | 50.4 |
| Bioengineering and biomedical engineering | 824 | 898 | 943 | 1,039 | 1,046 | 1,125 | 1,089 | 1,032 | 1,133 | 1,164 | 41.3 |
| Chemical engineering | 822 | 823 | 840 | 824 | 973 | 1,002 | 921 | 931 | 981 | 981 | 19.3 |
| Civil engineering | 643 | 634 | 495 | 542 | 617 | 632 | 564 | 713 | 676 | 701 | 9.0 |
| Electrical, electronics, and communications engineering | 1,778 | 1,886 | 1,938 | 1,897 | 1,952 | 1,997 | 1,823 | 1,879 | 1,944 | 1,799 | 1.2 |
| Industrial and manufacturing engineering | 215 | 258 | 226 | 241 | 298 | 243 | 256 | 249 | 272 | 234 | 8.8 |
| Materials science engineering | 670 | 662 | 743 | 815 | 832 | 871 | 984 | 937 | 993 | 992 | 48.1 |
| Mechanical engineering | 983 | 1,084 | 1,220 | 1,277 | 1,331 | 1,466 | 1,297 | 1,399 | 1,503 | 1,533 | 56.0 |
| Other engineering | 1,391 | 1,525 | 1,757 | 2,017 | 2,191 | 2,178 | 2,155 | 2,257 | 2,281 | 2,520 | 81.2 |
| Education | 5,287 | 4,670 | 4,802 | 4,934 | 4,789 | 5,098 | 5,146 | 4,826 | 4,824 | 4,635 | -12.3 |
| Education administration | 1,439 | 924 | 1,057 | 965 | 893 | 920 | 824 | 922 | 896 | 839 | -41.7 |
| Education research | 2,443 | 2,438 | 2,568 | 2,703 | 2,560 | 2,772 | 2,384 | 2,418 | 2,503 | 2,303 | -5.7 |
| Teacher education | 245 | 204 | 156 | 109 | 152 | 156 | 180 | 114 | 96 | 104 | -57.6 |
| Teaching fields | 799 | 805 | 757 | 892 | 915 | 953 | 1,166 | 925 | 960 | 960 | 20.2 |
| Other education | 361 | 299 | 264 | 265 | 269 | 297 | 592 | 447 | 369 | 429 | 18.8 |
| Humanities and arts | 5,015 | 5,225 | 5,561 | 5,715 | 5,524 | 5,594 | 5,482 | 5,286 | 5,140 | 5,054 | 0.8 |
| Foreign languages and literature | 601 | 644 | 684 | 701 | 674 | 656 | 599 | 618 | 617 | 610 | 1.5 |
| History | 1,005 | 1,065 | 1,086 | 1,148 | 1,186 | 1,146 | 1,148 | 1,058 | 948 | 912 | -9.3 |
| Letters | 1,516 | 1,513 | 1,638 | 1,606 | 1,551 | 1,583 | 1,531 | 1,462 | 1,439 | 1,387 | -8.5 |
| Other humanities and arts | 1,893 | 2,003 | 2,153 | 2,260 | 2,113 | 2,209 | 2,204 | 2,148 | 2,136 | 2,145 | 13.3 |
| Other ^b | 2,729 | 2,683 | 2,734 | 3,023 | 3,043 | 3,019 | 2,941 | 3,152 | 2,981 | 3,034 | 11.2 |
| Business management and administration | 1,366 | 1,327 | 1,404 | 1,551 | 1,584 | 1,582 | 1,509 | 1,565 | 1,475 | 1,536 | 12.4 |
| Communication | 638 | 650 | 595 | 645 | 663 | 667 | 672 | 622 | 630 | 543 | -14.9 |
| Non-S&E fields nec | 725 | 706 | 735 | 827 | 796 | 770 | 760 | 962 | 876 | 955 | 31.7 |

Table 15**Doctorate recipients, by sex and major field of study: 2010–19**

(Number and percent)

| Sex and field | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | % change 2010–19 |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------|
| Unknown field | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0.0 |
| Male | 25,524 | 26,188 | 27,362 | 28,326 | 29,008 | 29,532 | 29,572 | 29,081 | 29,754 | 30,151 | 18.1 |
| Life sciences | 5,101 | 5,243 | 5,335 | 5,492 | 5,514 | 5,563 | 5,628 | 5,612 | 5,650 | 5,819 | 14.1 |
| Agricultural sciences and natural resources | 609 | 652 | 698 | 702 | 691 | 746 | 755 | 755 | 746 | 761 | 25.0 |
| Biological and biomedical sciences | 3,823 | 3,878 | 3,891 | 3,941 | 4,088 | 4,100 | 4,154 | 4,056 | 4,081 | 4,200 | 9.9 |
| Health sciences | 669 | 713 | 746 | 849 | 735 | 717 | 719 | 801 | 823 | 858 | 28.3 |
| Physical sciences and earth sciences | 3,379 | 3,629 | 3,684 | 3,717 | 3,968 | 3,928 | 4,285 | 4,068 | 4,212 | 4,368 | 29.3 |
| Chemistry | 1,440 | 1,508 | 1,521 | 1,497 | 1,642 | 1,592 | 1,712 | 1,667 | 1,742 | 1,790 | 24.3 |
| Geosciences, atmospheric sciences, and ocean sciences | 496 | 522 | 538 | 539 | 622 | 600 | 716 | 644 | 659 | 740 | 49.2 |
| Physics and astronomy | 1,443 | 1,599 | 1,625 | 1,681 | 1,704 | 1,736 | 1,857 | 1,757 | 1,811 | 1,838 | 27.4 |
| Mathematics and computer sciences | 2,409 | 2,456 | 2,638 | 2,792 | 2,912 | 2,877 | 2,994 | 2,867 | 3,038 | 3,144 | 30.5 |
| Computer and information sciences | 1,286 | 1,312 | 1,419 | 1,502 | 1,580 | 1,581 | 1,662 | 1,548 | 1,566 | 1,717 | 33.5 |
| Mathematics and statistics | 1,123 | 1,144 | 1,219 | 1,290 | 1,332 | 1,296 | 1,332 | 1,319 | 1,472 | 1,427 | 27.1 |
| Psychology and social sciences | 3,357 | 3,332 | 3,539 | 3,501 | 3,507 | 3,757 | 3,741 | 3,670 | 3,636 | 3,672 | 9.4 |
| Psychology | 1,031 | 1,003 | 1,040 | 997 | 1,063 | 1,057 | 1,133 | 1,123 | 1,095 | 1,118 | 8.4 |
| Anthropology | 201 | 223 | 187 | 188 | 195 | 185 | 171 | 155 | 126 | 155 | -22.9 |
| Economics | 703 | 734 | 840 | 767 | 785 | 821 | 819 | 812 | 849 | 818 | 16.4 |
| Political science and government | 434 | 389 | 420 | 469 | 433 | 527 | 462 | 449 | 429 | 433 | -0.2 |
| Sociology | 250 | 254 | 230 | 259 | 247 | 284 | 257 | 263 | 250 | 229 | -8.4 |
| Other social sciences | 738 | 729 | 822 | 821 | 784 | 883 | 899 | 868 | 887 | 919 | 24.5 |
| Engineering | 5,829 | 6,242 | 6,565 | 6,946 | 7,401 | 7,578 | 7,267 | 7,341 | 7,712 | 7,833 | 34.4 |
| Aerospace, aeronautical, and astronautical engineering | 215 | 228 | 268 | 293 | 330 | 308 | 314 | 336 | 337 | 323 | 50.2 |
| Bioengineering and biomedical engineering | 509 | 563 | 608 | 684 | 660 | 698 | 686 | 605 | 687 | 720 | 41.5 |
| Chemical engineering | 574 | 566 | 583 | 566 | 682 | 685 | 624 | 659 | 688 | 665 | 15.9 |
| Civil engineering | 473 | 486 | 388 | 417 | 465 | 457 | 437 | 508 | 506 | 542 | 14.6 |
| Electrical, electronics, and communications engineering | 1,462 | 1,579 | 1,594 | 1,616 | 1,614 | 1,704 | 1,529 | 1,524 | 1,600 | 1,501 | 2.7 |
| Industrial and manufacturing engineering | 159 | 180 | 164 | 176 | 209 | 154 | 185 | 168 | 204 | 172 | 8.2 |
| Materials science engineering | 495 | 496 | 556 | 598 | 617 | 648 | 721 | 688 | 719 | 701 | 41.6 |
| Mechanical engineering | 858 | 934 | 1,042 | 1,081 | 1,126 | 1,265 | 1,096 | 1,160 | 1,285 | 1,283 | 49.5 |
| Other engineering | 1,084 | 1,210 | 1,362 | 1,515 | 1,698 | 1,659 | 1,675 | 1,693 | 1,686 | 1,926 | 77.7 |
| Education | 1,661 | 1,432 | 1,500 | 1,570 | 1,468 | 1,605 | 1,545 | 1,519 | 1,495 | 1,422 | -14.4 |
| Education administration | 547 | 349 | 389 | 372 | 371 | 344 | 304 | 344 | 323 | 342 | -37.5 |
| Education research | 706 | 699 | 761 | 826 | 723 | 849 | 718 | 772 | 764 | 653 | -7.5 |
| Teacher education | 59 | 38 | 43 | 22 | 35 | 36 | 43 | 21 | 18 | 20 | -66.1 |
| Teaching fields | 233 | 250 | 229 | 275 | 265 | 294 | 313 | 263 | 271 | 260 | 11.6 |
| Other education | 116 | 96 | 78 | 75 | 74 | 82 | 167 | 119 | 119 | 147 | 26.7 |
| Humanities and arts | 2,462 | 2,571 | 2,741 | 2,829 | 2,760 | 2,763 | 2,639 | 2,580 | 2,565 | 2,479 | 0.7 |
| Foreign languages and literature | 218 | 248 | 238 | 271 | 248 | 238 | 228 | 237 | 247 | 215 | -1.4 |
| History | 556 | 586 | 602 | 632 | 664 | 632 | 621 | 594 | 513 | 529 | -4.9 |
| Letters | 625 | 615 | 659 | 665 | 657 | 647 | 600 | 591 | 585 | 560 | -10.4 |
| Other humanities and arts | 1,063 | 1,122 | 1,242 | 1,261 | 1,191 | 1,246 | 1,190 | 1,158 | 1,220 | 1,175 | 10.5 |
| Other ^b | 1,326 | 1,283 | 1,360 | 1,479 | 1,478 | 1,461 | 1,473 | 1,424 | 1,446 | 1,414 | 6.6 |
| Business management and administration | 814 | 792 | 837 | 909 | 909 | 934 | 932 | 872 | 863 | 874 | 7.4 |
| Communication | 247 | 233 | 244 | 244 | 277 | 256 | 261 | 197 | 234 | 205 | -17.0 |

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(Number and percent)

| Sex and field | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | % change 2010–19 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------|
| Non-S&E fields nec | 265 | 258 | 279 | 326 | 292 | 271 | 280 | 353 | 349 | 335 | 26.4 |
| Unknown field | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0.0 |
| Female | 22,488 | 22,699 | 23,526 | 24,365 | 24,813 | 25,347 | 25,222 | 25,451 | 25,321 | 25,542 | 13.6 |
| Life sciences | 6,213 | 6,289 | 6,614 | 6,712 | 6,930 | 6,929 | 6,908 | 6,937 | 7,101 | 6,961 | 12.0 |
| Agricultural sciences and natural resources | 490 | 554 | 554 | 622 | 646 | 688 | 623 | 736 | 694 | 730 | 49.0 |
| Biological and biomedical sciences | 4,219 | 4,272 | 4,422 | 4,410 | 4,747 | 4,682 | 4,707 | 4,508 | 4,699 | 4,501 | 6.7 |
| Health sciences | 1,504 | 1,463 | 1,638 | 1,680 | 1,537 | 1,559 | 1,578 | 1,693 | 1,708 | 1,730 | 15.0 |
| Physical sciences and earth sciences | 1,615 | 1,640 | 1,730 | 1,864 | 1,924 | 1,987 | 1,963 | 2,013 | 2,117 | 2,213 | 37.0 |
| Chemistry | 864 | 922 | 894 | 985 | 1,021 | 1,074 | 991 | 1,031 | 1,067 | 1,151 | 33.2 |
| Geosciences, atmospheric sciences, and ocean sciences | 366 | 330 | 403 | 449 | 475 | 457 | 510 | 525 | 526 | 533 | 45.6 |
| Physics and astronomy | 385 | 388 | 433 | 430 | 428 | 456 | 462 | 457 | 524 | 529 | 37.4 |
| Mathematics and computer sciences | 814 | 813 | 855 | 868 | 934 | 939 | 959 | 974 | 982 | 1,095 | 34.5 |
| Computer and information sciences | 347 | 353 | 374 | 341 | 400 | 422 | 420 | 450 | 434 | 510 | 47.0 |
| Mathematics and statistics | 467 | 460 | 481 | 527 | 534 | 517 | 539 | 524 | 548 | 585 | 25.3 |
| Psychology and social sciences | 4,524 | 4,887 | 4,955 | 5,077 | 5,217 | 5,315 | 5,295 | 5,362 | 5,241 | 5,399 | 19.3 |
| Psychology | 2,389 | 2,573 | 2,558 | 2,594 | 2,648 | 2,719 | 2,776 | 2,803 | 2,728 | 2,818 | 18.0 |
| Anthropology | 306 | 330 | 360 | 362 | 328 | 307 | 289 | 291 | 298 | 290 | -5.2 |
| Economics | 369 | 387 | 402 | 416 | 404 | 434 | 417 | 425 | 396 | 429 | 16.3 |
| Political science and government | 294 | 296 | 303 | 333 | 341 | 332 | 283 | 294 | 304 | 274 | -6.8 |
| Sociology | 389 | 402 | 402 | 377 | 431 | 457 | 356 | 419 | 418 | 404 | 3.9 |
| Other social sciences | 777 | 899 | 930 | 995 | 1,065 | 1,066 | 1,174 | 1,130 | 1,097 | 1,184 | 52.4 |
| Engineering | 1,746 | 1,782 | 1,887 | 2,052 | 2,184 | 2,297 | 2,189 | 2,429 | 2,450 | 2,468 | 41.4 |
| Aerospace, aeronautical, and astronautical engineering | 37 | 34 | 39 | 55 | 55 | 53 | 56 | 43 | 46 | 56 | 51.4 |
| Bioengineering and biomedical engineering | 315 | 335 | 335 | 355 | 384 | 427 | 403 | 427 | 445 | 444 | 41.0 |
| Chemical engineering | 248 | 256 | 256 | 258 | 290 | 317 | 296 | 271 | 293 | 316 | 27.4 |
| Civil engineering | 169 | 147 | 106 | 125 | 147 | 175 | 127 | 203 | 170 | 159 | -5.9 |
| Electrical, electronics, and communications engineering | 315 | 301 | 336 | 279 | 325 | 293 | 293 | 355 | 344 | 297 | -5.7 |
| Industrial and manufacturing engineering | 55 | 78 | 62 | 65 | 89 | 89 | 71 | 80 | 68 | 62 | 12.7 |
| Materials science engineering | 175 | 166 | 184 | 217 | 211 | 223 | 262 | 249 | 274 | 290 | 65.7 |
| Mechanical engineering | 125 | 150 | 177 | 196 | 197 | 201 | 201 | 239 | 216 | 250 | 100.0 |
| Other engineering | 307 | 315 | 392 | 502 | 486 | 519 | 480 | 562 | 594 | 594 | 93.5 |
| Education | 3,624 | 3,234 | 3,298 | 3,364 | 3,311 | 3,492 | 3,601 | 3,305 | 3,328 | 3,213 | -11.3 |
| Education administration | 892 | 574 | 665 | 593 | 522 | 576 | 520 | 578 | 573 | 497 | -44.3 |
| Education research | 1,736 | 1,736 | 1,807 | 1,877 | 1,828 | 1,922 | 1,666 | 1,645 | 1,738 | 1,650 | -5.0 |
| Teacher education | 186 | 166 | 113 | 87 | 117 | 120 | 137 | 92 | 78 | 84 | -54.8 |
| Teaching fields | 566 | 555 | 527 | 617 | 649 | 659 | 853 | 662 | 689 | 700 | 23.7 |
| Other education | 244 | 203 | 186 | 190 | 195 | 215 | 425 | 328 | 250 | 282 | 15.6 |
| Humanities and arts | 2,552 | 2,654 | 2,818 | 2,885 | 2,760 | 2,830 | 2,842 | 2,705 | 2,572 | 2,573 | 0.8 |
| Foreign languages and literature | 382 | 396 | 446 | 430 | 424 | 418 | 371 | 381 | 370 | 394 | 3.1 |
| History | 449 | 479 | 484 | 516 | 521 | 514 | 527 | 464 | 435 | 383 | -14.7 |
| Letters | 891 | 898 | 978 | 941 | 894 | 936 | 931 | 871 | 853 | 827 | -7.2 |
| Other humanities and arts | 830 | 881 | 910 | 998 | 921 | 962 | 1,013 | 989 | 914 | 969 | 16.7 |
| Other ^b | 1,400 | 1,400 | 1,369 | 1,543 | 1,553 | 1,558 | 1,465 | 1,726 | 1,530 | 1,620 | 15.7 |
| Business management and administration | 550 | 535 | 564 | 641 | 669 | 648 | 575 | 692 | 609 | 662 | 20.4 |

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| Sex and field | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | % change 2010–19 |
|--------------------|------|------|------|------|------|------|------|------|------|------|---------------------|
| Communication | 390 | 417 | 350 | 401 | 383 | 411 | 410 | 425 | 395 | 338 | -13.3 |
| Non-S&E fields nec | 460 | 448 | 455 | 501 | 501 | 499 | 480 | 609 | 526 | 620 | 34.8 |
| Unknown field | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |

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

^a Includes respondents who did not report sex.^b 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.

Source(s):

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