

Table 95. Federal obligations for applied research, by detailed field of R&D: FYs 2016–25

(Dollars in millions)

| Field | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 (preliminary) |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------|
| All fields | 34,812 | 36,600 | 38,392 | 41,101 | 43,758 | 43,649 | 48,418 | 54,274 | 52,062 | 49,879 |
| Computer and information sciences | NA | NA | NA | NA | NA | 3,086 | 2,535 | 2,793 | 2,771 | 2,909 |
| Computer sciences and mathematics | 2,113 | 2,017 | 2,122 | 2,024 | 3,388 | NA | NA | NA | NA | NA |
| Computer sciences | 1,818 | 1,736 | 1,856 | 1,746 | 3,050 | NA | NA | NA | NA | NA |
| Mathematics | 141 | 118 | 113 | 118 | 178 | NA | NA | NA | NA | NA |
| Other computer sciences and mathematics | 154 | 163 | 154 | 160 | 160 | NA | NA | NA | NA | NA |
| Geosciences, atmospheric sciences, and ocean sciences (formerly environmental sciences) | 1,685 | 1,783 | 1,571 | 1,823 | 1,873 | 1,985 | 2,125 | 2,223 | 2,199 | 2,277 |
| Atmospheric science and meteorology (formerly atmospheric sciences) | 517 | 564 | 288 | 310 | 345 | 327 | 403 | 513 | 473 | NA |
| Geological and earth sciences (formerly geological sciences) | 129 | 141 | 45 | 39 | 44 | 287 | 320 | 115 | 77 | NA |
| Ocean sciences and marine sciences (formerly oceanography) | 331 | 390 | 359 | 387 | 476 | 606 | 608 | 607 | 495 | NA |
| Other geosciences, atmospheric sciences, and ocean sciences (formerly other environmental sciences) | 708 | 688 | 879 | 1,086 | 1,007 | 764 | 793 | 988 | 1,154 | NA |
| Life sciences | 16,468 | 17,516 | 18,818 | 19,423 | 21,720 | 19,232 | 22,558 | 25,397 | 21,015 | 20,026 |
| Agricultural sciences | 717 | 769 | 728 | 811 | 731 | 486 | 620 | 537 | 579 | NA |
| Biological and biomedical sciences | NA | NA | NA | NA | NA | 8,466 | 11,547 | 15,224 | 10,163 | NA |
| Biological sciences (excluding environmental biology) | 7,897 | 7,982 | 8,670 | 9,125 | 9,839 | NA | NA | NA | NA | NA |
| Environmental biology | 408 | 412 | 409 | 434 | 431 | NA | NA | NA | NA | NA |
| Health sciences (formerly medical sciences) | 6,021 | 6,931 | 7,150 | 7,386 | 8,722 | 8,176 | 8,095 | 7,274 | 7,856 | NA |
| Natural resources and conservation | NA | NA | NA | NA | NA | 195 | 203 | 314 | 391 | NA |
| Other life sciences | 1,426 | 1,421 | 1,862 | 1,668 | 1,997 | 1,909 | 2,092 | 2,048 | 2,027 | NA |
| Mathematics and statistics | NA | NA | NA | NA | NA | 212 | 296 | 326 | 280 | 286 |
| Physical sciences | 1,999 | 1,864 | 1,951 | 1,909 | 1,907 | 1,864 | 2,650 | 3,171 | 3,312 | 3,163 |
| Astronomy and astrophysics (formerly astronomy) | 154 | 153 | 8 | 6 | 1 | 1 | * | 1 | 7 | NA |
| Chemistry | 311 | 275 | 382 | 434 | 390 | 349 | 755 | 749 | 1,146 | NA |
| Materials science | NA | NA | NA | NA | NA | 215 | 179 | 191 | 241 | NA |
| Physics | 1,139 | 1,079 | 1,023 | 875 | 1,061 | 618 | 1,019 | 1,221 | 1,145 | NA |
| Other physical sciences | 395 | 358 | 537 | 593 | 455 | 681 | 698 | 1,009 | 774 | NA |
| Psychology | 1,032 | 1,054 | 1,180 | 1,387 | 1,664 | 1,836 | 2,300 | 2,434 | 2,625 | 2,609 |
| Biological aspects | 4 | * | 1 | 1 | 1 | * | 11 | 10 | 5 | NA |
| Social aspects | 44 | 43 | 38 | 42 | 30 | 34 | 34 | 23 | 24 | NA |
| Other psychological sciences | 983 | 1,011 | 1,141 | 1,344 | 1,634 | 1,801 | 2,255 | 2,402 | 2,596 | NA |
| Social sciences | 849 | 668 | 665 | 704 | 698 | 834 | 1,152 | 1,513 | 1,807 | 1,752 |
| Anthropology | 2 | 3 | 4 | 2 | 1 | 20 | 21 | 2 | 2 | NA |
| Economics | 320 | 238 | 230 | 209 | 164 | 175 | 187 | 214 | 238 | NA |
| Political science and government (formerly political science) | 1 | 5 | 2 | 4 | 8 | 9 | 8 | 3 | 3 | NA |
| Sociology, demography, and population studies (formerly sociology) | 173 | 155 | 119 | 187 | 132 | 69 | 70 | 80 | 107 | NA |
| Other social sciences ^a | 352 | 267 | 311 | 302 | 393 | 560 | 866 | 1,214 | 1,456 | NA |
| Engineering | 9,314 | 9,522 | 10,173 | 11,661 | 10,324 | 11,438 | 11,758 | 11,679 | 13,622 | 12,591 |
| Aeronautical engineering | 1,357 | 1,442 | 1,019 | 1,128 | 1,023 | NA | NA | NA | NA | NA |

Table 95. Federal obligations for applied research, by detailed field of R&D: FYs 2016–25

(Dollars in millions)

| Field | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 (preliminary) |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| Aerospace, aeronautical, and astronautical engineering | NA | NA | NA | NA | NA | 2,334 | 2,099 | 1,564 | 1,248 | NA |
| Astronautical engineering | 551 | 550 | 788 | 821 | 901 | NA | NA | NA | NA | NA |
| Bioengineering and biomedical engineering | NA | NA | NA | NA | NA | 13 | 64 | 66 | 243 | NA |
| Chemical engineering | 303 | 226 | 621 | 379 | 694 | 612 | 624 | 898 | 1,293 | NA |
| Civil engineering | 424 | 579 | 462 | 555 | 459 | 579 | 574 | 609 | 552 | NA |
| Electrical, electronics, and communications engineering (formerly electrical engineering) | 835 | 878 | 772 | 751 | 675 | 691 | 661 | 1,090 | 716 | NA |
| Industrial and manufacturing engineering | NA | NA | NA | NA | NA | 250 | 2,029 | 320 | 1,978 | NA |
| Mechanical engineering | 251 | 326 | 388 | 527 | 407 | 175 | 294 | 338 | 380 | NA |
| Metallurgical and materials engineering (formerly metallurgy and materials engineering) | 696 | 635 | 552 | 620 | 423 | 573 | 345 | 406 | 475 | NA |
| Other engineering | 4,895 | 4,886 | 5,573 | 6,881 | 5,741 | 6,212 | 5,067 | 6,387 | 6,737 | NA |
| Other fields | NA | NA | NA | NA | NA | 3,163 | 3,045 | 4,738 | 4,431 | 4,266 |
| Business management and business administration | NA | NA | NA | NA | NA | 86 | 79 | 107 | 94 | NA |
| Communication and communications technologies | NA | NA | NA | NA | NA | 12 | 21 | 31 | 58 | NA |
| Education research | NA | NA | NA | NA | NA | 627 | 707 | 673 | 736 | NA |
| Humanities, including history | NA | NA | NA | NA | NA | * | * | * | * | NA |
| Law | NA | NA | NA | NA | NA | * | * | 0 | 3 | NA |
| Social work | NA | NA | NA | NA | NA | 0 | 0 | 2 | 2 | NA |
| Visual and performing arts | NA | NA | NA | NA | NA | 0 | 0 | 0 | 0 | NA |
| All other fields | NA | NA | NA | NA | NA | 2,437 | 2,238 | 3,925 | 3,537 | NA |
| Other sciences nec | 1,352 | 2,176 | 1,912 | 2,168 | 2,185 | NA | NA | NA | NA | NA |

* = amount greater than \$0 but less than \$500,000. NA = not available; agency did not provide data.

nec = not elsewhere classified.

^a As of volume 71 (FYs 2021–22), other social sciences does not include education research or law; those fields were moved to the category other fields.**Note(s):**

Because of rounding, detail may not add to total. FYs 2020, 2021, and 2022 obligations include additional funding provided by supplemental COVID-19 pandemic-related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). As of volume 71 (FYs 2021–22), the fields of R&D (formerly fields of science and engineering) were revised for consistency with other National Center for Science and Engineering Statistics surveys; some fields were added, merged, or split, and some fields were renamed. Therefore, the data are not directly comparable with totals reported in previous years. For additional notes associated with the taxonomy changes to the fields listed in the table, see technical table A-3 at <https://ncses.nsf.gov/surveys/federal-funds-research-development/2024-2025#technical-tables>.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.