

TABLE 53

**Federal obligations for experimental development performed at higher education institutions, by detailed field of R&D: FY 2022**

(Dollars in thousands)

| Field                                                       | 2022      |
|-------------------------------------------------------------|-----------|
| All fields                                                  | 3,109,857 |
| Computer and information sciences                           | 61,924    |
| Geosciences, atmospheric sciences, and ocean sciences       | 121,630   |
| Atmospheric science and meteorology                         | 40,015    |
| Geological and earth sciences                               | 8,521     |
| Ocean sciences and marine sciences                          | 23,993    |
| Other geosciences, atmospheric sciences, and ocean sciences | 49,102    |
| Life sciences                                               | 935,500   |
| Agricultural sciences                                       | 26,011    |
| Biological and biomedical sciences                          | 856,060   |
| Health sciences                                             | 44,184    |
| Natural resources and conservation                          | 6,660     |
| Other life sciences                                         | 2,585     |
| Mathematics and statistics                                  | 4,238     |
| Physical sciences                                           | 718,347   |
| Astronomy and astrophysics                                  | 176,362   |
| Chemistry                                                   | 20,062    |
| Materials science                                           | 1,084     |
| Physics                                                     | 147,720   |
| Other physical sciences                                     | 373,118   |
| Psychology                                                  | 7,648     |
| Biological aspects                                          | 0         |
| Social aspects                                              | 91        |
| Other psychological sciences                                | 7,557     |
| Social sciences                                             | 5,497     |
| Anthropology                                                | 266       |
| Economics                                                   | 62        |
| Political science and government                            | 125       |
| Sociology, demography, and population studies               | 735       |
| Other social sciences                                       | 4,309     |
| Engineering                                                 | 943,170   |
| Aerospace, aeronautical, and astronautical engineering      | 208,614   |
| Bioengineering and biomedical engineering                   | 4,576     |
| Chemical engineering                                        | 36,457    |
| Civil engineering                                           | 12,388    |
| Electrical, electronics, and communications engineering     | 88,033    |
| Industrial and manufacturing engineering                    | 105,003   |
| Mechanical engineering                                      | 17,900    |
| Metallurgical and materials engineering                     | 20,481    |
| Other engineering                                           | 449,718   |
| Other fields                                                | 311,903   |
| Business management and business administration             | 9,630     |
| Communication and communications technologies               | 10,262    |
| Education research                                          | 85,936    |
| Humanities                                                  | 0         |
| Law                                                         | 0         |
| Social work                                                 | 0         |
| Visual and performing arts                                  | 0         |
| All other fields                                            | 206,076   |

**Note(s):**

Because of rounding, detail may not add to total. FY 2022 obligations include additional funding provided by supplemental COVID-19 pandemic-related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2022–23.