### Table 3
Higher education R&D expenditures, by R&D field: FYs 2021–22

(Millions of current dollars)

<table>
<thead>
<tr>
<th>Field</th>
<th>2021</th>
<th>2022</th>
<th>% change in current dollars, FYs 2021–22</th>
<th>% change in constant 2012 dollars, FYs 2021–22</th>
</tr>
</thead>
<tbody>
<tr>
<td>All R&amp;D fields</td>
<td>89,695</td>
<td>97,681</td>
<td>8.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Science</td>
<td>70,289</td>
<td>76,226</td>
<td>8.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Computer and information sciences</td>
<td>2,953</td>
<td>3,225</td>
<td>9.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Geosciences, atmospheric sciences, and ocean sciences</td>
<td>3,295</td>
<td>3,690</td>
<td>12.0</td>
<td>4.7</td>
</tr>
<tr>
<td>Atmospheric science and meteorology</td>
<td>624</td>
<td>669</td>
<td>7.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Geological and earth sciences</td>
<td>1,242</td>
<td>1,371</td>
<td>10.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Ocean sciences and marine sciences</td>
<td>1,035</td>
<td>1,211</td>
<td>17.0</td>
<td>9.4</td>
</tr>
<tr>
<td>Geosciences, atmospheric sciences, and ocean sciences nec</td>
<td>393</td>
<td>440</td>
<td>12.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Life sciences</td>
<td>52,350</td>
<td>56,498</td>
<td>7.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Agricultural sciences</td>
<td>3,553</td>
<td>3,936</td>
<td>10.8</td>
<td>3.5</td>
</tr>
<tr>
<td>Biological and biomedical sciences</td>
<td>16,566</td>
<td>18,161</td>
<td>9.6</td>
<td>2.5</td>
</tr>
<tr>
<td>Health sciences</td>
<td>29,859</td>
<td>31,870</td>
<td>6.7</td>
<td>-0.2</td>
</tr>
<tr>
<td>Natural resources and conservation</td>
<td>935</td>
<td>1,013</td>
<td>8.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Life sciences nec</td>
<td>1,436</td>
<td>1,518</td>
<td>5.7</td>
<td>-1.2</td>
</tr>
<tr>
<td>Mathematics and statistics</td>
<td>773</td>
<td>880</td>
<td>13.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Physical sciences</td>
<td>5,737</td>
<td>6,168</td>
<td>7.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Astronomy and astrophysics</td>
<td>741</td>
<td>814</td>
<td>9.9</td>
<td>2.7</td>
</tr>
<tr>
<td>Chemistry</td>
<td>1,996</td>
<td>2,127</td>
<td>6.6</td>
<td>-0.4</td>
</tr>
<tr>
<td>Materials science</td>
<td>286</td>
<td>286</td>
<td>0.0</td>
<td>-6.5</td>
</tr>
<tr>
<td>Physics</td>
<td>2,464</td>
<td>2,669</td>
<td>8.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Physical sciences nec</td>
<td>251</td>
<td>271</td>
<td>8.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Psychology</td>
<td>1,330</td>
<td>1,444</td>
<td>8.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Social sciences</td>
<td>2,828</td>
<td>3,165</td>
<td>11.9</td>
<td>4.6</td>
</tr>
<tr>
<td>Anthropology</td>
<td>108</td>
<td>133</td>
<td>23.1</td>
<td>15.1</td>
</tr>
<tr>
<td>Economics</td>
<td>550</td>
<td>668</td>
<td>21.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Political science and government</td>
<td>424</td>
<td>488</td>
<td>15.1</td>
<td>7.6</td>
</tr>
<tr>
<td>Sociology, demography, and population studies</td>
<td>553</td>
<td>616</td>
<td>11.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Social sciences nec</td>
<td>1,193</td>
<td>1,260</td>
<td>5.6</td>
<td>-1.3</td>
</tr>
<tr>
<td>Sciences nec</td>
<td>1,025</td>
<td>1,156</td>
<td>12.8</td>
<td>5.4</td>
</tr>
<tr>
<td>Engineering</td>
<td>14,292</td>
<td>15,597</td>
<td>9.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Aerospace, aeronautical, and astronautical engineering</td>
<td>1,452</td>
<td>1,647</td>
<td>13.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Bioengineering and biomedical engineering</td>
<td>1,560</td>
<td>1,726</td>
<td>10.6</td>
<td>3.4</td>
</tr>
<tr>
<td>Chemical engineering</td>
<td>1,024</td>
<td>1,108</td>
<td>8.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Civil engineering</td>
<td>1,482</td>
<td>1,647</td>
<td>11.1</td>
<td>3.9</td>
</tr>
<tr>
<td>Electrical, electronic, and communications engineering</td>
<td>3,079</td>
<td>3,437</td>
<td>11.6</td>
<td>4.3</td>
</tr>
<tr>
<td>Industrial and manufacturing engineering</td>
<td>574</td>
<td>615</td>
<td>7.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Mechanical engineering</td>
<td>1,882</td>
<td>2,063</td>
<td>9.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Metallurgical and materials engineering</td>
<td>842</td>
<td>887</td>
<td>5.3</td>
<td>-1.5</td>
</tr>
<tr>
<td>Engineering nec</td>
<td>2,397</td>
<td>2,467</td>
<td>2.9</td>
<td>-3.8</td>
</tr>
<tr>
<td>Non-S&amp;E</td>
<td>5,114</td>
<td>5,858</td>
<td>14.5</td>
<td>7.1</td>
</tr>
<tr>
<td>Business management and business administration</td>
<td>934</td>
<td>1,081</td>
<td>15.7</td>
<td>8.2</td>
</tr>
<tr>
<td>Communication and communications technologies</td>
<td>186</td>
<td>213</td>
<td>14.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Education</td>
<td>1,616</td>
<td>1,741</td>
<td>7.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Humanities</td>
<td>561</td>
<td>714</td>
<td>27.3</td>
<td>18.9</td>
</tr>
<tr>
<td>Law</td>
<td>283</td>
<td>359</td>
<td>26.9</td>
<td>18.6</td>
</tr>
</tbody>
</table>
### Table 3

Higher education R&D expenditures, by R&D field: FYs 2021–22

(Millions of current dollars)

<table>
<thead>
<tr>
<th>Field</th>
<th>2021</th>
<th>2022</th>
<th>% change in current dollars, FYs 2021–22</th>
<th>% change in constant 2012 dollars, FYs 2021–22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social work</td>
<td>320</td>
<td>363</td>
<td>13.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Visual and performing arts</td>
<td>178</td>
<td>225</td>
<td>26.4</td>
<td>18.1</td>
</tr>
<tr>
<td>Non-S&amp;E nec</td>
<td>1,037</td>
<td>1,162</td>
<td>12.1</td>
<td>4.7</td>
</tr>
</tbody>
</table>

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

**Note(s):**
This table includes only institutions reporting $1 million or more in total R&D expenditures in FY 2021. Institutions reporting less than $1 million in total R&D expenditures in FY 2021 completed a shorter version of the survey form in FY 2022 that did not include this question. Total expenditures from institutions reporting less than $1 million in R&D in FY 2022 was $162 million. Gross domestic product deflators come from the Bureau of Economic Analysis and are available in Table 1.1.9 "Implicit Price Deflators for Gross Domestic Product" at https://www.bea.gov/iTable/index_nipa.cfm (accessed September 2023).

**Source(s):**