

TABLE 1-10b

## Postdoctoral appointees in engineering broad fields: 1979–2022

(Number)

Year	Total	Aerospace, aeronautical, and astronautical engineering	Biological, biomedical, and biosystems engineering	Chemical, petroleum, and chemical-related engineering	Civil, environmental, transportation and related engineering fields <sup>a</sup>	Electrical, electronics, communications and computer engineering	Industrial, manufacturing, systems engineering and operations research	Mechanical engineering	Metallurgical, mining, materials and related engineering fields <sup>b</sup>	Other engineering <sup>c</sup>
1979	1,067	32	28	198	128	142	8	143	214	174
1980	981	20	25	191	122	123	16	137	175	172
1981	1,040	14	32	175	103	191	13	130	210	172
1982	980	25	28	181	103	178	9	130	178	148
1983	1,108	32	27	200	131	180	13	182	223	120
1984	1,203	42	31	250	146	178	21	196	186	153
1985	1,356	51	46	280	122	183	18	207	264	185
1986	1,405	48	53	299	140	175	25	240	275	150
1987	1,446	43	44	322	174	177	26	216	309	135
1988	1,690	48	47	433	203	187	32	218	388	134
1989	1,928	38	69	486	182	193	32	304	413	211
1990	1,950	67	71	572	168	242	6	222	382	220
1991	2,262	77	59	595	186	346	27	326	403	243
1992	2,369	92	79	556	188	318	38	352	473	273
1993	2,446	116	80	542	181	388	63	358	422	296
1994	2,606	100	135	541	210	411	54	388	465	302
1995	2,648	101	129	585	201	381	30	410	509	302
1996	2,677	109	140	551	230	395	30	425	506	291
1997	2,971	125	154	657	248	508	28	440	476	335
1998	2,853	133	180	627	225	488	30	434	414	322
1999	3,196	128	242	690	299	548	27	476	427	359
2000	3,313	111	220	723	295	525	48	480	515	396
2001	3,152	128	262	591	268	436	21	501	493	452
2002	3,566	140	284	773	342	613	43	441	517	413
2003	3,810	141	388	703	300	646	45	543	551	493
2004	3,949	141	425	703	313	654	50	514	576	573
2005	4,166	153	477	715	384	689	51	562	586	549
2006	4,642	165	591	753	458	721	51	644	582	677
2007old <sup>a</sup>	4,908	178	640	780	419	885	73	725	559	649
2007new <sup>a</sup>	4,942	178	640	812	417	884	71	722	569	649
2008	5,462	154	710	908	465	987	115	784	610	729
2009	6,416	168	960	1,120	535	1,025	109	948	762	789
2010 <sup>d,e</sup>	6,969	212	1,023	1,121	571	1,095	151	1,021	845	930
2011 <sup>e</sup>	6,786	202	1,069	1,172	551	1,035	121	889	864	883
2012	7,103	170	1,161	1,151	590	1,152	127	985	859	908
2013	7,106	202	1,103	1,279	587	1,180	133	1,034	816	772
2014old <sup>f</sup>	7,292	220	1,196	1,310	629	1,177	131	1,055	791	783
2014new <sup>f</sup>	7,307	220	1,198	1,310	629	1,179	131	1,058	795	787
2015	7,656	217	1,201	1,356	670	1,160	142	1,161	926	823
2016	7,796	201	1,278	1,290	706	1,186	130	1,080	892	1,033
2017old <sup>b</sup>	7,929	na	na	na	na	na	na	na	na	na
2017new <sup>b</sup>	7,839	196	1,476	1,262	804	1,170	127	1,089	565	1,150
2018	7,914	207	1,529	1,205	739	1,197	156	1,069	575	1,237
2019	8,266	227	1,602	1,229	865	1,305	167	1,142	665	1,064
2020	8,462	233	1,696	1,157	1,006	1,302	194	1,149	630	1,095
2021	8,340	277	1,616	1,167	968	1,275	127	1,200	562	1,148

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Year	Total	Aerospace, aeronautical, and astronautical engineering	Biological, biomedical, and biosystems engineering	Chemical, petroleum, and chemical-related engineering	Civil, environmental, transportation and related engineering fields <sup>a</sup>	Electrical, electronics, communications and computer engineering	Industrial, manufacturing, systems engineering and operations research	Mechanical engineering	Metallurgical, mining, materials and related engineering fields <sup>b</sup>	Other engineering <sup>c</sup>
2022	8,335	244	1,540	1,239	1,018	1,217	143	1,189	542	1,203

na = not applicable; data were not collected at this level of detail in the year shown.

<sup>a</sup> In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. Architecture is reported as a separate field of engineering in 2007new; data were reported under civil engineering in 2007old and previous years. See appendix A in <https://www.nsf.gov/statistics/nsf10307/> for more detail.

<sup>b</sup> As part of the 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Materials sciences was reported as part of metallurgical and materials engineering from 2011–16; starting in 2017, materials sciences is reported as part of physical sciences, nanotechnology was reported as part of the science detailed field multidisciplinary and interdisciplinary studies from 2007–16; and starting in 2017, architecture was removed.

<sup>c</sup> Other engineering includes agricultural engineering; engineering mechanics, science, and physics; nuclear engineering; engineering, other; and, from 2007new to 2017old, architecture. Architecture was reported under civil engineering in 2007old and previous years.

<sup>d</sup> In 2010, the postdoctoral appointee (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at <https://www.nsf.gov/statistics/infbrief/nsf13334/>.

<sup>e</sup> Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

<sup>f</sup> In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, and health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see <https://www.nsf.gov/statistics/2016/nsf16314/>.

**Note(s):**

Prior to 2020, there were no broad fields in engineering and this table includes all engineering detailed fields. All fields have been moved to match the current broad field organization. For postdoctoral appointees, "field" refers to the field of the unit that reports information on this group to the GSS. Sum of the broad fields may not add to total because of rounding. For more information on the mapping of GSS fields and codes, see technical table A-17.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.