

TABLE 93

Federal obligations for basic research, by detailed field of R&D: FYs 2015–24

(Dollars in millions)

Field	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024 (preliminary)
All fields	31,527	32,293	33,271	36,195	40,017	41,547	42,266	45,414	47,335	47,473
Computer and information sciences	NA	NA	NA	NA	NA	NA	2,264	2,319	2,342	2,307
Computer sciences and mathematics	1,984	2,110	1,877	2,085	2,306	2,524	NA	NA	NA	NA
Computer sciences	1,025	997	999	1,032	1,151	1,230	NA	NA	NA	NA
Mathematics	874	1,019	824	943	1,039	504	NA	NA	NA	NA
Other computer sciences and mathematics	86	93	55	110	116	791	NA	NA	NA	NA
Geosciences, atmospheric sciences, and ocean sciences (formerly Environmental sciences)	2,738	2,765	2,687	2,996	3,252	3,167	3,057	3,441	3,661	3,719
Atmospheric science and meteorology (formerly Atmospheric sciences)	1,051	1,080	1,088	508	514	563	561	557	583	NA
Geological and earth sciences (formerly Geological sciences)	433	433	439	183	200	262	315	302	299	NA
Ocean sciences and marine sciences (formerly Oceanography)	432	442	385	419	432	470	489	519	513	NA
Other geosciences, atmospheric sciences, and ocean sciences (formerly Other environmental sciences)	822	810	776	1,887	2,106	1,872	1,692	2,064	2,266	NA
Life sciences	15,210	15,577	16,574	18,176	18,881	20,805	19,016	19,052	18,353	18,351
Agricultural sciences	554	566	584	597	635	682	587	648	671	NA
Biological and biomedical sciences	NA	NA	NA	NA	NA	NA	9,762	9,780	9,567	NA
Biological sciences (excluding environmental biology)	7,758	8,026	8,573	9,159	9,786	10,326	NA	NA	NA	NA
Environmental biology	399	381	372	514	490	471	NA	NA	NA	NA
Health sciences (formerly Medical sciences)	5,270	5,337	5,717	6,415	6,389	7,460	6,832	6,611	6,007	NA
Natural resources and conservation	NA	NA	NA	NA	NA	NA	32	44	46	NA
Other life sciences	1,228	1,267	1,327	1,492	1,581	1,866	1,803	1,968	2,062	NA
Mathematics and statistics	NA	NA	NA	NA	NA	NA	503	608	671	650
Physical sciences	4,621	4,707	4,717	5,931	7,907	6,513	8,184	9,449	9,532	9,991
Astronomy and astrophysics (formerly Astronomy)	1,073	1,093	1,139	879	1,577	870	964	1,112	1,339	NA
Chemistry	672	688	694	739	691	754	792	1,260	1,170	NA
Materials science	NA	NA	NA	NA	NA	NA	337	355	402	NA
Physics	2,569	2,593	2,597	2,518	2,571	2,516	2,537	2,658	3,053	NA
Other physical sciences	306	333	286	1,795	3,068	2,373	3,554	4,064	3,566	NA
Psychology	1,000	990	1,027	1,147	1,366	1,612	1,934	2,288	2,513	2,503
Biological aspects	14	16	10	19	16	13	13	18	16	NA
Social aspects	14	12	13	10	11	12	17	14	13	NA
Other psychological sciences	972	962	1,004	1,118	1,339	1,587	1,904	2,256	2,484	NA
Social sciences	345	378	359	374	451	440	537	766	1,166	1,150
Anthropology	28	29	29	31	33	18	22	36	37	NA
Economics	47	51	56	53	86	39	53	58	84	NA
Political science and government (formerly Political science)	12	14	12	9	10	5	1	*	1	NA
Sociology, demography, and population studies (formerly Sociology)	27	24	23	24	37	20	43	33	48	NA
Other social sciences ^a	230	260	239	258	286	358	418	639	996	NA

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Field	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024 (preliminary)
Engineering	3,694	3,658	3,686	3,586	3,618	2,898	3,212	3,739	4,345	4,178
Aeronautical engineering	469	479	450	99	71	70	NA	NA	NA	NA
Aerospace, aeronautical, and astronautical engineering	NA	NA	NA	NA	NA	NA	270	293	265	NA
Astronautical engineering	99	99	101	8	9	15	NA	NA	NA	NA
Bioengineering and biomedical engineering	NA	NA	NA	NA	NA	NA	27	84	96	NA
Chemical engineering	60	70	76	72	75	94	121	124	123	NA
Civil engineering	54	38	27	14	12	16	70	70	73	NA
Electrical, electronics, and communications engineering (formerly Electrical engineering)	228	228	225	238	219	205	200	211	242	NA
Industrial and manufacturing engineering	NA	NA	NA	NA	NA	NA	41	45	67	NA
Mechanical engineering	126	123	124	111	103	116	114	135	137	NA
Metallurgical and materials engineering (formerly Metallurgy and materials engineering)	1,290	1,279	1,306	1,364	1,223	281	238	201	305	NA
Other engineering	1,368	1,342	1,376	1,680	1,906	2,100	2,131	2,575	3,037	NA
Other fields	NA	NA	NA	NA	NA	NA	3,558	3,752	4,753	4,625
Business management and business administration	NA	NA	NA	NA	NA	NA	34	27	129	NA
Communication and communications technologies	NA	NA	NA	NA	NA	NA	0	1	1	NA
Education research	NA	NA	NA	NA	NA	NA	360	357	411	NA
Humanities, including History	NA	NA	NA	NA	NA	NA	*	*	*	NA
Law	NA	NA	NA	NA	NA	NA	7	6	6	NA
Social work	NA	NA	NA	NA	NA	NA	0	0	0	NA
Visual and performing arts	NA	NA	NA	NA	NA	NA	0	0	0	NA
All other fields	NA	NA	NA	NA	NA	NA	3,158	3,361	4,207	NA
Other sciences nec	1,935	2,108	2,344	1,900	2,237	3,588	NA	NA	NA	NA

* = amount greater than \$0 but less than \$500,000. NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

^a As of volume 71 (FYs 2021–22), Other social sciences no longer includes Education research or Law; those categories were moved to 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. See technical table A-3 for additional notes associated with the taxonomy changes to the fields listed in this table.

Source(s):

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