Table 93. Federal obligations for basic 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	32,293	33,271	36,195	40,017	41,547	42,266	45,414	46,981	47,494	45,361
Computer and information sciences	NA	NA	NA	NA	NA	2,264	2,319	2,342	3,893	2,179
Computer sciences and mathematics	2,110	1,877	2,085	2,306	2,524	NA	NA	NA	NA	NA
Computer sciences	997	999	1,032	1,151	1,230	NA	NA	NA	NA	NA
Mathematics	1,019	824	943	1,039	504	NA	NA	NA	NA	NA
Other computer sciences and mathematics	93	55	110	116	791	NA	NA	NA	NA	NA
Geosciences, atmospheric sciences, and ocean sciences (formerly environmental sciences)	2,765	2,687	2,996	3,252	3,167	3,057	3,441	3,661	3,494	3,577
Atmospheric science and meteorology (formerly atmospheric sciences)	1,080	1,088	508	514	563	561	557	583	546	NA
Geological and earth sciences (formerly geological sciences)	433	439	183	200	262	315	302	299	292	NA
Ocean sciences and marine sciences (formerly oceanography)	442	385	419	432	470	489	519	513	464	NA
Other geosciences, atmospheric sciences, and ocean sciences (formerly other environmental sciences)	810	776	1,887	2,106	1,872	1,692	2,064	2,266	2,192	NA
Life sciences	15,577	16,574	18,176	18,881	20,805	19,016	19,052	18,353	17,606	17,348
Agricultural sciences	566	584	597	635	682	587	648	671	676	NA
Biological and biomedical sciences	NA	NA	NA	NA	NA	9,762	9,780	9,567	9,208	NA
Biological sciences (excluding environmental biology)	8,026	8,573	9,159	9,786	10,326	NA	NA	NA	NA	NA
Environmental biology	381	372	514	490	471	NA	NA	NA	NA	NA
Health sciences (formerly medical sciences)	5,337	5,717	6,415	6,389	7,460	6,832	6,611	6,007	5,652	NA
Natural resources and conservation	NA	NA	NA	NA	NA	32	44	46	16	NA
Other life sciences	1,267	1,327	1,492	1,581	1,866	1,803	1,968	2,062	2,054	NA
Mathematics and statistics	NA	NA	NA	NA	NA	503	608	671	585	606
Physical sciences	4,707	4,717	5,931	7,907	6,513	8,184	9,449	9,532	9,447	9,340
Astronomy and astrophysics (formerly astronomy)	1,093	1,139	879	1,577	870	964	1,112	1,339	1,249	NA
Chemistry	688	694	739	691	754	792	1,260	1,170	1,476	NA
Materials science	NA	NA	NA	NA	NA	337	355	402	397	NA
Physics	2,593	2,597	2,518	2,571	2,516	2,537	2,658	3,053	2,829	NA
Other physical sciences	333	286	1,795	3,068	2,373	3,554	4,064	3,566	3,496	NA
Psychology	990	1,027	1,147	1,366	1,612	1,934	2,288	2,513	2,661	2,627
Biological aspects	16	10	19	16	13	13	18	16	16	NA
Social aspects	12	13	10	11	12	17	14	13	9	NA
Other psychological sciences	962	1,004	1,118	1,339	1,587	1,904	2,256	2,484	2,636	NA
Social sciences	378	359	374	451	440	537	766	1,166	1,331	1,301
Anthropology	29	29	31	33	18	22	36	37	18	NA
Economics	51	56	53	86	39	53	58	84	60	NA
Political science and government (formerly political science)	14	12	9	10	5	1	*	1	6	NA
Sociology, demography, and population studies (formerly sociology)	24	23	24	37	20	43	33	48	31	NA
Other social sciences[a]	260	239	258	286	358	418	639	996	1,216	NA
Engineering	3,658	3,686	3,586	3,618	2,898	3,212	3,739	3,991	3,929	3,754
Aeronautical engineering	479	450	99	71	70	NA	NA	NA	NA	NA

Table 93. Federal obligations for basic 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	270	293	265	110	NA
Astronautical engineering	99	101	8	9	15	NA	NA	NA	NA	NA
Bioengineering and biomedical engineering	NA	NA	NA	NA	NA	27	84	96	64	NA
Chemical engineering	70	76	72	75	94	121	124	123	95	NA
Civil engineering	38	27	14	12	16	70	70	73	70	NA
Electrical, electronics, and communications engineering (formerly electrical engineering)	228	225	238	219	205	200	211	242	228	NA
Industrial and manufacturing engineering	NA	NA	NA	NA	NA	41	45	67	35	NA
Mechanical engineering	123	124	111	103	116	114	135	137	127	NA
Metallurgical and materials engineering (formerly metallurgy and materials engineering)	1,279	1,306	1,364	1,223	281	238	201	305	353	NA
Other engineering	1,342	1,376	1,680	1,906	2,100	2,131	2,575	2,683	2,847	NA
Other fields	NA	NA	NA	NA	NA	3,558	3,752	4,753	4,547	4,629
Business management and business administration	NA	NA	NA	NA	NA	34	27	129	46	NA
Communication and communications technologies	NA	NA	NA	NA	NA	0	1	1	1	NA
Education research	NA	NA	NA	NA	NA	360	357	411	358	NA
Humanities, including history	NA	NA	NA	NA	NA	*	*	*	25	NA
Law	NA	NA	NA	NA	NA	7	6	6	6	NA
Social work	NA	NA	NA	NA	NA	0	0	0	0	NA
Visual and performing arts	NA	NA	NA	NA	NA	0	0	0	0	NA
All other fields	NA	NA	NA	NA	NA	3,158	3,361	4,207	4,112	NA
Other sciences nec	2,108	2,344	1,900	2,237	3,588	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.