

Table 2C. Federal obligations to universities and colleges for basic research, by detailed field of science & engineering: Department of Defense, fiscal years 1973-2003

[Dollars in thousands]

Field of science & engineering	1973	1974	1975	1976	1977	1978	1979	1980
Total, all fields	NA	106,279	105,530	112,003	141,754	167,865	178,902	208,336
Life sciences, total	NA	8,018	12,176	10,842	12,728	11,601	12,855	15,543
Biol & agricultural, total	NA	4,184	4,246	3,795	5,030	7,010	8,561	9,197
Biol (excl environmental)	NA	NA	NA	NA	NA	5,487	7,533	7,951
Environmental biology	NA	NA	NA	NA	NA	1,523	1,028	1,246
Agricultural	NA	NA	NA	NA	NA	0	0	0
Medical sciences, total	NA	3,834	7,930	7,047	7,698	4,195	4,294	6,346
Clinical medical	NA	1,713	6,785	5,564	6,707	NA	NA	NA
Other medical	NA	2,121	1,145	1,483	991	NA	NA	NA
Life sciences, n.e.c.	NA	0	0	0	0	396	0	0
Psychology, total	NA	7,428	4,598	5,454	6,636	8,517	9,034	9,294
Biological aspects	NA	901	1,032	1,528	605	462	464	114
Social aspects	NA	6,091	3,489	3,832	5,428	6,666	8,570	9,180
Psychological sciences, n.e.c.	NA	436	77	94	603	1,389	0	0
Physical sciences, total	NA	20,107	20,954	21,488	25,656	29,288	31,901	37,880
Astronomy	NA	232	229	283	2,120	2,793	3,322	3,513
Chemistry	NA	5,579	6,203	6,824	9,536	10,830	12,182	15,045
Physics	NA	13,932	14,144	13,832	12,948	15,665	16,397	19,279
Physical sciences, n.e.c.	NA	364	378	549	1,052	0	0	43
Environmental sciences, total	NA	21,286	22,788	23,989	30,053	42,367	42,664	46,050
Atmospheric sciences	NA	2,174	2,456	2,128	3,730	6,098	6,448	5,902
Geological sciences	NA	1,735	2,189	1,896	3,114	5,314	4,998	5,071
Oceanography	NA	17,377	18,143	19,555	19,212	27,518	26,864	28,380
Environmental sciences, n.e.c.	NA	0	0	410	3,997	3,437	4,354	6,697
Math & computer sciences, total	NA	13,587	14,041	14,540	17,501	22,462	26,359	28,272
Mathematics	NA	NA	NA	8,913	11,656	11,872	12,947	15,279
Computer sciences	NA	NA	NA	5,627	5,815	9,553	12,618	10,781
Math & computer sciences, n.e.c.	NA	NA	NA	0	30	1,037	794	2,212
Engineering, total	NA	35,627	30,611	35,572	49,068	53,205	55,904	70,550
Aeronautical	NA	4,852	4,694	6,231	7,140	9,165	9,910	10,467
Astronautical	NA	1,860	1,832	2,266	1,425	1,700	0	0
Chemical	NA	909	860	0	648	486	0	3,393
Civil	NA	0	0	18	10	374	132	72
Electrical	NA	9,459	8,252	12,435	17,559	18,995	19,135	26,021
Mechanical	NA	3,449	2,729	3,562	7,275	8,364	9,563	10,833
Metallurgy & materials	NA	15,098	12,244	11,060	14,604	14,007	17,146	19,751
Engineering, n.e.c.	NA	0	0	0	407	114	18	13
Social sciences, total	NA	226	272	118	112	138	185	747
Anthropology	NA	0	0	0	0	0	0	0
Economics	NA	0	0	0	0	0	0	0
Political science	NA	0	0	0	0	0	0	168
Sociology	NA	226	32	118	112	138	173	27
Social sciences, n.e.c.	NA	0	240	0	0	0	12	552
History	NA	0	0	NA	NA	NA	NA	NA
Linguistics	NA	0	0	NA	NA	NA	NA	NA
Other social sciences	NA	0	240	NA	NA	NA	NA	NA
Other sciences, n.e.c.	NA	0	90	0	0	287	0	0

See explanatory information, if any, and SOURCE at end of table.

Table 2C. Federal obligations to universities and colleges for basic research, by detailed field of science & engineering: Department of Defense, fiscal years 1973-2003

[Dollars in thousands]

Field of science & engineering	1981	1982	1983	1984	1985	1986	1987	1988
Total, all fields	244,405	305,365	360,432	405,373	408,777	475,013	476,160	492,378
Life sciences, total	14,300	25,304	25,831	33,201	38,787	36,000	35,517	42,061
Biol & agricultural, total	11,489	13,501	18,345	22,615	26,840	23,036	23,288	27,220
Biol (excl environmental)	10,334	11,234	15,528	16,753	24,077	20,433	20,146	24,800
Environmental biology	1,155	2,267	2,817	5,862	2,763	2,603	3,142	2,420
Agricultural	0	0	0	0	0	0	0	0
Medical sciences, total	2,811	11,803	7,486	10,556	11,947	12,964	12,229	14,121
Clinical medical	NA	NA	NA	NA	NA	NA	NA	NA
Other medical	NA	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c.	0	0	0	30	0	0	0	720
Psychology, total	10,652	11,268	13,009	15,981	18,868	18,123	22,204	21,719
Biological aspects	53	0	0	3,617	3,738	3,976	4,658	5,441
Social aspects	10,431	11,268	13,009	12,185	14,722	13,982	17,266	3,661
Psychological sciences, n.e.c.	168	0	0	179	408	165	280	12,617
Physical sciences, total	49,892	61,460	60,801	68,940	73,363	83,914	86,026	81,535
Astronomy	4,558	4,022	3,057	3,727	4,722	5,960	6,620	4,241
Chemistry	20,725	25,939	29,102	32,053	36,673	38,563	40,881	37,149
Physics	24,415	31,337	28,465	32,382	31,786	39,310	38,506	40,115
Physical sciences, n.e.c.	194	162	177	778	182	81	19	30
Environmental sciences, total	44,842	56,725	63,790	70,480	65,681	80,511	78,577	79,472
Atmospheric sciences	5,210	8,265	10,689	13,228	12,682	20,208	16,997	18,394
Geological sciences	1,906	3,628	5,095	6,218	16,810	30,358	27,638	23,123
Oceanography	33,224	38,794	39,699	42,928	36,132	29,815	33,907	37,894
Environmental sciences, n.e.c.	4,502	6,038	8,307	8,106	57	130	35	61
Math & computer sciences, total	43,222	53,180	71,026	73,365	66,405	70,251	71,739	76,895
Mathematics	20,009	23,844	27,000	29,798	31,474	34,708	32,160	31,829
Computer sciences	18,059	25,279	33,252	27,819	23,706	24,157	24,705	27,219
Math & computer sciences, n.e.c.	5,154	4,057	10,774	15,748	11,225	11,386	14,874	17,847
Engineering, total	81,241	97,418	115,781	133,406	134,345	176,365	172,609	188,528
Aeronautical	10,673	13,278	14,390	16,899	14,566	22,763	24,815	19,320
Astronautical	0	2,099	5,991	2,434	2,109	4,431	4,616	3,591
Chemical	2,424	1,469	255	1,215	1,285	1,556	2,065	1,529
Civil	751	966	1,433	2,081	1,985	5,826	6,202	7,525
Electrical	28,399	34,740	34,965	50,312	51,618	55,447	59,194	55,094
Mechanical	13,785	14,278	23,150	23,170	25,909	26,949	24,925	21,584
Metallurgy & materials	25,205	30,528	35,217	37,170	36,840	58,969	50,770	71,427
Engineering, n.e.c.	4	60	380	125	33	424	22	8,458
Social sciences, total	256	10	0	0	0	0	0	0
Anthropology	0	0	0	0	0	0	0	0
Economics	0	0	0	0	0	0	0	0
Political science	236	0	0	0	0	0	0	0
Sociology	20	0	0	0	0	0	0	0
Social sciences, n.e.c.	0	10	0	0	0	0	0	0
History	NA	NA	NA	NA	NA	NA	NA	NA
Linguistics	NA	NA	NA	NA	NA	NA	NA	NA
Other social sciences	NA	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c.	0	0	10,194	10,000	11,328	9,849	9,488	2,168

See explanatory information, if any, and SOURCE at end of table.

Table 2C. Federal obligations to universities and colleges for basic research, by detailed field of science & engineering: Department of Defense, fiscal years 1973-2003

[Dollars in thousands]

Field of science & engineering	1989	1990	1991	1992	1993	1994	1995	1996
Total, all fields	511,857	523,586	545,946	598,972	763,675	728,482	708,444	678,537
Life sciences, total	39,953	39,944	48,413	72,581	84,759	90,969	51,755	56,377
Biol & agricultural, total	28,447	28,246	36,480	57,196	49,684	54,032	41,686	42,967
Biol (excl environmental)	26,033	21,630	27,889	31,272	32,579	29,287	26,901	29,351
Environmental biology	2,414	6,616	8,591	25,924	16,935	24,745	14,785	13,616
Agricultural	0	0	0	0	170	0	0	0
Medical sciences, total	11,506	11,200	11,933	15,385	31,013	36,937	9,755	11,130
Clinical medical	NA	NA	NA	NA	NA	NA	NA	NA
Other medical	NA	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c.	0	498	0	0	4,062	0	314	2,280
Psychology, total	20,972	23,387	17,854	17,008	18,667	14,479	16,341	17,999
Biological aspects	7,239	6,033	4,962	6,082	8,309	6,052	8,221	14,043
Social aspects	3,351	8,778	9,219	9,262	8,658	6,855	5,379	1,658
Psychological sciences, n.e.c.	10,382	8,576	3,673	1,664	1,700	1,572	2,741	2,298
Physical sciences, total	85,861	81,591	80,650	95,288	110,347	112,272	121,756	100,327
Astronomy	3,997	2,261	0	506	6,238	7,050	4,949	1,806
Chemistry	38,515	37,511	38,914	48,295	49,986	52,846	60,598	52,706
Physics	43,337	41,804	39,380	45,286	54,094	52,280	56,203	39,921
Physical sciences, n.e.c.	12	15	2,356	1,201	29	96	6	5,894
Environmental sciences, total	91,018	84,365	100,921	98,737	105,682	129,577	87,039	89,780
Atmospheric sciences	15,388	9,763	13,054	15,199	12,195	18,216	18,615	20,328
Geological sciences	29,150	29,917	32,438	26,298	35,992	56,508	24,412	16,091
Oceanography	46,480	44,021	55,389	55,290	56,349	54,393	41,629	43,950
Environmental sciences, n.e.c.	0	664	40	1,950	1,146	460	2,383	9,411
Math & computer sciences, total	77,475	89,205	90,045	97,884	117,006	111,238	114,740	95,132
Mathematics	30,987	35,706	25,482	38,805	38,374	43,165	30,940	32,697
Computer sciences	32,086	53,317	47,173	57,936	78,350	67,025	81,856	58,504
Math & computer sciences, n.e.c.	14,402	182	17,390	1,143	282	1,048	1,944	3,931
Engineering, total	196,349	204,849	207,199	210,862	272,102	268,817	310,967	318,636
Aeronautical	19,792	26,602	13,092	18,839	12,966	24,513	15,884	19,484
Astronautical	3,577	926	4,753	6,636	2,372	3,242	3,207	5,472
Chemical	656	84	17	1,824	5,476	3,540	4,960	7,546
Civil	8,544	7,537	12,248	4,625	4,046	3,230	3,460	3,170
Electrical	55,984	55,691	49,775	61,857	97,864	98,433	99,449	99,258
Mechanical	27,409	24,714	32,358	39,299	56,809	61,559	57,200	55,556
Metallurgy & materials	78,357	87,115	92,468	72,654	76,353	67,624	102,412	95,449
Engineering, n.e.c.	2,030	2,180	2,488	5,128	16,216	6,676	24,395	32,701
Social sciences, total	0	0	823	3,205	17,066	861	0	0
Anthropology	0	0	0	0	0	0	0	0
Economics	0	0	0	0	0	0	0	0
Political science	0	0	0	0	0	0	0	0
Sociology	0	0	0	0	0	0	0	0
Social sciences, n.e.c.	0	0	823	3,205	17,066	861	0	0
History	NA	NA	NA	NA	NA	NA	NA	NA
Linguistics	NA	NA	NA	NA	NA	NA	NA	NA
Other social sciences	NA	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c.	229	245	41	3,407	38,046	269	5,846	286

See explanatory information, if any, and SOURCE at end of table.

Table 2C. Federal obligations to universities and colleges for basic research, by detailed field of science & engineering: Department of Defense, fiscal years 1973-2003

[Dollars in thousands]

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Field of science & engineering	1997	1998	1999	2000	2001	Preliminary	
						2002	2003
Total, all fields	558,027	546,040	560,067	653,311	1,121,671	967,037	813,911
Life sciences, total	43,091	51,746	75,009	125,344	422,038	322,209	143,923
Biol & agricultural, total	30,392	29,687	35,965	35,553	56,073	NA	NA
Biol (excl environmental)	25,308	24,760	27,958	24,478	47,985	NA	NA
Environmental biology	5,084	4,927	8,007	11,075	8,076	NA	NA
Agricultural	0	0	0	0	12	NA	NA
Medical sciences, total	12,699	22,035	27,494	67,883	345,908	NA	NA
Clinical medical	NA	NA	NA	NA	NA	NA	NA
Other medical	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c.	0	24	11,550	21,908	20,057	NA	NA
Psychology, total	17,205	13,831	3,216	14,450	9,822	11,110	8,960
Biological aspects	14,388	11,531	2,292	4,919	9,724	NA	NA
Social aspects	1,779	1,357	0	7,777	0	NA	NA
Psychological sciences, n.e.c.	1,038	943	924	1,754	98	NA	NA
Physical sciences, total	86,499	89,702	84,994	92,697	124,101	123,152	130,136
Astronomy	153	6,270	2,117	0	0	NA	NA
Chemistry	30,289	33,816	34,796	40,876	46,646	NA	NA
Physics	50,307	44,419	43,031	42,810	66,577	NA	NA
Physical sciences, n.e.c.	5,750	5,197	5,050	9,011	10,878	NA	NA
Environmental sciences, total	70,900	62,532	71,609	72,510	87,710	79,968	81,732
Atmospheric sciences	14,491	13,990	7,340	8,634	9,842	NA	NA
Geological sciences	6,175	4,953	2,431	2,756	7,244	NA	NA
Oceanography	41,539	36,249	61,612	59,751	70,624	NA	NA
Environmental sciences, n.e.c.	8,695	7,340	226	1,369	0	NA	NA
Math & computer sciences, total	86,903	78,900	70,388	74,903	117,041	124,011	122,553
Mathematics	18,470	18,651	13,151	23,324	16,877	NA	NA
Computer sciences	52,936	44,227	37,267	46,299	57,813	NA	NA
Math & computer sciences, n.e.c.	15,497	16,022	19,970	5,280	42,351	NA	NA
Engineering, total	251,653	249,329	248,818	265,964	357,609	302,281	321,571
Aeronautical	8,785	15,563	14,693	14,134	7,948	NA	NA
Astronautical	3,505	1,889	114	11,137	2,309	NA	NA
Chemical	5,581	8,960	10,014	7,271	5,857	NA	NA
Civil	2,547	2,557	1,096	4,023	572	NA	NA
Electrical	74,192	96,658	94,897	86,411	130,144	NA	NA
Mechanical	46,328	42,956	46,459	42,237	69,640	NA	NA
Metallurgy & materials	66,104	70,236	66,882	76,661	90,714	NA	NA
Engineering, n.e.c.	44,611	10,510	14,663	24,090	50,425	NA	NA
Social sciences, total	0	0	0	415	6	706	1,036
Anthropology	0	0	0	0	0	NA	NA
Economics	0	0	0	0	0	NA	NA
Political science	0	0	0	0	0	NA	NA
Sociology	0	0	0	415	0	NA	NA
Social sciences, n.e.c.	0	0	0	0	6	NA	NA
History	NA	NA	NA	NA	NA	NA	NA
Linguistics	NA	NA	NA	NA	NA	NA	NA
Other social sciences	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c.	1,776	0	6,033	7,028	3,344	3,600	4,000

KEY: NA = Not applicable (indicates that the data collected for this table were not recorded at that level in that particular fiscal year, or that the agency or subagency did not exist as such or in that organization in that year)
n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Federal Funds for Research and Development: Fiscal Years 2001, 2002, and 2003