

Expenditures for academic R&D, by field: Selected years, 1975–2001

Field	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	Millions of current dollars														
All fields	3,409	6,063	9,687	16,286	17,585	18,818	19,951	21,023	22,165	23,040	24,363	25,848	27,505	30,042	32,723
Sciences.....	3,028	5,201	8,269	13,630	14,679	15,756	16,795	17,668	18,650	19,333	20,524	21,779	23,245	25,495	27,723
Physical sciences	350	677	1,148	1,807	1,939	2,055	2,130	2,177	2,255	2,257	2,370	2,482	2,604	2,708	2,800
Astronomy.....	27	59	96	170	211	238	259	267	304	276	287	302	384	385	378
Chemistry	121	244	422	648	671	705	740	759	771	801	820	876	918	960	1,007
Physics	174	323	551	842	881	921	940	957	989	987	1,058	1,078	1,149	1,206	1,237
Other.....	29	52	80	147	176	191	191	193	191	193	204	226	152	158	179
Mathematics	40	78	128	222	230	248	272	282	279	288	289	310	313	341	357
Computer sciences.....	46	124	281	515	554	555	608	646	682	690	709	746	861	875	954
Earth, atmospheric, and ocean sciences....	255	508	705	1,069	1,119	1,242	1,319	1,396	1,433	1,488	1,532	1,624	1,691	1,763	1,827
Atmospheric sciences	NA	76	108	173	175	194	210	203	208	224	245	269	288	287	300
Earth sciences.....	NA	188	254	355	384	413	417	455	456	445	449	513	545	562	553
Ocean sciences.....	NA	176	258	377	389	427	458	455	473	533	537	546	604	633	674
Other.....	255	68	86	164	171	207	234	283	295	285	301	296	254	281	299
Life sciences	1,901	3,218	5,279	8,725	9,472	10,196	10,851	11,466	12,186	12,713	13,588	14,593	15,610	17,460	19,189
Agricultural sciences	384	676	999	1,349	1,458	1,512	1,558	1,661	1,814	1,910	1,966	1,995	2,035	2,175	2,318
Biological sciences.....	630	1,028	1,781	2,859	3,064	3,304	3,536	3,709	3,834	3,909	4,180	4,581	5,029	5,613	5,944
Medical sciences.....	811	1,423	2,318	4,154	4,546	4,964	5,324	5,639	6,070	6,391	6,908	7,472	7,994	8,986	10,177
Other.....	75	91	181	363	404	417	433	457	468	503	534	545	552	686	751
Psychology	80	110	158	253	283	329	350	358	370	381	396	444	464	516	582
Social sciences	256	339	383	703	750	815	896	954	1,019	1,096	1,125	1,131	1,251	1,297	1,436
Economics	56	91	118	201	209	222	231	243	250	271	261	261	266	255	271
Political science	29	54	59	115	125	142	151	161	173	180	175	176	200	230	252
Sociology	69	87	75	132	156	163	183	196	215	231	257	253	271	301	327
Other.....	102	107	131	255	260	288	331	354	380	415	432	442	513	512	585
Other sciences	100	146	186	336	332	315	369	389	426	418	514	448	451	534	579
Engineering	381	862	1,418	2,656	2,907	3,062	3,156	3,355	3,515	3,707	3,839	4,069	4,260	4,547	5,000
Aeronautical/astronautical	NA	53	81	164	180	197	213	217	241	233	247	250	260	256	339
Bioengineering/biomedical	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	77	102	137	172	211
Chemical.....	NA	61	116	218	244	261	274	279	297	317	317	327	349	375	414
Civil.....	NA	83	153	284	315	340	371	403	431	455	472	495	529	600	667
Electrical/electronic.....	NA	183	337	663	679	704	698	745	819	888	942	1,042	1,017	1,116	1,160
Mechanical.....	NA	140	208	391	421	451	483	502	521	519	518	568	625	632	685
Materials.....	NA	NA	NA	274	304	294	299	310	330	349	389	391	384	399	451
Other.....	381	341	523	663	764	817	818	899	877	946	878	894	959	997	1,073
	Millions of constant 1996 dollars														
All fields	8,815	10,828	13,182	18,926	19,671	20,512	21,240	21,908	22,608	23,040	23,897	25,000	26,235	28,114	29,892
Sciences.....	7,830	9,289	11,252	15,839	16,419	17,174	17,880	18,412	19,023	19,333	20,132	21,065	22,171	23,859	25,325
Physical sciences	906	1,210	1,563	2,100	2,169	2,240	2,268	2,269	2,300	2,257	2,325	2,401	2,484	2,534	2,558
Astronomy.....	69	105	131	198	236	259	275	278	310	276	282	292	367	361	345
Chemistry	312	436	574	753	750	768	788	791	787	801	805	847	876	898	920
Physics	449	576	750	978	986	1,004	1,001	997	1,009	987	1,038	1,043	1,096	1,128	1,130
Other.....	76	93	109	171	196	209	203	201	195	193	200	218	145	147	163

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	Millions of constant 1996 dollars														
Mathematics	103	140	174	258	257	270	290	294	284	288	284	300	299	319	326
Computer sciences.....	118	222	382	598	620	605	647	673	696	690	696	722	821	819	871
Earth, atmospheric, and ocean sciences.....	660	907	960	1,242	1,252	1,354	1,404	1,455	1,462	1,488	1,503	1,570	1,613	1,650	1,669
Atmospheric sciences	NA	135	147	201	195	212	224	212	212	224	241	260	275	269	274
Earth sciences.....	NA	336	345	412	430	450	444	474	465	445	440	496	520	526	505
Ocean sciences.....	NA	314	350	438	436	466	488	474	483	533	526	528	576	592	616
Other.....	660	122	117	191	191	226	249	295	301	285	295	286	242	263	274
Life sciences	4,916	5,747	7,184	10,140	10,595	11,114	11,553	11,949	12,429	12,713	13,328	14,114	14,889	16,340	17,529
Agricultural sciences.....	993	1,207	1,360	1,567	1,631	1,648	1,659	1,731	1,851	1,910	1,928	1,930	1,941	2,036	2,118
Biological sciences.....	1,630	1,836	2,424	3,323	3,427	3,602	3,765	3,865	3,910	3,909	4,100	4,431	4,797	5,253	5,429
Medical sciences.....	2,098	2,541	3,154	4,828	5,086	5,411	5,668	5,876	6,191	6,391	6,776	7,227	7,625	8,409	9,296
Other.....	195	163	246	422	451	454	461	477	477	503	524	527	526	642	686
Psychology.....	208	196	215	294	317	358	372	373	378	381	388	430	443	483	532
Social sciences	662	606	522	817	839	889	954	994	1,039	1,096	1,104	1,094	1,194	1,214	1,311
Economics	145	162	161	233	234	242	246	253	255	271	256	253	254	238	247
Political science	76	97	81	134	140	155	161	167	176	180	172	170	191	215	230
Sociology	178	156	102	153	174	178	195	204	219	231	252	244	259	281	299
Other.....	264	191	178	297	291	314	352	369	388	415	423	427	490	479	535
Other sciences	258	261	254	390	371	344	392	405	435	418	504	434	430	500	529
Engineering	985	1,539	1,929	3,087	3,251	3,338	3,360	3,496	3,585	3,707	3,765	3,935	4,063	4,255	4,567
Aeronautical/astronautical	NA	95	110	190	202	214	226	227	246	233	242	241	248	240	309
Bioengineering/biomedical	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	75	99	130	161	193
Chemical.....	NA	109	158	254	273	284	291	290	303	317	311	316	333	351	378
Civil.....	NA	149	208	330	352	370	395	420	439	455	463	479	505	561	609
Electrical/electronic.....	NA	327	459	770	760	767	743	776	835	888	924	1,008	970	1,044	1,060
Mechanical.....	NA	251	283	454	471	491	514	523	531	519	508	549	596	591	626
Materials.....	NA	NA	NA	318	340	320	318	323	336	349	381	379	366	373	412
Other.....	985	610	711	771	854	891	871	937	895	946	861	865	915	933	980
	Percent distribution														
All fields	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sciences.....	88.8	85.8	85.4	83.7	83.5	83.7	84.2	84.0	84.1	83.9	84.2	84.3	84.5	84.9	84.7
Physical sciences	10.3	11.2	11.9	11.1	11.0	10.9	10.7	10.4	10.2	9.8	9.7	9.6	9.5	9.0	8.6
Astronomy.....	0.8	1.0	1.0	1.0	1.2	1.3	1.3	1.3	1.4	1.2	1.2	1.2	1.4	1.3	1.2
Chemistry	3.5	4.0	4.4	4.0	3.8	3.7	3.7	3.6	3.5	3.5	3.4	3.4	3.3	3.2	3.1
Physics.....	5.1	5.3	5.7	5.2	5.0	4.9	4.7	4.6	4.5	4.3	4.3	4.2	4.2	4.0	3.8
Other.....	0.9	0.9	0.8	0.9	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.9	0.6	0.5	0.5
Mathematics	1.2	1.3	1.3	1.4	1.3	1.3	1.4	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.1
Computer sciences.....	1.3	2.0	2.9	3.2	3.2	3.0	3.0	3.1	3.1	3.0	2.9	2.9	3.1	2.9	2.9
Earth, atmospheric, and ocean sciences..	7.5	8.4	7.3	6.6	6.4	6.6	6.6	6.6	6.5	6.5	6.3	6.3	6.1	5.9	5.6
Atmospheric sciences	NA	1.3	1.1	1.1	1.0	1.0	1.1	1.0	0.9	1.0	1.0	1.0	1.0	1.0	0.9
Earth sciences.....	NA	3.1	2.6	2.2	2.2	2.2	2.1	2.2	2.1	1.9	1.8	2.0	2.0	1.9	1.7
Ocean sciences.....	NA	2.9	2.7	2.3	2.2	2.3	2.3	2.2	2.1	2.3	2.2	2.1	2.2	2.1	2.1
Other.....	7.5	1.1	0.9	1.0	1.0	1.1	1.2	1.3	1.3	1.2	1.2	1.1	0.9	0.9	0.9

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Field	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	Percent distribution														
Life sciences	55.8	53.1	54.5	53.6	53.9	54.2	54.4	54.5	55.0	55.2	55.8	56.5	56.8	58.1	58.6
Agricultural sciences	11.3	11.1	10.3	8.3	8.3	8.0	7.8	7.9	8.2	8.3	8.1	7.7	7.4	7.2	7.1
Biological sciences.....	18.5	17.0	18.4	17.6	17.4	17.6	17.7	17.6	17.3	17.0	17.2	17.7	18.3	18.7	18.2
Medical sciences.....	23.8	23.5	23.9	25.5	25.9	26.4	26.7	26.8	27.4	27.7	28.4	28.9	29.1	29.9	31.1
Other.....	2.2	1.5	1.9	2.2	2.3	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.0	2.3	2.3
Psychology.....	2.4	1.8	1.6	1.6	1.6	1.7	1.8	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.8
Social sciences	7.5	5.6	4.0	4.3	4.3	4.3	4.5	4.5	4.6	4.8	4.6	4.4	4.5	4.3	4.4
Economics	1.6	1.5	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.1	1.0	1.0	0.8	0.8
Political science	0.9	0.9	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.8
Sociology	2.0	1.4	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.0	1.0	1.0	1.0
Other.....	3.0	1.8	1.4	1.6	1.5	1.5	1.7	1.7	1.7	1.8	1.8	1.7	1.9	1.7	1.8
Other sciences	2.9	2.4	1.9	2.1	1.9	1.7	1.8	1.9	1.9	1.8	2.1	1.7	1.6	1.8	1.8
Engineering	11.2	14.2	14.6	16.3	16.5	16.3	15.8	16.0	15.9	16.1	15.8	15.7	15.5	15.1	15.3
Aeronautical/astronautical.....	NA	0.9	0.8	1.0	1.0	1.0	1.1	1.0	1.1	1.0	1.0	1.0	0.9	0.9	1.0
Bioengineering/biomedical	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	0.4	0.5	0.6	0.6
Chemical.....	NA	1.0	1.2	1.3	1.4	1.4	1.4	1.3	1.3	1.4	1.3	1.3	1.3	1.2	1.3
Civil.....	NA	1.4	1.6	1.7	1.8	1.8	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0
Electrical/electronic	NA	3.0	3.5	4.1	3.9	3.7	3.5	3.5	3.7	3.9	3.9	4.0	3.7	3.7	3.5
Mechanical.....	NA	2.3	2.1	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.1	2.2	2.3	2.1	2.1
Materials.....	NA	NA	NA	1.7	1.7	1.6	1.5	1.5	1.5	1.5	1.6	1.5	1.4	1.3	1.4
Other.....	11.2	5.6	5.4	4.1	4.3	4.3	4.1	4.3	4.0	4.1	3.6	3.5	3.5	3.3	3.3

NA not available

NOTES: Details may not add to totals because of rounding. See appendix table 4-1 for gross domestic product implicit price deflators used to convert current dollars to constant 1996 dollars.

SOURCES: National Science Foundation, Division of Science Resources Statistics (NSF/SRS), *Academic Research and Development Expenditures: Fiscal Year 2001*, NSF 03-316 (Arlington, VA, 2003); and NSF/SRS, WebCASPAR database system, <http://caspar.nsf.gov>.