



APPENDIX TABLE 4-25

Federal obligations for research, by detailed S&E field: Selected years, FYs 1990–2015

(Millions of current and of constant 2009 dollars and percent share by field)

S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990–2000	2000–10	2010–15
Current \$millions									Percent		
Total, all fields	21,622.4	28,434.4	38,470.6	53,738.2	63,728.0	61,945.2	62,908.8	63,645.3	5.9	5.2	-0.0
Computer sciences and mathematics	840.7	1,579.1	2,205.6	2,983.4	3,411.8	3,527.5	3,883.2	3,862.7	10.1	4.5	2.5
Computer sciences	562.1	1,013.9	1,659.6	2,157.1	2,362.0	2,392.2	2,612.8	2,645.6	-	-	-
Mathematics	241.3	258.6	432.9	686.6	835.5	925.3	979.3	1,005.9	-	-	-
Other computer sciences and mathematics	37.3	306.6	113.1	139.7	214.4	210.1	291.0	211.2	-	-	-
Environmental sciences	2,174.1	2,854.4	3,328.8	3,502.6	3,338.9	3,884.3	4,365.8	4,413.7	4.4	0.0	5.7
Atmospheric sciences	773.4	1,135.6	1,104.3	1,185.1	953.8	1,469.2	1,567.5	1,567.9	-	-	-
Geological sciences	661.1	848.3	639.2	673.5	530.4	725.7	561.0	643.3	-	-	-
Oceanography	520.1	407.3	673.0	771.5	743.7	813.5	848.0	726.0	-	-	-
Other environmental sciences	219.5	463.3	912.2	872.5	1,111.0	875.8	1,389.3	1,476.5	-	-	-
Life sciences	8,829.8	11,811.0	17,964.7	28,127.8	33,909.1	30,965.0	30,668.2	30,473.0	7.4	6.6	-2.1
Biological and agricultural	5,178.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Agricultural sciences	691.4	670.3	895.0	1,094.2	1,131.9	942.7	1,004.2	1,320.3	-	-	-
Biological sciences (excluding environmental biology)	4,144.6	4,925.4	10,740.0	13,351.6	17,213.9	15,458.3	15,310.6	14,839.7	-	-	-



S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990-2000	2000-10	2010-15
Environmental biology	342.3	806.9	740.0	699.0	816.4	796.7	820.6	819.1	-	-	-
Medical sciences	3,382.4	4,972.2	4,463.8	10,862.1	11,677.0	11,037.4	11,002.7	10,934.7	-	-	-
Clinical medical	na	na	na	na	na	na	na	na	-	-	-
Other medical	na	na	na	na	na	na	na	na	-	-	-
Other life sciences	269.1	436.3	1,125.9	2,120.9	3,070.0	2,729.9	2,530.0	2,559.2	-	-	-
Physical sciences	3,808.7	4,278.3	4,788.0	5,493.7	5,870.8	6,407.5	6,483.1	6,510.3	2.3	2.1	2.1
Astronomy	597.2	764.5	880.3	884.9	559.9	1,099.4	1,191.6	1,230.2	-	-	-
Chemistry	761.7	863.5	1,225.6	1,197.5	1,310.6	1,103.0	1,012.7	967.7	-	-	-
Physics	2,254.9	2,451.2	2,405.4	3,041.3	3,470.1	3,708.3	3,565.2	3,040.2	-	-	-
Other physical sciences	195.0	199.2	276.7	370.0	530.2	496.7	713.6	1,272.2	-	-	-
Psychology	448.6	622.6	1,626.7	1,891.8	2,155.6	2,086.6	1,968.0	1,994.9	13.7	2.9	-1.5
Biological aspects	130.6	58.8	8.2	2.3	13.6	14.2	15.0	19.1	-	-	-
Social aspects	177.5	156.3	56.0	46.6	74.5	61.7	59.5	58.5	-	-	-
Other psychological sciences	140.5	407.5	1,562.5	1,842.8	2,067.4	2,010.8	1,893.5	1,917.2	-	-	-
Social sciences	630.0	678.7	1,050.4	1,097.1	1,197.3	1,124.5	1,435.1	1,136.3	5.2	1.3	-1.0
Anthropology	14.4	21.7	15.9	18.0	24.7	30.2	26.5	29.9	-	-	-
Economics	197.2	206.5	249.5	215.9	274.0	343.5	344.3	336.8	-	-	-
Political science	13.1	22.3	22.6	32.7	14.2	12.9	13.4	16.0	-	-	-



S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990-2000	2000-10	2010-15
Sociology	116.2	47.8	90.6	70.2	132.3	154.7	157.7	128.2	-	-	-
Other social sciences	289.1	380.3	671.8	760.4	752.0	583.2	893.2	625.3	-	-	-
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 nec	663.7	901.8	1,160.2	2,088.9	2,763.2	2,546.3	2,217.9	3,298.8	5.7	9.1	3.6
Engineering	4,226.6	5,708.4	6,346.4	8,552.9	11,081.2	11,403.4	11,887.5	11,955.6	4.1	5.7	1.5
Aeronautical engineering	927.1	1,248.3	1,463.9	1,276.3	830.1	1,814.9	1,833.0	1,825.1	-	-	-
Astronautical engineering	580.8	546.5	515.0	494.1	389.9	690.2	668.7	660.6	-	-	-
Chemical engineering	241.9	246.1	196.5	283.8	509.7	349.6	535.4	374.6	-	-	-
Civil engineering	317.7	339.4	239.2	279.2	699.8	513.6	445.1	457.6	-	-	-
Electrical engineering	640.0	756.3	744.8	1,033.5	1,360.9	1,324.6	1,240.2	883.3	-	-	-
Mechanical engineering	268.3	412.5	289.3	323.7	363.6	372.2	502.7	309.6	-	-	-
Metallurgy and materials engineering	554.5	815.3	918.1	1,184.1	1,758.8	1,699.2	1,768.7	1,756.9	-	-	-
Other engineering	696.3	1,344.0	1,979.6	3,678.3	5,168.4	4,639.1	4,893.6	5,688.0	-	-	-
Constant 2009 \$millions									Percent		
Total, all fields	32,622.8	37,857.0	47,220.6	58,852.5	63,172.1	59,102.4	58,017.9	57,912.0	3.8	3.0	-1.7
Computer sciences and mathematics	1,268.5	2,102.4	2,707.3	3,267.3	3,382.0	3,365.6	3,581.3	3,514.7	7.9	2.3	0.8



S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990-2000	2000-10	2010-15
Computer sciences	848.1	1,349.9	2,037.1	2,362.4	2,341.4	2,282.4	2,409.7	2,407.3	-	-	-
Mathematics	364.1	344.3	531.4	751.9	828.2	882.8	903.2	915.3	-	-	-
Other computer sciences and mathematics	56.2	408.2	138.8	153.0	212.5	200.5	268.4	192.2	-	-	-
Environmental sciences	3,280.2	3,800.3	4,085.9	3,835.9	3,309.8	3,706.0	4,026.4	4,016.1	2.2	-2.1	3.9
Atmospheric sciences	1,166.9	1,511.9	1,355.5	1,297.9	945.5	1,401.8	1,445.6	1,426.7	-	-	-
Geological sciences	997.5	1,129.4	784.6	737.6	525.8	692.4	517.4	585.4	-	-	-
Oceanography	784.7	542.3	826.1	844.9	737.2	776.2	782.1	660.6	-	-	-
Other environmental sciences	331.1	616.8	1,119.7	955.5	1,101.3	835.6	1,281.3	1,343.5	-	-	-
Life sciences	13,322.0	15,724.9	22,050.7	30,804.7	33,613.3	29,543.9	28,283.9	27,727.9	5.2	4.3	-3.8
Biological and agricultural	7,812.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Agricultural sciences	1,043.2	892.4	1,098.6	1,198.3	1,122.0	899.4	926.1	1,201.4	-	-	-
Biological sciences (excluding environmental biology)	6,253.2	6,557.6	13,182.8	14,622.3	17,063.7	14,748.9	14,120.3	13,502.9	-	-	-
Environmental biology	516.5	1,074.3	908.3	765.5	809.3	760.1	756.8	745.3	-	-	-
Medical sciences	5,103.1	6,619.9	5,479.1	11,895.8	11,575.1	10,530.9	10,147.3	9,949.7	-	-	-
Clinical medical	na	na	na	na	na	na	na	na	-	-	-
Other medical	na	na	na	na	na	na	na	na	-	-	-
Other life sciences	406.0	580.9	1,382.0	2,322.7	3,043.2	2,604.6	2,333.3	2,328.7	-	-	-
Physical sciences	5,746.4	5,696.0	5,877.0	6,016.5	5,819.6	6,113.4	5,979.1	5,923.8	0.2	-0.1	0.4



S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990-2000	2000-10	2010-15
Astronomy	901.0	1,017.8	1,080.5	969.1	555.0	1,048.9	1,099.0	1,119.4	-	-	-
Chemistry	1,149.2	1,149.6	1,504.4	1,311.5	1,299.2	1,052.4	934.0	880.5	-	-	-
Physics	3,402.1	3,263.5	2,952.5	3,330.7	3,439.8	3,538.1	3,288.0	2,766.3	-	-	-
Other physical sciences	294.1	265.2	339.6	405.2	525.6	473.9	658.1	1,157.6	-	-	-
Psychology	676.8	828.9	1,996.7	2,071.8	2,136.8	1,990.8	1,815.0	1,815.2	11.4	0.7	-3.2
Biological aspects	197.1	78.3	10.1	2.5	13.5	13.5	13.8	17.4	-	-	-
Social aspects	267.7	208.1	68.7	51.0	73.9	58.9	54.9	53.2	-	-	-
Other psychological sciences	212.0	542.5	1,917.9	2,018.2	2,049.4	1,918.5	1,746.3	1,744.5	-	-	-
Social sciences	950.5	903.6	1,289.3	1,201.5	1,186.9	1,072.9	1,323.5	1,033.9	3.1	-0.8	-2.7
Anthropology	21.7	28.9	19.5	19.7	24.5	28.8	24.4	27.2	-	-	-
Economics	297.5	274.9	306.2	236.4	271.6	327.7	317.5	306.5	-	-	-
Political science	19.8	29.7	27.7	35.8	14.1	12.3	12.4	14.6	-	-	-
Sociology	175.3	63.6	111.2	76.9	131.1	147.6	145.4	116.7	-	-	-
Other social sciences	436.2	506.3	824.6	832.8	745.4	556.4	823.8	569.0	-	-	-
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 nec	1,001.4	1,200.6	1,424.1	2,287.7	2,739.1	2,429.4	2,045.5	3,001.6	3.6	6.8	1.8



S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990-2000	2000-10	2010-15
Engineering	6,376.9	7,600.1	7,789.9	9,366.9	10,984.5	10,880.1	10,963.3	10,878.6	2.0	3.5	-0.2
Aeronautical engineering	1,398.8	1,662.0	1,796.9	1,397.8	822.9	1,731.6	1,690.5	1,660.7	-	-	-
Astronautical engineering	876.3	727.6	632.1	541.1	386.5	658.5	616.7	601.1	-	-	-
Chemical engineering	364.9	327.7	241.2	310.8	505.3	333.6	493.8	340.9	-	-	-
Civil engineering	479.3	451.9	293.6	305.8	693.7	490.0	410.5	416.4	-	-	-
Electrical engineering	965.7	1,006.9	914.2	1,131.9	1,349.0	1,263.8	1,143.8	803.7	-	-	-
Mechanical engineering	404.8	549.2	355.1	354.5	360.4	355.1	463.6	281.7	-	-	-
Metallurgy and materials engineering	836.6	1,085.5	1,126.9	1,296.8	1,743.5	1,621.2	1,631.2	1,598.6	-	-	-
Other engineering	1,050.6	1,789.4	2,429.9	4,028.4	5,123.3	4,426.2	4,513.1	5,175.6	-	-	-
Share by field (%)									Percent		
Total, all fields	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-
Computer sciences and mathematics	3.9	5.6	5.7	5.6	5.4	5.7	6.2	6.1	-	-	-
Computer sciences	2.6	3.6	4.3	4.0	3.7	3.9	4.2	4.2	-	-	-
Mathematics	1.1	0.9	1.1	1.3	1.3	1.5	1.6	1.6	-	-	-
Other computer sciences and mathematics	0.2	1.1	0.3	0.3	0.3	0.3	0.5	0.3	-	-	-
Environmental sciences	10.1	10.0	8.7	6.5	5.2	6.3	6.9	6.9	-	-	-
Atmospheric sciences	3.6	4.0	2.9	2.2	1.5	2.4	2.5	2.5	-	-	-
Geological sciences	3.1	3.0	1.7	1.3	0.8	1.2	0.9	1.0	-	-	-



S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990-2000	2000-10	2010-15
Oceanography	2.4	1.4	1.7	1.4	1.2	1.3	1.3	1.1	-	-	-
Other environmental sciences	1.0	1.6	2.4	1.6	1.7	1.4	2.2	2.3	-	-	-
Life sciences	40.8	41.5	46.7	52.3	53.2	50.0	48.8	47.9	-	-	-
Biological and agricultural	23.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Agricultural sciences	3.2	2.4	2.3	2.0	1.8	1.5	1.6	2.1	-	-	-
Biological sciences (excluding environmental biology)	19.2	17.3	27.9	24.8	27.0	25.0	24.3	23.3	-	-	-
Environmental biology	1.6	2.8	1.9	1.3	1.3	1.3	1.3	1.3	-	-	-
Medical sciences	15.6	17.5	11.6	20.2	18.3	17.8	17.5	17.2	-	-	-
Clinical medical	na	na	na	na	na	na	na	na	-	-	-
Other medical	na	na	na	na	na	na	na	na	-	-	-
Other life sciences	1.2	1.5	2.9	3.9	4.8	4.4	4.0	4.0	-	-	-
Physical sciences	17.6	15.0	12.4	10.2	9.2	10.3	10.3	10.2	-	-	-
Astronomy	2.8	2.7	2.3	1.6	0.9	1.8	1.9	1.9	-	-	-
Chemistry	3.5	3.0	3.2	2.2	2.1	1.8	1.6	1.5	-	-	-
Physics	10.4	8.6	6.3	5.7	5.4	6.0	5.7	4.8	-	-	-
Other physical sciences	0.9	0.7	0.7	0.7	0.8	0.8	1.1	2.0	-	-	-
Psychology	2.1	2.2	4.2	3.5	3.4	3.4	3.1	3.1	-	-	-
Biological aspects	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-



S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990-2000	2000-10	2010-15
Social aspects	0.8	0.5	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-
Other psychological sciences	0.6	1.4	4.1	3.4	3.2	3.2	3.0	3.0	-	-	-
Social sciences	2.9	2.4	2.7	2.0	1.9	1.8	2.3	1.8	-	-	-
Anthropology	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Economics	0.9	0.7	0.6	0.4	0.4	0.6	0.5	0.5	-	-	-
Political science	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	-	-	-
Sociology	0.5	0.2	0.2	0.1	0.2	0.2	0.3	0.2	-	-	-
Other social sciences	1.3	1.3	1.7	1.4	1.2	0.9	1.4	1.0	-	-	-
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 nec	3.1	3.2	3.0	3.9	4.3	4.1	3.5	5.2	-	-	-
Engineering	19.5	20.1	16.5	15.9	17.4	18.4	18.9	18.8	-	-	-
Aeronautical engineering	4.3	4.4	3.8	2.4	1.3	2.9	2.9	2.9	-	-	-
Astronautical engineering	2.7	1.9	1.3	0.9	0.6	1.1	1.1	1.0	-	-	-
Chemical engineering	1.1	0.9	0.5	0.5	0.8	0.6	0.9	0.6	-	-	-
Civil engineering	1.5	1.2	0.6	0.5	1.1	0.8	0.7	0.7	-	-	-
Electrical engineering	3.0	2.7	1.9	1.9	2.1	2.1	2.0	1.4	-	-	-



S&E field	1990	1995	2000	2005	2010	2012	2014	2015	Average annual growth rate		
									1990-2000	2000-10	2010-15
Mechanical engineering	1.2	1.5	0.8	0.6	0.6	0.6	0.8	0.5	-	-	-
Metallurgy and materials engineering	2.6	2.9	2.4	2.2	2.8	2.7	2.8	2.8	-	-	-
Other engineering	3.2	4.7	5.1	6.8	8.1	7.5	7.8	8.9	-	-	-

na = not applicable; data collected for this table were not recorded at that level in that particular fiscal year, or the agency or subagency did not exist as such or in that organization in that year.

nec = not elsewhere classified.

Note(s)

Detail may not add to total because of rounding.

Source(s)

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

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