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**Federal obligations for applied research, by detailed field of science and engineering: FYs 2011–20**

(Dollars in millions)

Field	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All fields	28,751.2	31,027.4	29,753.2	31,603.5	32,298.4	34,812.0	36,599.8	38,392.4	41,100.5	43,507.2
Computer sciences and mathematics	1,585.9	1,732.6	1,736.2	1,965.5	1,878.2	2,113.1	2,016.9	2,122.3	2,024.0	2,266.1
Computer sciences	1,255.2	1,469.7	1,501.7	1,654.0	1,621.1	1,818.5	1,736.0	1,855.6	1,746.1	NA
Mathematics	150.3	119.1	106.5	154.9	131.8	140.7	117.7	112.7	118.1	NA
Other computer sciences and mathematics	180.4	143.8	128.0	156.6	125.4	153.9	163.2	154.0	159.9	NA
Engineering	6,889.2	7,944.5	7,540.7	8,343.0	8,289.7	9,313.9	9,521.8	10,172.8	11,661.4	12,605.9
Aeronautical engineering	691.9	1,413.0	1,433.2	1,386.2	1,356.4	1,357.5	1,442.2	1,018.8	1,128.2	NA
Astronautical engineering	377.2	610.8	652.3	575.9	561.9	551.4	550.4	787.5	821.0	NA
Chemical engineering	291.8	255.2	334.8	431.7	314.1	303.3	226.1	620.7	379.2	NA
Civil engineering	467.9	478.3	418.7	417.3	403.3	424.0	579.2	462.4	554.8	NA
Electrical engineering	954.4	1,025.9	903.9	992.4	669.0	835.2	877.7	771.6	751.2	NA
Mechanical engineering	227.5	215.7	401.7	374.1	198.1	251.3	325.9	387.7	526.7	NA
Metallurgy and materials engineering	544.0	513.1	528.2	536.0	467.0	696.1	634.6	551.5	619.7	NA
Other engineering	3,334.4	3,432.4	2,867.8	3,629.4	4,320.0	4,895.0	4,885.7	5,572.7	6,880.6	NA
Environmental sciences	1,410.7	1,625.6	1,645.2	1,612.9	1,675.4	1,685.4	1,782.8	1,571.1	1,822.9	1,856.0
Atmospheric sciences	341.4	516.9	547.6	530.9	516.5	516.6	563.5	288.2	310.5	NA
Geological sciences	201.4	224.1	215.4	143.2	210.6	129.3	141.3	44.6	38.8	NA
Oceanography	240.7	319.1	331.1	365.3	294.2	331.3	389.7	359.1	387.1	NA
Other environmental sciences	627.2	565.5	551.1	573.5	654.2	708.2	688.3	879.2	1,086.5	NA
Life sciences	14,076.3	14,990.3	14,345.5	14,931.8	15,415.4	16,468.4	17,515.8	18,818.3	19,423.1	20,458.9
Agricultural sciences	538.0	462.3	440.7	490.5	766.1	717.0	769.3	728.4	810.9	NA
Biological sciences (excluding environmental biology)	6,901.2	7,141.0	6,669.3	7,027.0	7,081.3	7,896.5	7,982.4	8,669.6	9,124.6	NA
Environmental biology	420.3	390.0	397.6	425.8	420.5	407.5	411.5	408.9	434.0	NA
Medical sciences	5,116.7	5,550.5	5,591.5	5,721.1	5,816.3	6,021.3	6,931.4	7,149.6	7,385.6	NA
Other life sciences	1,100.1	1,446.5	1,246.5	1,267.4	1,331.2	1,426.0	1,421.1	1,861.8	1,668.0	NA
Physical sciences	1,611.6	1,850.8	1,849.7	1,845.6	1,889.5	1,998.7	1,864.1	1,950.7	1,909.2	1,891.6
Astronomy	56.6	174.4	173.1	155.6	156.7	153.7	152.9	8.4	6.2	NA
Chemistry	332.0	326.7	267.4	290.6	295.3	310.9	274.8	382.3	434.2	NA
Physics	993.6	1,140.3	1,013.0	989.2	471.0	1,138.7	1,078.7	1,023.4	875.3	NA
Other physical sciences	229.4	209.3	396.1	410.3	966.4	395.4	357.7	536.6	593.4	NA
Psychology	908.1	998.8	919.2	930.5	995.0	1,031.6	1,053.9	1,179.6	1,387.5	1,461.3
Biological aspects	3.0	1.1	0.5	1.4	4.9	4.1	0.5	0.5	1.4	NA
Social aspects	37.6	48.4	48.5	46.2	44.9	44.3	42.9	38.1	42.1	NA
Other psychological sciences	867.5	949.3	870.2	882.8	945.2	983.2	1,010.6	1,140.9	1,343.9	NA
Social sciences	891.4	743.1	863.4	1,049.0	791.6	848.6	667.9	665.3	704.5	589.4
Anthropology	0.3	3.4	2.3	2.4	1.7	2.1	3.1	3.7	2.3	NA
Economics	344.1	289.0	274.6	286.1	289.5	320.4	237.8	229.9	209.2	NA
Political science	2.7	2.6	2.1	1.3	3.6	1.0	5.4	1.8	3.9	NA
Sociology	97.0	116.0	112.8	126.9	101.5	173.2	154.8	119.2	187.4	NA
Other social sciences	447.3	332.2	471.7	632.2	395.2	352.0	266.7	310.7	301.7	NA
Other sciences nec	1,377.9	1,141.7	853.5	925.4	1,363.7	1,352.3	2,176.5	1,912.4	2,168.0	2,378.1

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

**Note(s):**

Because of rounding, detail may not add to total. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

**Source(s):**

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