

Science and engineering profile: Michigan

Characteristic	State	U.S.	Rank
Doctoral scientists, 2003	14,490	566,330	14
Doctoral engineers, 2003	4,760	118,540	7
S&E doctorates awarded, 2005	1,075	27,974	7
Engineering (%)	29	23	-
Life sciences (%)	22	26	-
Social sciences (%)	15	15	-
S&E and health postdoctorates in doctorate-granting institutions, 2005	1,216	48,601	12
S&E and health graduate students in doctorate-granting institutions, 2005	18,484	527,767	9
Population, 2005 (thousands)	10,121	300,322	8
Civilian labor force, 2005 (thousands)	5,097	150,717	8
Personal income per capita, 2005 (dollars)	32,735	34,495	25
Federal spending			
Total expenditures, 2004 (\$millions)	60,488	2,136,440	10
R&D obligations, 2004 (\$millions)	1,073	98,936	23
Total R&D performance, 2004 (\$millions)	16,722	283,439	2
Industry R&D, 2004 (\$millions)	15,170	201,131	2
Academic R&D, 2005 (\$millions)	1,456	45,725	10
Life sciences (%)	61	60	-
Engineering (%)	16	15	-
Social sciences (%)	9	4	-
SBIR awards, 2000-05	666	33,289	13
Utility patents issued to state residents, 2005	3,367	74,630	4
Gross domestic product, 2005 (\$billions)	376	12,492	9

- = no value possible.

S&E = science and engineering.

SBIR = small business innovation research.

NOTES: Rankings and totals are based on data for the 50 states, District of Columbia, and Puerto Rico. Rankings are based on unrounded totals. Reliability of estimates of doctoral scientists and engineers varies by state, because sample allocation was not based on geography. Rankings do not take into account the margin of error of estimates from sample surveys. Data on doctoral scientists and engineers include only recipients of doctoral degrees from U.S. institutions in S&E and health fields. The field percentages represent the largest three fields within the state.

Federal obligations for research and development, by agency and performer: Michigan, FY 2004
(Thousands of dollars)

Agency	Total	Performer					Rank	
		Federal intramural	All FFRDCs	Industrial firms	Universities and colleges	Other nonprofits		State, local governments
All agencies	1,072,966	110,069	0	195,221	715,647	44,655	7,374	23
Department of Agriculture	27,625	5,947	0	0	21,678	0	0	28
Department of Commerce	22,594	8,262	0	11,765	2,567	0	0	10
Department of Defense	287,129	87,371	0	145,037	48,501	5,723	497	23
Department of Energy	32,919	0	0	5,021	27,158	740	0	21
Department of Health and Human Services	537,762	572	0	19,049	481,243	35,794	1,104	11
Department of Homeland Security	601	436	0	165	0	0	0	30
Department of the Interior	6,255	5,735	0	44	253	0	223	19
Department of Transportation	13,638	170	0	7,427	566	0	5,475	12
Environmental Protection Agency	9,480	1,576	0	140	5,316	2,398	50	17
National Aeronautics and Space Administration	22,081	0	0	4,134	17,922	0	25	26
National Science Foundation	112,882	0	0	2,439	110,443	0	0	9
Rank	23	23	-	25	9	21	27	-

- = no value possible.

FFRDC = federally funded research and development center.

NOTES: Federal R&D obligations are as reported by funding agencies. Ranks and totals are based on data for the 50 states, District of Columbia, and Puerto Rico.

SOURCES: Prepared by the National Science Foundation/Division of Science Resources Statistics. Data compiled from numerous sources; see the section, Data Sources for Science and Engineering (S&E) State Profiles.