

UNIVERSITY OF MASSACHUSETTS ANNUAL R&D EXPENDITURES FY2005

OFFICE OF THE PRESIDENT
INSTITUTIONAL RESEARCH
SEPTEMBER 2006

The *FY2005 Annual R&D Expenditures* report presents information on the research and development expenditures at the University of Massachusetts system. It is based on data that our five campuses provide to the National Science Foundation (NSF) through its annual Survey of Research and Development Expenditures at Universities and Colleges. In addition to FY2005 data, this report also provides trend data in many cases. Selected NSF rankings of R&D expenditures by fields are available from Institutional Research.

FY2005 highlights:

- Total FY2005 R&D spending was \$377 million, which represents a 6.2% increase from the FY2004 total of \$355 million.
- \$365 million (97%) of our R&D expenditures are in the sciences and engineering (S&E). Among Massachusetts colleges and universities, UMass ranks 3rd in S&E expenditures. UMass, MIT, Harvard and BU together account for 80% of the academic science and engineering R&D expenditures in the state.
- In terms of funding sources for S&E research, 63% is from the federal government, 15% is from institutional sources, 11% is from state and local government, 5% is from industry and 6% is from other sources (e.g., private foundations).
- All areas of funding showed growth - industry sponsorship increased 21%, institutional funding grew by 9%, state/local government funding 8%, and federal funding 4%.
- At \$223 million, life sciences constitute almost 60% of UMass' total R&D expenditures. The distribution of R&D expenditures by field is:

life sciences	59.1%	social sciences	4.1%
physical sciences	10.6%	non sciences/engineering	3.0%
engineering	9.9%	psychology	1.9%
computer sciences	5.1%	mathematical sciences	1.0%
environmental sciences	4.8%	other sciences	0.5%

- Within life sciences, biological sciences constitute more than a third (35%) of the expenditures, medical sciences another third (35%), and agricultural and other sciences the remaining 30%.

Barbara Velardi
Research Associate

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Director of Institutional Research

TOTAL R&D EXPENDITURES

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SCIENCE & ENGINEERING R&D EXPENDITURES

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LIFE SCIENCES R&D EXPENDITURES

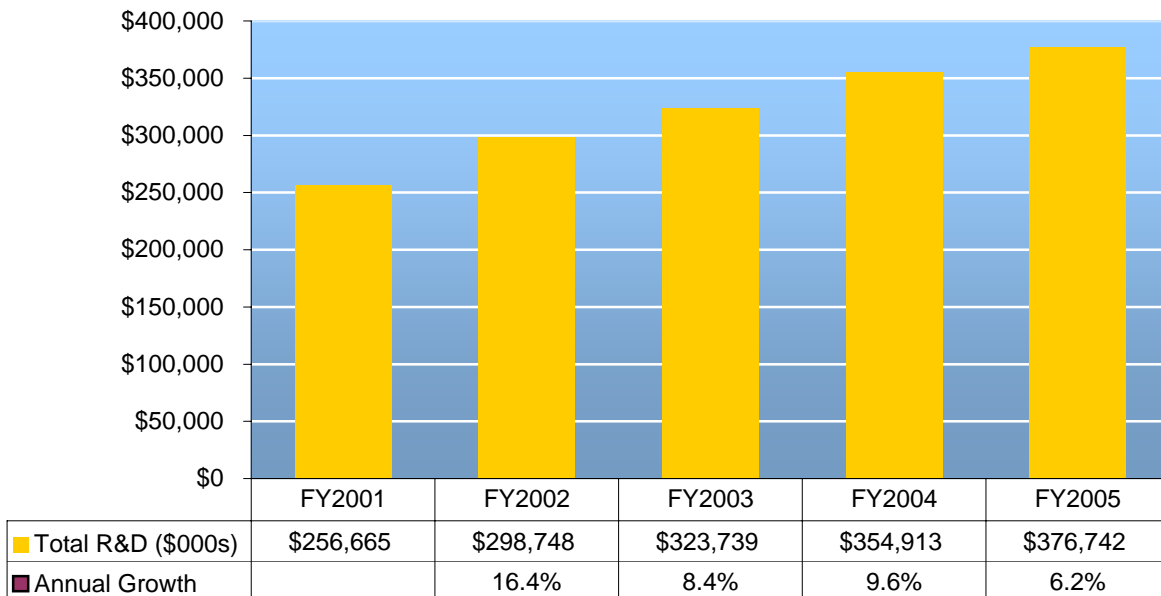
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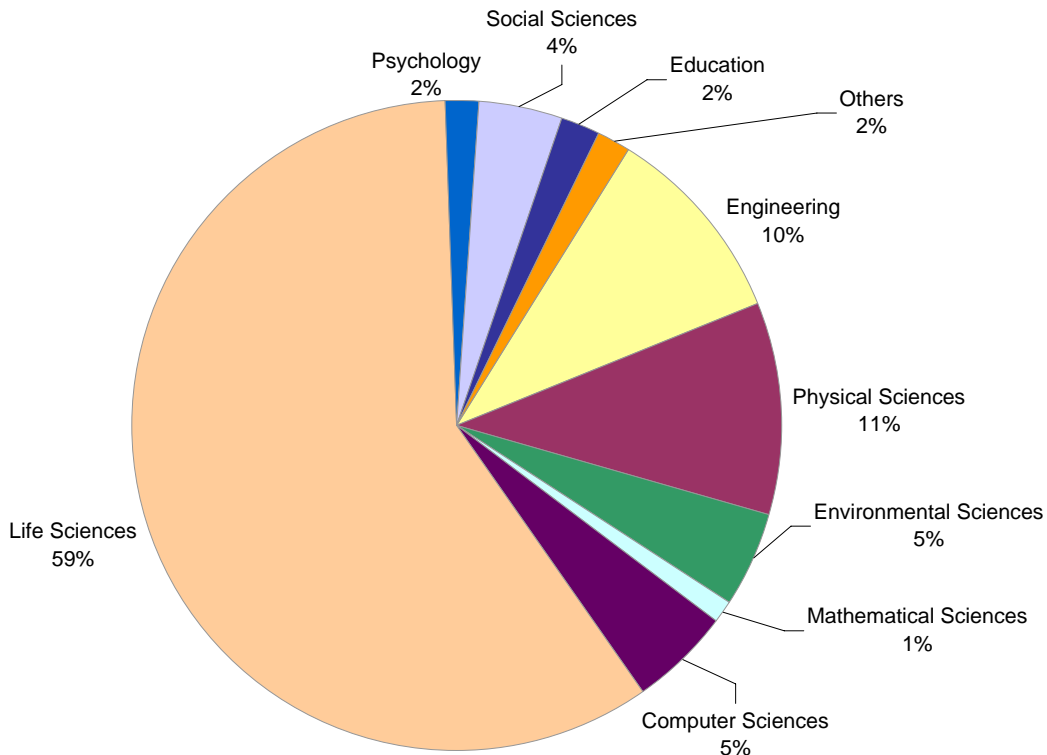
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UMASS System

Total R&D Expenditures FY2001 – FY2005

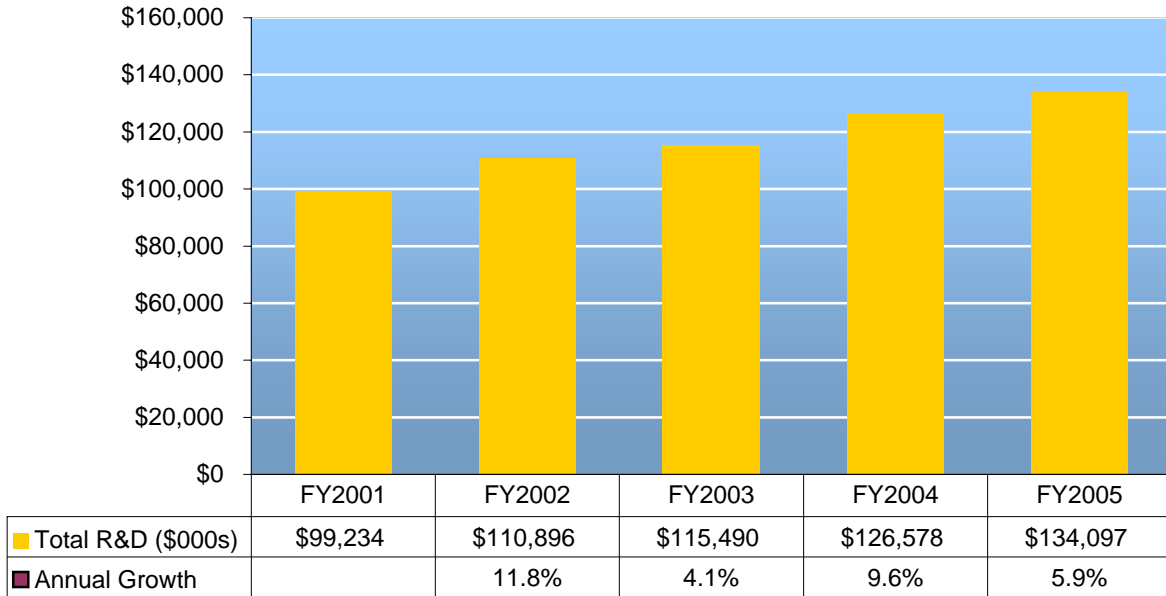


Total R&D Expenditures FY2005

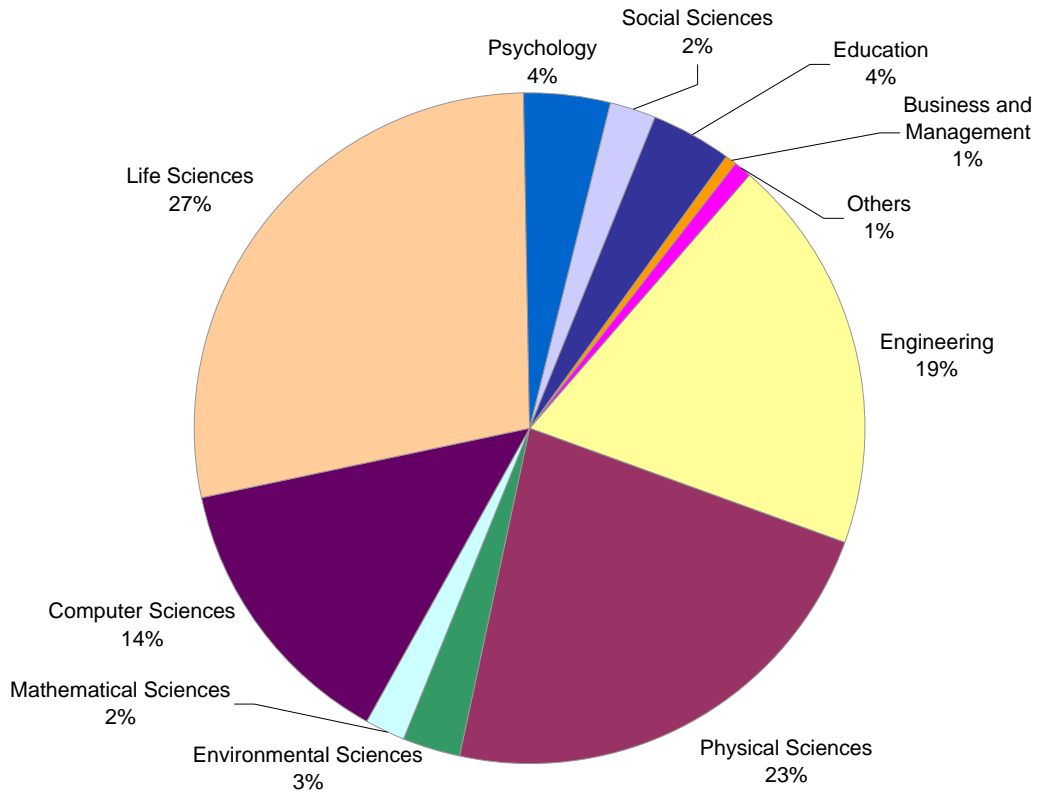


Amherst

Total R&D Expenditures FY2001 – FY2005

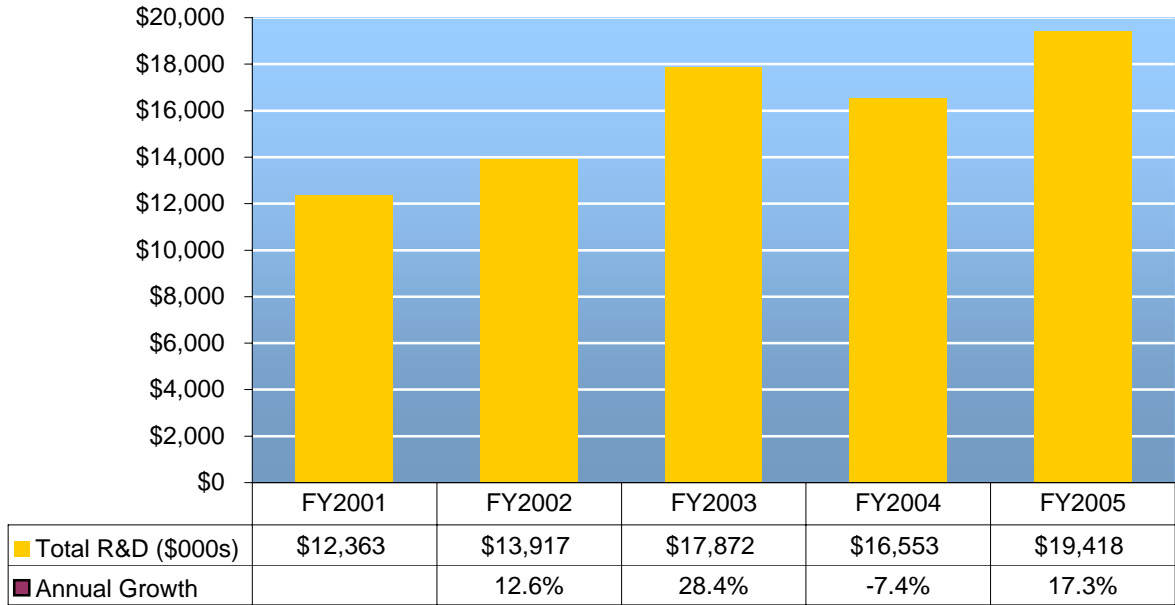


Total R&D Expenditures FY2005

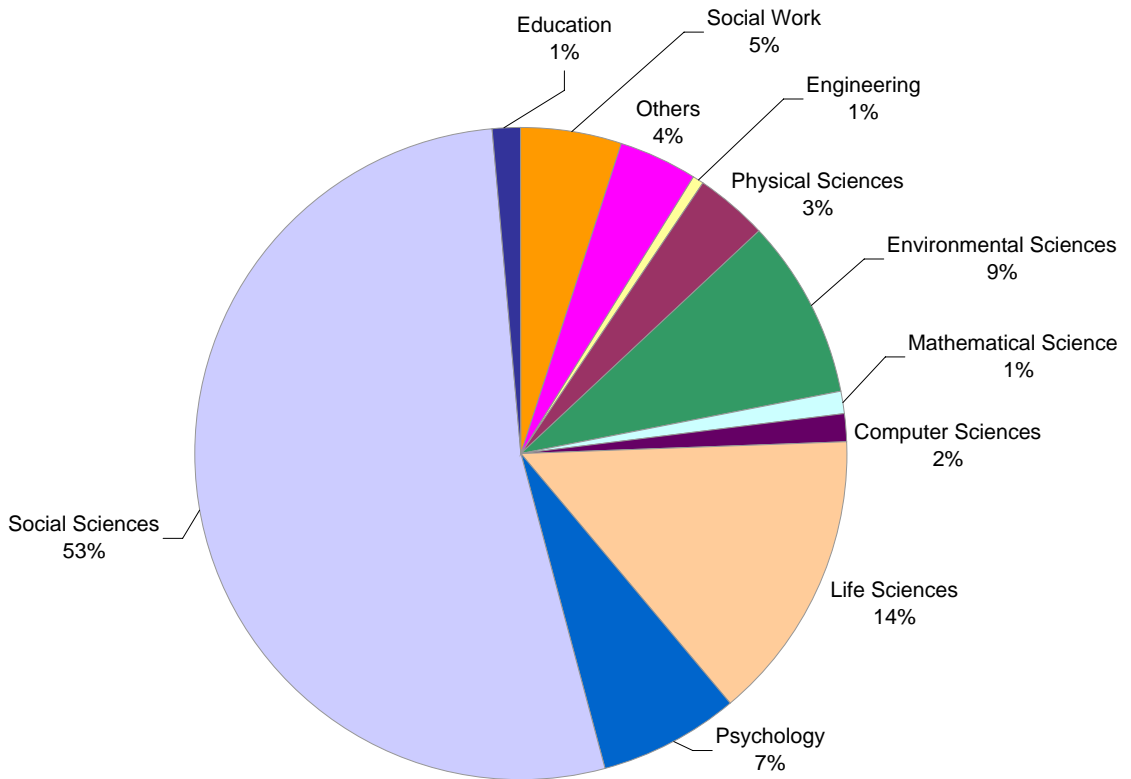


Boston

Total R&D Expenditures FY2001 – FY2005

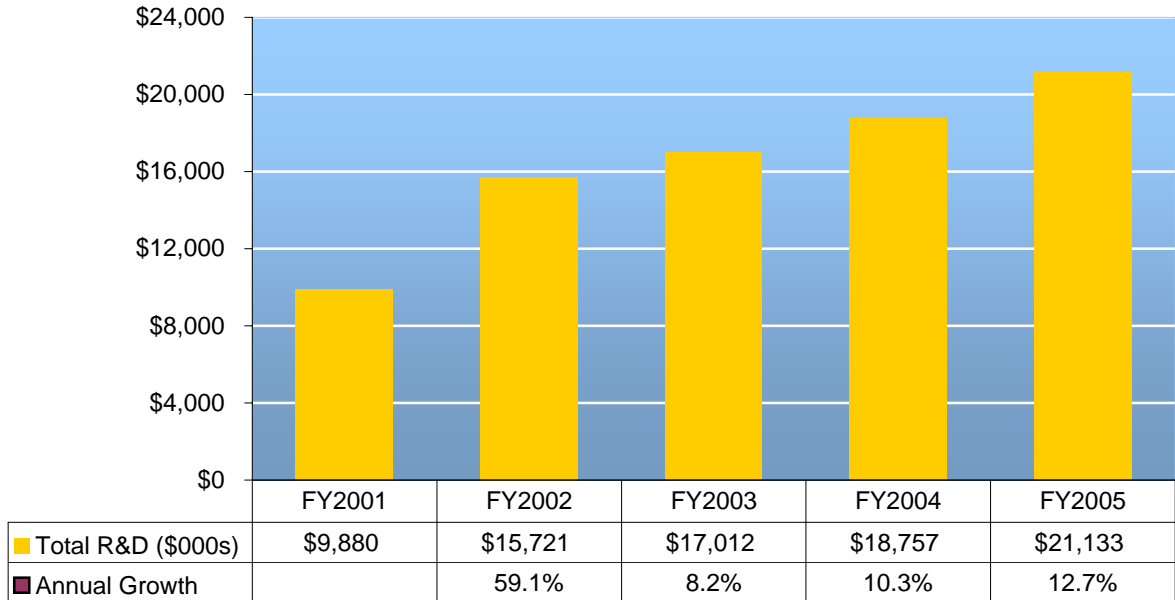


Total R&D Expenditures FY2005

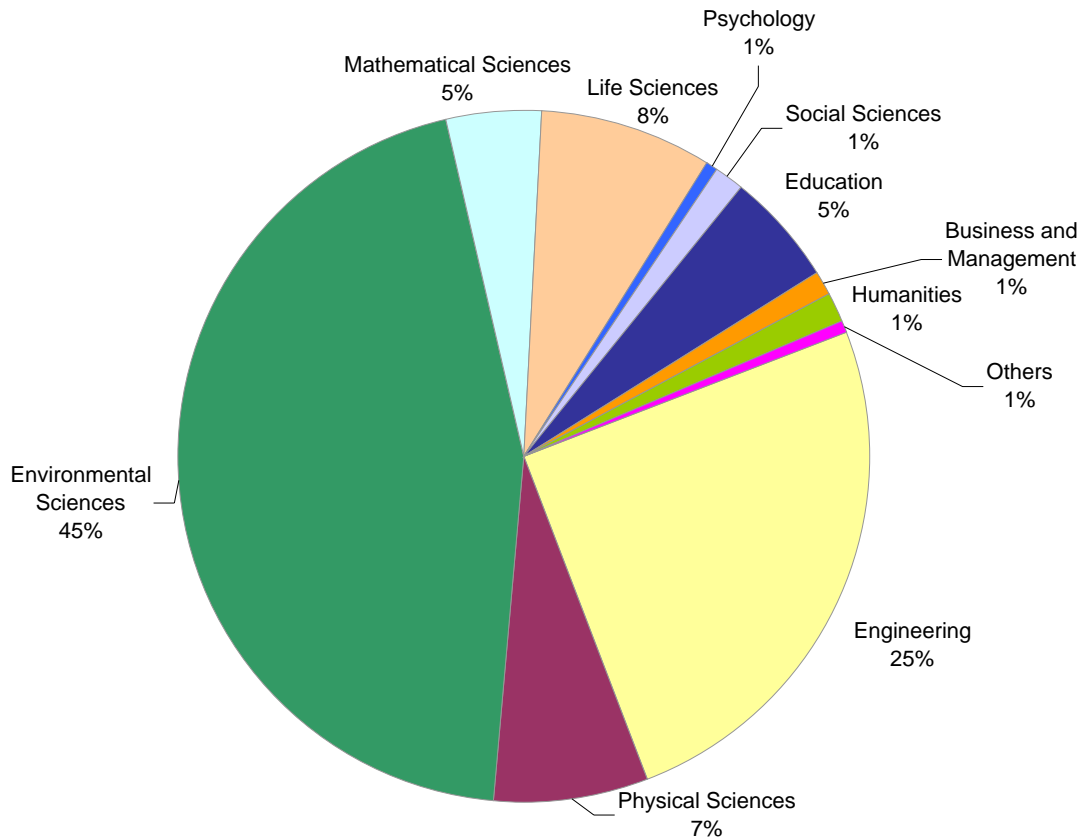


Dartmouth

Total R&D Expenditures FY2001 – FY2005

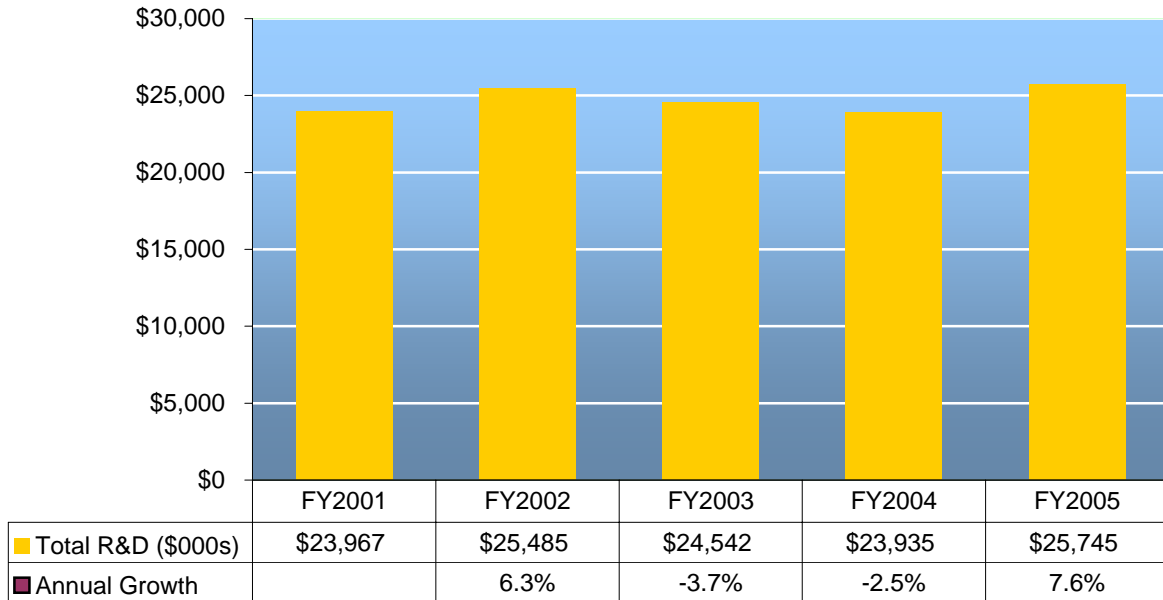


Total R&D Expenditures FY2005

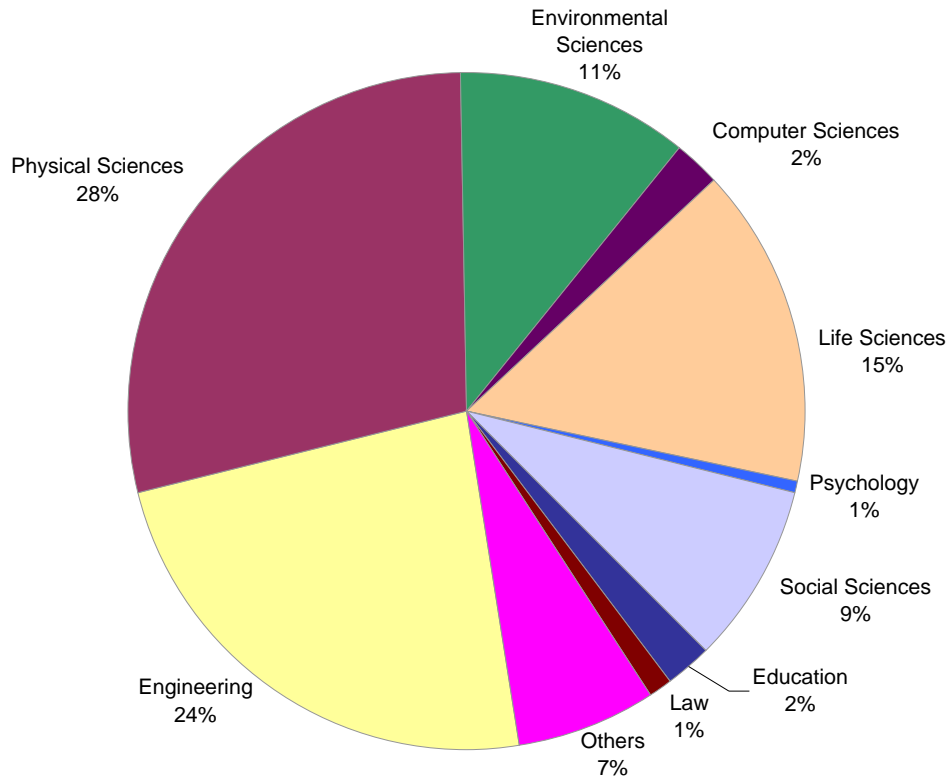


Lowell

Total R&D Expenditures FY2001 – FY2005

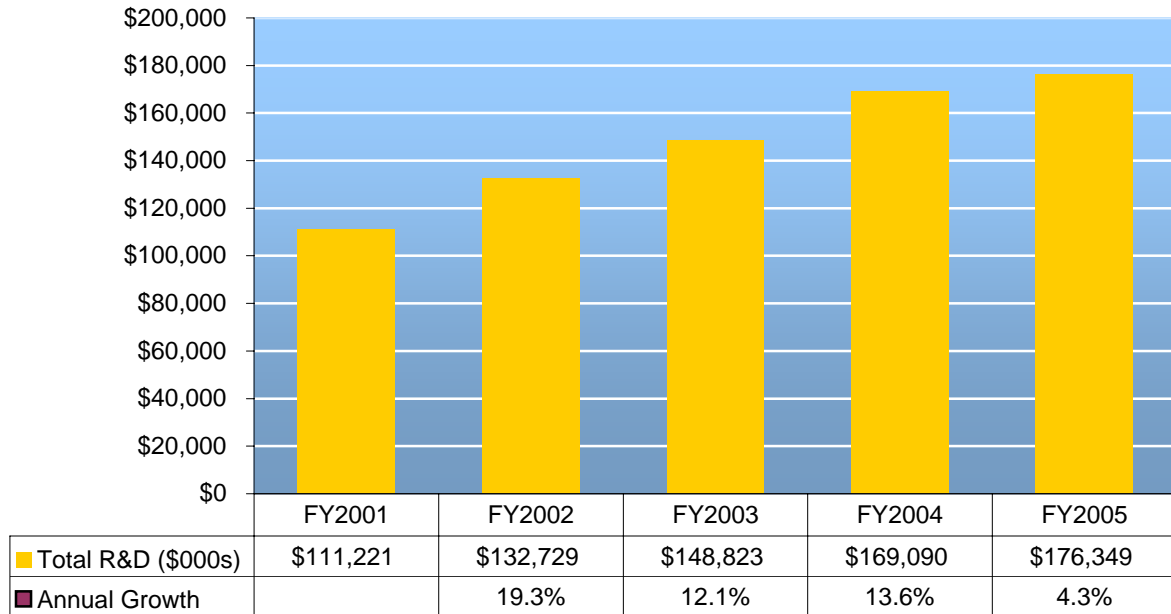


Total R&D Expenditures FY2005



Worcester

Total R&D Expenditures FY2001 – FY2005



All of Worcester's R&D expenditures are in the life sciences.

Total R&D Expenditures By Field FY2005

FIELD	UMA FY2005	% of UMA Total	% of Field	UMB FY2005	% of UMB Total	% of Field	UMD FY2005	% of UMD Total	% of Field	UML FY2005	% of UML Total	% of Field	UMW FY2005	% of UMW Total	% of Field	System FY2005	% of Total
Engineering (Total)	\$ 25,838	19.3%	69.3%	\$ 111	0.6%	0.3%	\$ 5,270	24.9%	14.1%	\$ 6,087	23.6%	16.3%	\$ -			\$ 37,306	9.9%
Aeronautical & Astronomical	\$ -			\$ -			\$ -			\$ -			\$ -			\$ -	
Bioengineering/Biomedical	\$ -			\$ -			\$ 13	0.1%	100.0%	\$ -			\$ -			\$ 13	0.0%
Chemical	\$ 4,766	3.6%	94.1%	\$ -			\$ -			\$ 301	1.2%	5.9%	\$ -			\$ 5,067	1.3%
Civil	\$ 6,256	4.7%	88.1%	\$ -			\$ 663	3.1%	9.3%	\$ 183	0.7%	2.6%	\$ -			\$ 7,102	1.9%
Electrical	\$ 10,394	7.8%	88.9%	\$ -			\$ 630	3.0%	5.4%	\$ 670	2.6%	5.7%	\$ -			\$ 11,694	3.1%
Mechanical	\$ 4,130	3.1%	75.0%	\$ -			\$ 266	1.3%	4.8%	\$ 1,114	4.3%	20.2%	\$ -			\$ 5,510	1.5%
Metallurgical & Materials	\$ -			\$ -			\$ 789	3.7%	43.8%	\$ 1,012	3.9%	56.2%	\$ -			\$ 1,801	0.5%
Other	\$ 292	0.2%	4.8%	\$ 111	0.6%	1.8%	\$ 2,909	13.8%	47.5%	\$ 2,807	10.9%	45.9%	\$ -			\$ 6,119	1.6%
Physical Sciences (Total)	\$ 30,336	22.6%	76.0%	\$ 673	3.5%	1.7%	\$ 1,523	7.2%	3.8%	\$ 7,368	28.6%	18.5%	\$ -			\$ 39,900	10.6%
Astronomy	\$ 8,149	6.1%	100.0%	\$ -			\$ -			\$ -			\$ -			\$ 8,149	2.2%
Chemistry	\$ 17,088	12.7%	88.0%	\$ 398	2.0%	2.1%	\$ 1,322	6.3%	6.8%	\$ 606	2.4%	3.1%	\$ -			\$ 19,414	5.2%
Physics	\$ 4,948	3.7%	40.6%	\$ 275	1.4%	2.3%	\$ 201	1.0%	1.6%	\$ 6,762	26.3%	55.5%	\$ -			\$ 12,186	3.2%
Other	\$ 151	0.1%	100.0%	\$ -			\$ -			\$ -			\$ -			\$ 151	0.0%
Environmental Sciences (Total)	\$ 3,888	2.9%	21.6%	\$ 1,734	8.9%	9.6%	\$ 9,528	45.1%	52.8%	\$ 2,882	11.2%	16.0%	\$ -			\$ 18,032	4.8%
Atmospheric	\$ -			\$ -			\$ -			\$ -			\$ -			\$ -	
Earth Sciences	\$ 3,227	2.4%	52.8%	\$ -			\$ -			\$ 2,882	11.2%	47.2%	\$ -			\$ 6,109	1.6%
Oceanography	\$ 26	0.0%	0.3%	\$ 483	2.5%	4.8%	\$ 9,528	45.1%	94.9%	\$ -			\$ -			\$ 10,037	2.7%
Other	\$ 635	0.5%	33.7%	\$ 1,251	6.4%	66.3%	\$ -			\$ -			\$ -			\$ 1,886	0.5%
Mathematical Sciences (Total)	\$ 2,519	1.9%	66.9%	\$ 215	1.1%	5.7%	\$ 945	4.5%	25.1%	\$ 88	0.3%	2.3%	\$ -			\$ 3,767	1.0%
Computer Sciences (Total)	\$ 18,160	13.5%	95.2%	\$ 305	1.6%	1.6%	\$ 86	0.4%	0.5%	\$ 524	2.0%	2.7%	\$ -			\$ 19,075	5.1%
Life Sciences (Total)	\$ 37,850	28.2%	17.0%	\$ 2,768	14.3%	1.2%	\$ 1,681	8.0%	0.8%	\$ 3,944	15.3%	1.8%	\$ 176,349	100.0%	79.2%	\$ 222,592	59.1%
Agricultural	\$ 17,017	12.7%	93.5%	\$ -			\$ 1,180	5.6%	6.5%	\$ -			\$ -			\$ 18,197	4.8%
Biological	\$ 16,309	12.2%	21.0%	\$ 1,417	7.3%	1.8%	\$ 190	0.9%	0.2%	\$ 1,036	4.0%	1.3%	\$ 58,543	33.2%	75.5%	\$ 77,495	20.6%
Medical	\$ 1,804	1.3%	2.3%	\$ -			\$ -			\$ 2,886	11.2%	3.7%	\$ 73,125	41.5%	94.0%	\$ 77,815	20.7%
Other	\$ 2,720	2.0%	5.5%	\$ 1,351	7.0%	2.8%	\$ 311	1.5%	0.6%	\$ 22	0.1%	0.04%	\$ 44,681	25.3%	91.0%	\$ 49,085	13.0%
Psychology (Total)	\$ 5,475	4.1%	76.3%	\$ 1,374	7.1%	19.1%	\$ 160	0.8%	2.2%	\$ 167	0.6%	2.3%	\$ -			\$ 7,176	1.9%
Social Sciences (Total)	\$ 2,781	2.1%	17.9%	\$ 10,236	52.7%	66.0%	\$ 259	1.2%	1.7%	\$ 2,226	8.6%	14.4%	\$ -			\$ 15,502	4.1%
Economics	\$ 955	0.7%	85.3%	\$ 50	0.3%	4.5%	\$ 15	0.1%	1.3%	\$ 100	0.4%	8.9%	\$ -			\$ 1,120	0.3%
Political Science	\$ 7	0.0%	1.5%	\$ 275	1.4%	57.3%	\$ 198	0.9%	41.3%	\$ -			\$ -			\$ 480	0.1%
Sociology	\$ 800	0.6%	68.9%	\$ 315	1.6%	27.1%	\$ 46			\$ -			\$ -			\$ 1,161	0.3%
Other	\$ 1,019	0.8%	8.0%	\$ 9,596	49.4%	75.3%	\$ -			\$ 2,126	8.3%	16.7%	\$ -			\$ 12,741	3.4%
Other Sciences (Total)	\$ 640	0.5%	33.0%	\$ 732	3.8%	37.8%	\$ -	0.0%	0.0%	\$ 566	2.2%	29.2%	\$ -			\$ 1,938	0.5%
TOTAL, SCI & ENG FIELDS	\$ 127,487	95.1%	34.9%	\$ 18,148	93.5%	5.0%	\$ 19,452	92.0%	5.3%	\$ 23,852	92.6%	6.5%	\$ 176,349	100.0%	48.3%	\$ 365,288	97.0%

Total R&D Expenditures By Field FY2005

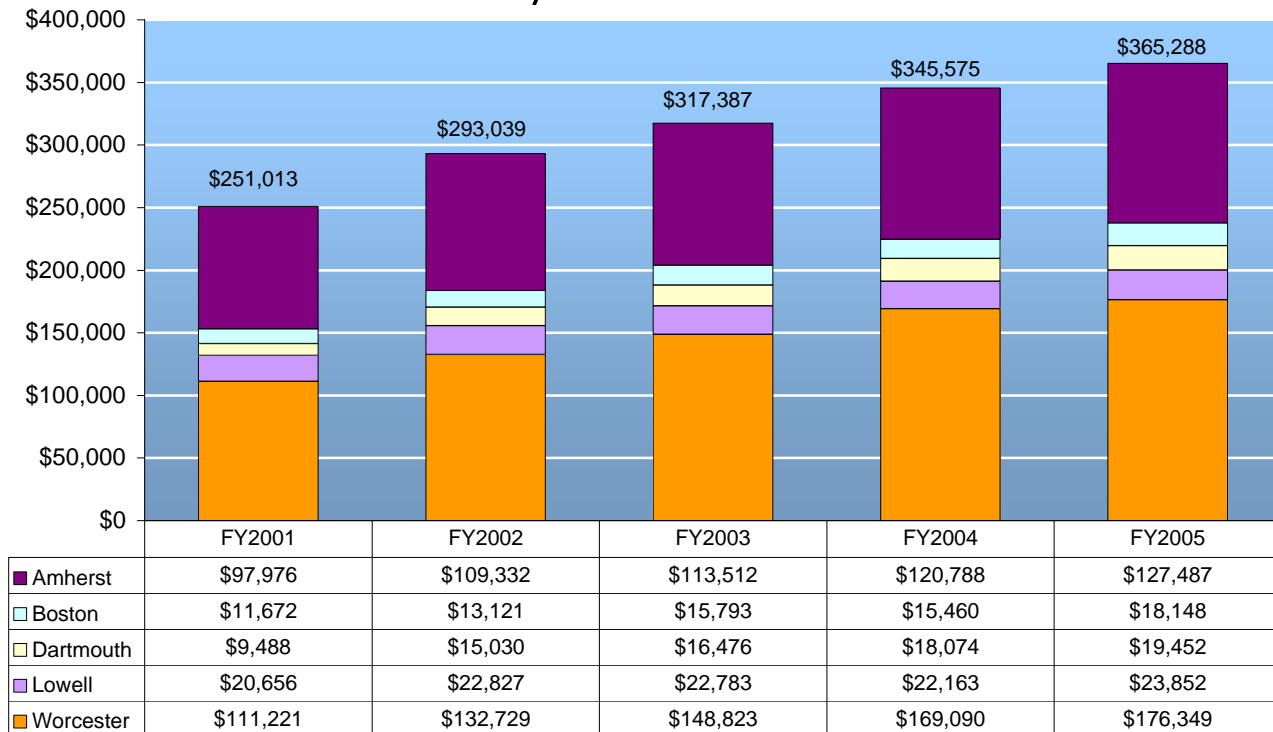
FIELD	UMA FY2005	% of UMA Total	% of Field	UMB FY2005	% of UMB Total	% of Field	UMD FY2005	% of UMD Total	% of Field	UML FY2005	% of UML Total	% of Field	UMW FY2005	% of UMW Total	% of Field	System FY2005	% of Total
Education	\$ 5,279	3.9%	73.1%	\$ 263	1.4%	3.6%	\$ 1,112	5.3%	15.4%	\$ 571	2.2%	7.9%	\$ -			\$ 7,225	1.9%
Law	\$ 134	0.1%	31.7%	\$ -			\$ -			\$ 289	1.1%	68.3%	\$ -			\$ 423	0.1%
Humanities	\$ 309	0.2%	49.4%	\$ 25	0.1%	4.0%	\$ 291	1.4%	46.6%	\$ -	0.0%	0.0%	\$ -			\$ 625	0.2%
Visual and Performing Arts	\$ 59	0.0%	67.0%	\$ 12	0.1%	13.6%	\$ 8	0.0%	9.1%	\$ 9	0.03%	10.2%	\$ -			\$ 88	0.02%
Business and Management	\$ 829	0.6%	75.4%	\$ -	0.0%	0.0%	\$ 264	1.2%	24.0%	\$ 6	0.0%	0.5%	\$ -			\$ 1,099	0.3%
Comm., Journalism & Library Sci	\$ -		0.0%	\$ -			\$ 6		100.0%	\$ -		0.0%	\$ -			\$ 6	0.0%
Social Work	\$ -		0.0%	\$ 970	5.0%	100.0%	\$ -		0.0%	\$ -		0.0%	\$ -			\$ 970	0.3%
Other Non-Science and Engin.	\$ -		0.0%	\$ -			\$ -		0.0%	\$ 1,018		100.0%	\$ -			\$ 1,018	0.3%
TOTAL, NON-SCI & ENG FIELDS	\$ 6,610	4.9%	57.7%	\$ 1,270	6.5%	11.1%	\$ 1,681	8.0%	14.7%	\$ 1,893	7.4%	16.5%	\$ -			\$ 11,454	3.0%
TOTAL, SCI & ENG FIELDS	\$ 127,487	95.1%	34.9%	\$ 18,148	93.5%	5.0%	\$ 19,452	92.0%	5.3%	\$ 23,852	92.6%	6.5%	\$ 176,349	100.0%	48.3%	\$ 365,288	97.0%
GRAND TOTAL	\$ 134,097		35.6%	\$ 19,418		5.2%	\$ 21,133		5.6%	\$ 25,745		6.8%	\$ 176,349		46.8%	\$ 376,742	100.0%

Source: Campus NSF surveys. All dollars are in thousands.

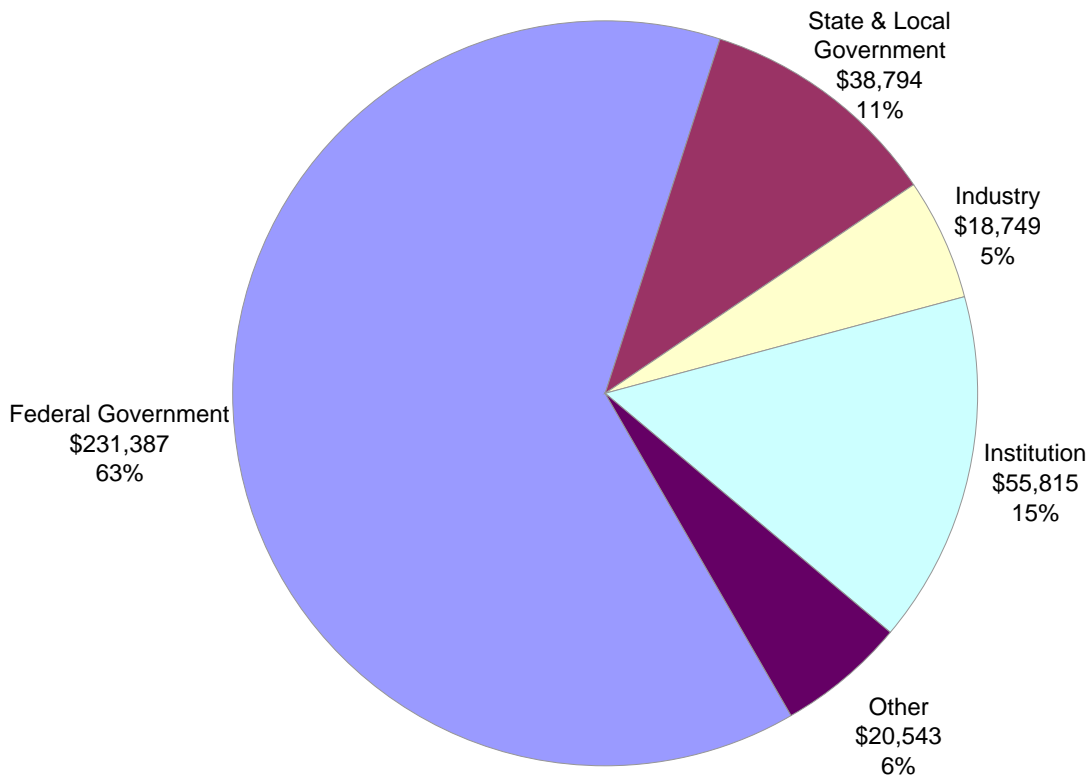
Note: % of Total is the percentage each field represents of total campus or system R&D expenditures in all fields.

% of Field is the percentage of the UMass system's expenditures in a particular field represented by that campus.

Science and Engineering R&D Expenditures UMASS System FY2001 – FY2005



Science and Engineering R&D Expenditures by Source of Funds FY2005 UMASS System



Source: Campus NSF surveys. All dollars are in thousands.

**Science and Engineering R&D Expenditures by Source
FY1995 – FY2005**

	Total R&D Expenditures														
	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$66,082	\$73,678	\$85,811	\$89,970	\$86,576	\$97,052	\$97,976	\$109,332	\$113,512	\$120,788	\$127,487	\$61,405	92.9%	\$6,699	5.5%
Boston	\$9,146	\$10,898	\$11,194	\$11,491	\$11,132	\$12,028	\$11,672	\$13,121	\$15,793	\$15,460	\$18,148	\$9,002	98.4%	\$2,688	17.4%
Dartmouth	\$3,709	\$4,092	\$4,197	\$4,902	\$5,820	\$6,905	\$9,488	\$15,030	\$16,476	\$18,074	\$19,452	\$15,743	424.5%	\$1,378	7.6%
Lowell	\$15,505	\$17,834	\$18,328	\$19,372	\$19,413	\$19,334	\$20,656	\$22,827	\$22,783	\$22,163	\$23,852	\$8,347	53.8%	\$1,689	7.6%
Worcester	\$62,441	\$63,341	\$71,346	\$82,950	\$83,040	\$97,587	\$111,221	\$132,729	\$148,823	\$169,090	\$176,349	\$113,908	182.4%	\$7,259	4.3%
System	\$156,883	\$169,843	\$190,876	\$208,685	\$205,981	\$232,906	\$251,013	\$293,039	\$317,387	\$345,575	\$365,288	\$208,405	132.8%	\$19,713	5.7%

	Federal R&D Expenditures														
	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$32,126	\$37,969	\$40,925	\$43,196	\$39,877	\$44,697	\$49,576	\$54,770	\$60,845	\$65,452	\$66,921	\$34,795	108.3%	\$1,469	2.2%
Boston	\$2,454	\$2,706	\$3,075	\$3,160	\$2,951	\$3,378	\$2,546	\$4,837	\$5,579	\$5,412	\$6,326	\$3,872	157.8%	\$914	16.9%
Dartmouth	\$3,221	\$3,433	\$2,884	\$3,731	\$3,983	\$3,228	\$4,928	\$7,142	\$8,718	\$9,199	\$9,852	\$6,631	205.9%	\$653	7.1%
Lowell	\$8,097	\$10,257	\$11,560	\$12,259	\$10,354	\$9,905	\$11,196	\$14,932	\$15,821	\$16,655	\$17,608	\$9,511	117.5%	\$953	5.7%
Worcester	\$36,970	\$40,198	\$43,350	\$53,766	\$55,516	\$64,212	\$79,453	\$93,992	\$109,082	\$126,162	\$130,680	\$93,710	253.5%	\$4,518	3.6%
System	\$82,868	\$94,563	\$101,794	\$116,112	\$112,681	\$125,420	\$147,699	\$175,673	\$200,045	\$222,880	\$231,387	\$148,519	179.2%	\$8,507	3.8%

	State & Local Government R&D Expenditures														
	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$5,776	\$5,933	\$6,546	\$7,072	\$6,354	\$6,961	\$3,969	\$4,185	\$3,842	\$3,597	\$3,873	-\$1,903	-32.9%	\$276	7.7%
Boston	\$1,659	\$2,405	\$1,705	\$1,351	\$1,261	\$1,211	\$1,447	\$1,112	\$1,291	\$1,001	\$2,481	\$822	49.5%	\$1,480	147.9%
Dartmouth	\$203	\$272	\$526	\$325	\$343	\$1,343	\$2,632	\$4,124	\$4,228	\$4,027	\$5,039	\$4,836	2382.3%	\$1,012	25.1%
Lowell	\$555	\$638	\$697	\$530	\$1,156	\$599	\$962	\$854	\$677	\$380	\$180	-\$375	-67.6%	-\$200	-52.6%
Worcester	\$109	\$11,912	\$14,747	\$15,811	\$18,308	\$23,474	\$22,088	\$27,891	\$26,976	\$27,018	\$27,221	\$27,112	24873.4%	\$203	0.8%
System	\$8,302	\$21,160	\$24,221	\$25,089	\$27,422	\$33,588	\$31,098	\$38,166	\$37,014	\$36,023	\$38,794	\$30,492	367.3%	\$2,771	7.7%

**Science and Engineering R&D Expenditures by Source
FY1995 to FY2005**

	Industry-Sponsored R&D Expenditures														
	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$4,760	\$5,738	\$5,778	\$6,236	\$5,796	\$5,535	\$6,181	\$5,417	\$3,838	\$4,914	\$4,724	-\$36	-0.8%	-\$190	-3.9%
Boston	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Dartmouth	\$248	\$325	\$412	\$831	\$771	\$652	\$517	\$2,120	\$0	\$753	\$1,252	\$1,004	404.8%	\$499	66.3%
Lowell	\$3,599	\$5,779	\$4,920	\$5,099	\$6,234	\$7,204	\$6,911	\$5,294	\$4,920	\$3,904	\$4,755	\$1,156	32.1%	\$851	21.8%
Worcester	\$2,492	\$1,146	\$2,129	\$2,631	\$4,265	\$3,467	\$3,317	\$3,275	\$4,397	\$5,904	\$8,018	\$5,526	221.7%	\$2,114	35.8%
System	\$11,099	\$12,988	\$13,239	\$14,797	\$17,066	\$16,858	\$16,926	\$16,106	\$13,155	\$15,475	\$18,749	\$7,650	68.9%	\$3,274	21.2%

	Institutional R&D Expenditures														
	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$17,326	\$17,503	\$26,022	\$26,967	\$27,796	\$31,879	\$29,538	\$35,959	\$36,490	\$38,932	\$42,887	\$25,561	147.5%	\$3,955	10.2%
Boston	\$3,359	\$3,691	\$4,000	\$4,005	\$3,997	\$4,371	\$4,663	\$4,494	\$5,815	\$5,861	\$6,731	\$3,372	100.4%	\$870	14.8%
Dartmouth	\$37	\$62	\$375	\$15	\$723	\$1,677	\$1,411	\$1,644	\$2,585	\$4,092	\$3,305	\$3,268	8832.4%	-\$787	-19.2%
Lowell	\$1,821	\$1,160	\$1,151	\$1,484	\$1,669	\$1,626	\$1,587	\$1,747	\$1,365	\$1,224	\$1,309	-\$512	-28.1%	\$85	6.9%
Worcester	\$18,116	\$6,264	\$6,485	\$6,495	\$0	\$0	\$0	\$0	\$0	\$1,106	\$1,583	-\$16,533	-91.3%	\$477	43.1%
System	\$40,659	\$28,680	\$38,033	\$38,966	\$34,185	\$39,553	\$37,199	\$43,844	\$46,255	\$51,215	\$55,815	\$15,156	37.3%	\$4,600	9.0%

	Other R&D Expenditures														
	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$6,094	\$6,535	\$6,540	\$6,499	\$6,753	\$7,980	\$8,712	\$9,001	\$8,503	\$7,893	\$9,082	\$2,988	49.0%	\$1,189	15.1%
Boston	\$1,674	\$2,096	\$2,414	\$2,975	\$2,923	\$3,098	\$3,016	\$2,678	\$3,108	\$3,186	\$2,610	\$936	55.9%	-\$576	-18.1%
Dartmouth	\$0	\$0	\$0	\$0	\$0	\$5	\$0	\$0	\$945	\$3	\$4	\$4	-	\$1	33.3%
Lowell	\$1,433	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-\$1,433	-	-	-
Worcester	\$4,754	\$3,821	\$4,635	\$4,247	\$4,951	\$6,434	\$6,383	\$7,571	\$8,368	\$8,900	\$8,847	\$4,093	86.1%	-\$53	-0.6%
System	\$13,955	\$12,452	\$13,589	\$13,721	\$14,627	\$17,517	\$18,111	\$19,250	\$20,924	\$19,982	\$20,543	\$6,588	47.2%	\$561	2.8%

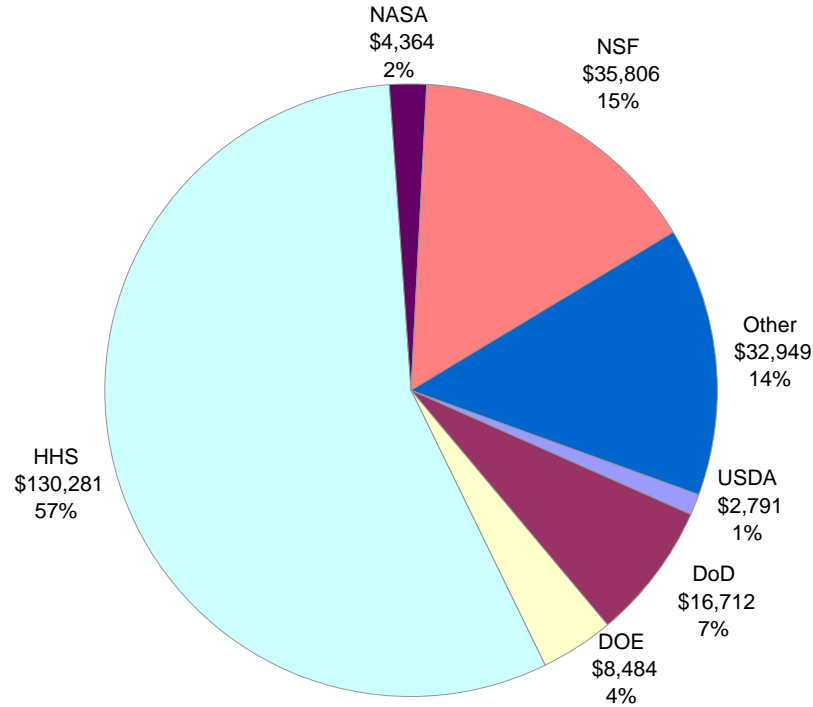
Source: Campus NSF surveys. All dollars are in thousands.

Science and Engineering R&D Expenditures
Percent Basic Research FY2005

FY05 Basic Research as a % of:		
	Federal R&D	Total R&D
Amherst	70%	70%
Boston	0%	0%
Dartmouth	31%	31%
Lowell	78%	78%
Worcester	60%	45%

Source: Campus NSF surveys.

**Science and Engineering R&D Expenditures
by Federal Government Agency Sources FY2005
UMASS System**

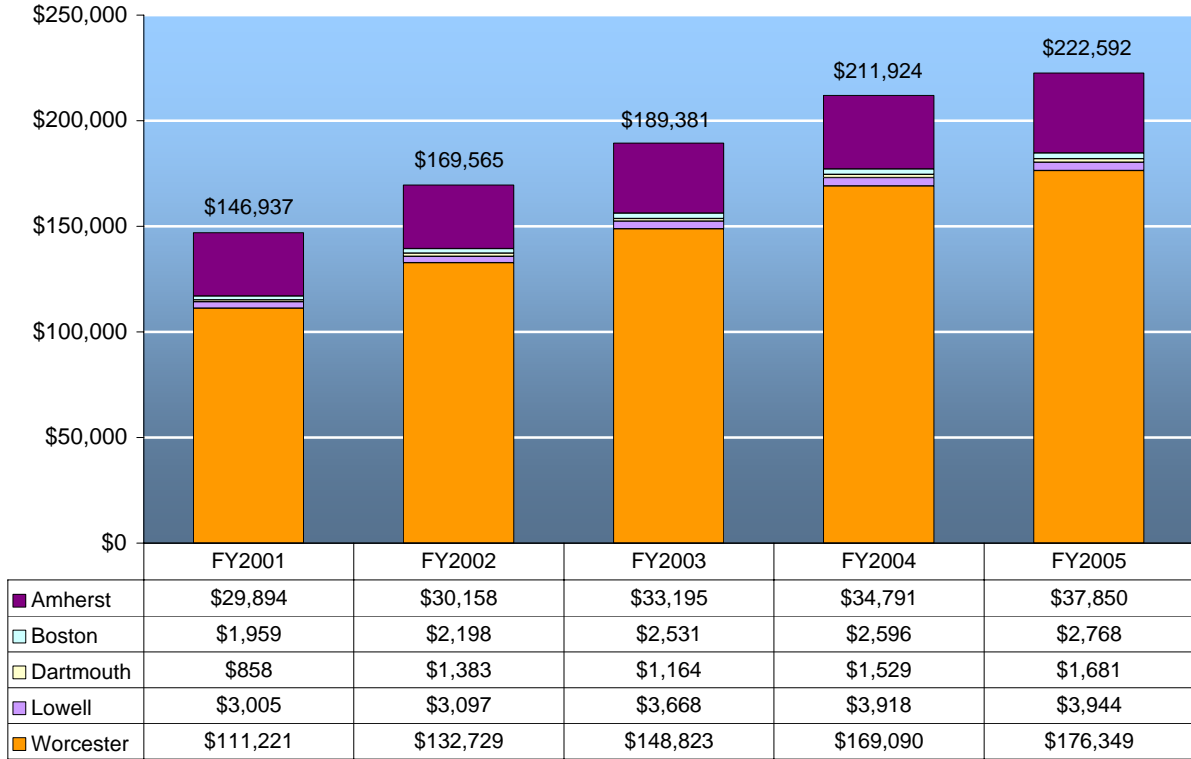


	Total Federal \$	USDA	% of Campus Total	DoD	% of Campus Total	DOE	% of Campus Total	HHS	% of Campus Total	NASA	% of Campus Total	NSF	% of Campus Total	Other	% of Campus Total
Amherst	\$ 66,921	\$ 2,649	4.0%	\$ 6,352	9.5%	\$ 6,898	10.3%	\$ 12,474	18.6%	\$ 1,651	2.5%	\$ 28,798	43.0%	\$ 8,099	12.1%
Boston	\$ 6,326	\$ 20	0.3%	\$ 411	6.5%	\$ 114	1.8%	\$ 2,799	44.2%	\$ -	0.0%	\$ 2,102	33.2%	\$ 880	13.9%
Dartmouth	\$ 9,852	\$ 58	0.6%	\$ 1,721	17.5%	\$ 9	0.1%	\$ 199	2.0%	\$ 1,005	10.2%	\$ 2,428	24.6%	\$ 4,432	45.0%
Lowell	\$ 17,608	\$ -	0.0%	\$ 6,592	37.4%	\$ 1,180	6.7%	\$ 4,365	24.8%	\$ 1,402	8.0%	\$ 1,959	11.1%	\$ 2,110	12.0%
Worcester	\$ 130,680	\$ 64	0.0%	\$ 1,636	1.3%	\$ 283	0.2%	\$ 110,444	84.5%	\$ 306	0.2%	\$ 519	0.4%	\$ 17,428	13.3%
System	\$ 231,387	\$ 2,791	1.2%	\$ 16,712	7.2%	\$ 8,484	3.7%	\$ 130,281	56.3%	\$ 4,364	1.9%	\$ 35,806	15.5%	\$ 32,949	14.2%

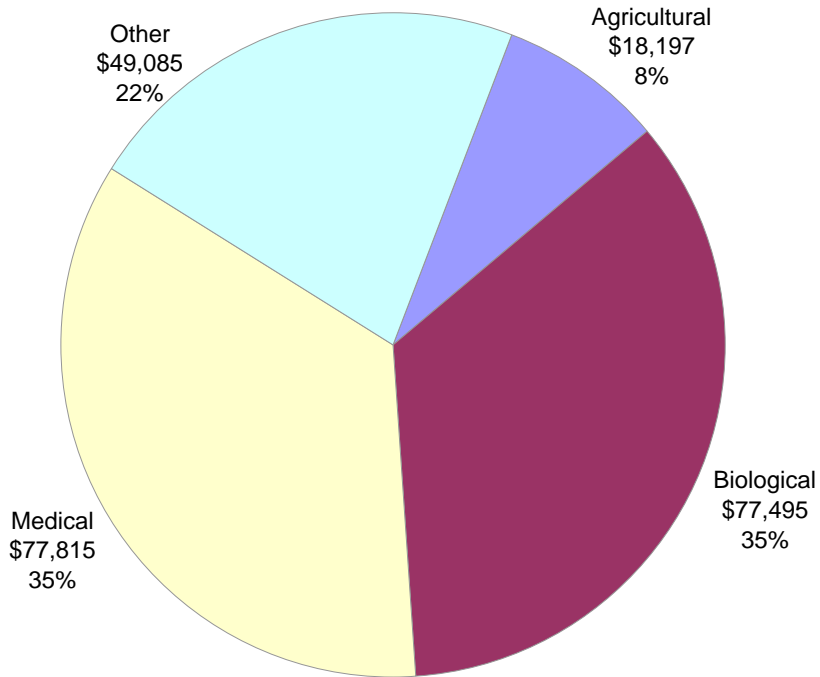
Source: Campus NSF surveys. All dollars are in thousands.

Note: HHS includes NIH

Life Sciences R&D Expenditures UMASS System FY2001 – FY2005



Life Sciences R&D Expenditures by Field FY2005 UMASS System



Source: Campus NSF surveys. All dollars are in thousands.

**Life Sciences R&D Expenditures by Field
FY1995 to FY2005**

	Life Sciences R&D Expenditures														
	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$18,640	\$20,387	\$23,134	\$26,555	\$26,596	\$32,453	\$29,894	\$30,158	\$33,195	\$34,791	\$37,850	\$19,210	103.1%	\$3,059	8.8%
Boston	\$1,757	\$2,616	\$2,394	\$2,306	\$2,422	\$2,190	\$1,959	\$2,198	\$2,531	\$2,596	\$2,768	\$1,011	57.5%	\$172	6.6%
Dartmouth	\$935	\$1,094	\$1,081	\$851	\$1,085	\$1,028	\$858	\$1,383	\$1,164	\$1,529	\$1,681	\$746	79.8%	\$152	9.9%
Lowell	\$2,032	\$2,550	\$1,693	\$931	\$1,384	\$2,205	\$3,005	\$3,097	\$3,668	\$3,918	\$3,944	\$1,912	94.1%	\$26	0.7%
Worcester	\$62,441	\$63,341	\$71,346	\$82,950	\$83,040	\$97,587	\$111,221	\$132,729	\$148,823	\$169,090	\$176,349	\$113,908	182.4%	\$7,259	4.3%
System	\$85,805	\$89,988	\$99,648	\$113,593	\$114,527	\$135,463	\$146,937	\$169,565	\$189,381	\$211,924	\$222,592	\$136,787	159.4%	\$10,668	5.0%

	Agricultural														
	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$10,276	\$12,667	\$12,689	\$16,364	\$16,051	\$13,932	\$11,275	\$11,073	\$10,762	\$15,321	\$17,017	\$6,741	65.6%	\$1,696	11.1%
Boston	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Dartmouth	\$627	\$739	\$824	\$688	\$865	\$835	\$659	\$956	\$617	\$1,064	\$1,180	\$553	88.2%	\$116	10.9%
Lowell	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Worcester	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	-
System	\$10,903	\$13,406	\$13,513	\$17,052	\$16,916	\$14,767	\$11,934	\$12,029	\$11,379	\$16,385	\$18,197	\$7,294	66.9%	\$1,812	11.1%

	Biological														
	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$6,218	\$5,493	\$7,387	\$7,256	\$7,831	\$15,612	\$15,453	\$15,949	\$20,073	\$16,148	\$16,309	\$10,091	162.3%	\$161	1.0%
Boston	\$1,487	\$1,681	\$1,524	\$1,264	\$1,150	\$1,115	\$994	\$1,060	\$1,350	\$1,485	\$1,417	-\$70	-4.7%	-\$68	-4.6%
Dartmouth	\$105	\$182	\$127	\$135	\$205	\$169	\$191	\$413	\$258	\$169	\$190	\$85	81.0%	\$21	12.4%
Lowell	\$1,012	\$979	\$636	\$487	\$675	\$622	\$745	\$658	\$970	\$1,200	\$1,036	\$24	2.4%	-\$164	-13.7%
Worcester	\$19,740	\$18,338	\$21,357	\$29,038	\$30,079	\$32,296	\$35,724	\$44,810	\$50,967	\$57,951	\$58,543	\$38,803	196.6%	\$592	1.0%
System	\$28,562	\$26,673	\$31,031	\$38,180	\$39,940	\$49,814	\$53,107	\$62,890	\$73,618	\$76,953	\$77,495	\$48,933	171.3%	\$542	0.7%

**Life Sciences R&D Expenditures by Field
FY1995 to FY2005**

	Medical														
	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$0	\$0	\$0	\$0	\$0	\$450	\$617	\$905	\$884	\$1,062	\$1,804	\$1,804	-	\$742	69.9%
Boston	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Dartmouth	\$0	\$173	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	-	-	-
Lowell	\$687	\$591	\$405	\$387	\$481	\$1,475	\$1,955	\$2,266	\$2,681	\$2,715	\$2,886	\$2,199	320.1%	\$171	6.3%
Worcester	\$22,911	\$25,196	\$27,134	\$29,843	\$31,531	\$40,328	\$44,349	\$51,616	\$56,548	\$68,779	\$73,125	\$50,214	219.2%	\$4,346	6.3%
System	\$23,598	\$25,960	\$27,539	\$30,230	\$32,012	\$42,253	\$46,921	\$54,787	\$60,113	\$72,556	\$77,815	\$54,217	229.8%	\$5,259	7.2%

	Other Life Sciences														
	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	10-Year Change FY95 - FY05		1-Year Change FY04 - FY05	
												\$	%	\$	%
Amherst	\$2,146	\$2,227	\$3,058	\$2,935	\$2,714	\$2,459	\$2,549	\$2,231	\$1,476	\$2,260	\$2,720	\$574	26.7%	\$460	20.4%
Boston	\$270	\$935	\$870	\$1,042	\$1,272	\$1,075	\$965	\$1,138	\$1,181	\$1,111	\$1,351	\$1,081	400.4%	\$240	21.6%
Dartmouth	\$203	\$0	\$130	\$28	\$15	\$24	\$8	\$14	\$289	\$296	\$311	\$108	53.2%	\$15	5.1%
Lowell	\$333	\$980	\$652	\$57	\$228	\$108	\$305	\$173	\$17	\$3	\$22	-\$311	-93.4%	\$19	633.3%
Worcester	\$19,790	\$19,807	\$22,855	\$24,069	\$21,430	\$24,963	\$31,148	\$36,303	\$41,308	\$42,360	\$44,681	\$24,891	125.8%	\$2,321	5.5%
System	\$22,742	\$23,949	\$27,565	\$28,131	\$25,659	\$28,629	\$34,975	\$39,859	\$44,271	\$46,030	\$49,085	\$26,343	115.8%	\$3,055	6.6%

Source: Campus NSF surveys and WebCASPAR. All dollars are in thousands.