



WPI

**WORCESTER POLYTECHNIC INSTITUTE
REPORT OF SPONSORED PROGRAM ACTIVITY**

for the Period

July 1, 2012 to June 30, 2013

Prepared by the

Office of Sponsored Programs

January 2014

(For WPI Use Only)

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Introduction

This report, published annually by the Office of Sponsored programs, aims to provide a summary of key data related to WPI's extramural funding activities, including proposals submitted, awards received, and funds expended.

As with prior years, this report includes only those proposals and awards administered by OSP. Proposals and awards that are exclusively the purview of the University Institutional Advancement Office, the Projects Program, or other University offices, are not included here. Every effort has been made to ensure the accuracy of data presented, but should any errors be noted, please let us know so that we may make corrections to the report.

We welcome your feedback on this report. Comments and suggestions can be submitted via e-mail to Gabe Johnson, Associate Director, Post-Award & Compliance (gjohnson@wpi.edu).

Executive Summary

This Annual Report consists of quantitative information compiled from the Offices of Sponsored Programs and Research Accounting and identifies trends and financial aspects of the basic grant activity at WPI. It does not measure the quality of or scholarly merit associated with this activity as may be demonstrated, for example, by peer-reviewed publications, honors, and other such indications. This report also does not significantly address compliance activities associated with sponsored programs.

In FY13 WPI achieved unprecedented positive results by most extrinsic measures. Total FY13 award volume of \$25.1M was an increase of 38.4% over FY12 continuing a progression of successively higher levels of award funding beginning in FY2009. The award levels include transferred grants accompanying new faculty hires. At the same time, FY13 proposal activity was essentially flat in number of proposals. Total dollar volume of proposals decreased following a pattern of two year cycles within a five year overall growth trend. Sponsor use of pre-proposals to limit full proposal submission volume in recent years also contributed to reductions in full proposal measures.

Overall new funding in FY13 continued the historically heavy reliance on federal funding (92%), followed by foundations and private non-profits (5%), and industry (2%). WPI's award base diversified in FY13 relative to FY12, mostly in NSF dollar volume share (23% vs. 50%, respectively), which was offset by FY13 gains in DOD, DOE, and NIH awards. Congressionally funded earmarks were absent in FY13. WPI prime awards with sub-awards issued to collaborating organizations increased in FY13, reflecting the presence of larger, multi-organizational collaborative grants.

Highlights among the several major and notable grants received in FY13 were:

1. **\$4M** Sisson (PI), ARL - *Center for Thermo-mechanical Processing of Materials by Design*; Co-PIs: Apelian, Gatsonis, Liang, Makhlouf; multiple sub-awardees.
2. **\$4M** Ma (PI), DOE - *Engineering Design of Advanced H₂ - CO₂ and Pd/Alloy Composite Membrane Separations and Process Intensification*; Co-PIs: Dixon, Guazzone, Kazantzis; multiple sub-awardees.
3. **\$1.9M** Chon (PI), USAMRMC - *Wearable Wireless Sensor For Multi-Scale Physiological Monitoring*; Co-PI: Mendelson
4. **\$998K** Cyganski (PI), FEMA/DHS - *Improving Firefighter Health and Safety With Uninterrupted Real Time Personal Sensors*; Co-PIs: Duckworth, Notarianni
5. **\$496K** Fischer (PI), NIH R01 - *MR-Guided Precision Conformal Ablation Therapy for Brain Tumors*; Co-PIs: Ludwig, Wu; multiple sub-awardees. (Year 1 of 5)
6. **\$150K** Vidali (PI), NSF CAREER - *Role of Plant Myosin XI in Polarized Secretion and Actin Dynamics*. (Year 1 of 5)

WPI's overall cost share level in awards received was \$1.8M, up 76%, rising both with the significantly higher award levels received in FY13 and increased levels of academic year faculty release time, Ph.D. tuition and IDC cost share. Fully funded awards (i.e. without cost share) remained at 87% of total award volume as in FY12. WPI maintained its effective IDC recovery rate of 47% on its modified total direct cost base in FY13 compared to its full federally approved IDC rate of 58.2%.

FY13 expenditures at \$18.4M increased by 24%, and the indirect cost recovery (IDC) level at \$4.3M was up 10% over FY12, representing a return to earlier growth trends in expenditures

and IDC recovery after a step back in FY12. Sub-award expenditures at \$2.8M more than tripled in FY13 relative to FY12, contributing to lower gains in IDC recovery relative to expenditure gains.

Behind the institutional numbers above, it should be noted that new awards in Engineering rebounded 182% to \$19.4M in FY13 over a slow FY12 while A&S awards were down substantially in FY13 following a strong FY12.

Faculty productivity also gained:

- 43% of T/TT faculty received awards in FY13 (28% of A&S, 64% Engineering, 39% Business).
- 51% of A&S faculty submitted proposals in FY13.
- 84% of Engineering faculty submitted proposals in FY13.
- Three-fourths (74.5%) of STEM faculty submitted proposals.
- Tenure-track (i.e., "junior") faculty received 32% of all new awards (by number), totaling \$4.65M.
- Grant proposal success rate has been steady at 14% by dollar award volume and 31% by number of received awards.
- Award dollar volume per T/TT faculty increased 50% in FY13 to \$100K.
- Award dollar volume per funded T/TT faculty was up 30% to \$249K in FY13.

In FY13, by the numbers, the WPI research enterprise demonstrated both resilience in an uncertain funding climate and renewed commitment to robust expenditure activity that drives key ranking measures such as annual PhD graduation rates. Important development milestones were met. For example, NIH awards tripled in FY13, advancing a long standing WPI life sciences research development goal, achieved in part through new faculty hires in BME.

With increased incentives in place such as a higher fully funded program PhD tuition reduction and greater discretionary investment likely in research development activities, WPI sponsored program performance is poised for another record year in FY14.

1. Summary of Sponsored Programs Activity

Figure 1-1: Awards, Proposals and Expenditures by Dean/Department

Worcester Polytechnic Institute										
Comparative Summary of Sponsored Program Activity by Department										
July 1, 2012 - June 30, 2013 and July 1, 2011 - June 30, 2012										
Department	Award Actions Received				Proposals Submitted				Expenditures	
	FY 2013		FY 2012		FY 2013		FY 2012		FY 2013	FY 2012
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	Amount	Amount
Arts & Sciences										
Biology & Biotechnology	10	\$ 376,630	8	\$ 114,481	18	\$ 5,993,431	18	\$ 16,435,762	\$ 322,455	\$ 460,297
Chemistry & Biochemistry	2	244,811	10	2,595,186	18	17,281,122	16	7,423,184	1,864,274	1,735,894
Computer Science	20	2,052,294	23	4,017,842	54	33,747,223	42	64,805,823	3,086,398	2,969,987
Humanities & Arts	3	114,470	0	0	3	988,816	6	1,834,968	77,924	52,318
Mathematical Sciences	9	1,045,199	11	1,151,024	15	3,527,188	16	11,279,861	1,029,556	1,136,064
Physics	3	334,797	2	260,916	10	2,262,065	16	19,359,682	265,292	279,597
Social Science & Policy Studies	2	477,229	5	1,157,857	9	2,866,317	13	7,525,562	756,451	1,192,292
Arts & Sciences Subtotals	49	4,645,430	59	9,297,306	127	66,666,162	127	128,664,842	7,402,350	7,826,449
Business	2	42,000	2	1,461,791	9	3,132,349	6	3,289,525	309,703	453,290
Engineering										
Biomedical Engineering	10	2,757,851	10	553,400	25	14,486,641	35	17,810,952	845,897	322,990
Chemical Engineering	7	4,524,504	9	1,755,878	25	8,619,898	17	7,246,250	1,477,771	1,693,302
Civil & Environmental Engineering	6	776,787	2	101,584	32	7,361,718	19	3,801,803	240,657	176,211
Electrical & Computer Engineering	24	3,362,075	17	2,132,758	44	19,609,779	40	14,946,906	1,517,774	1,344,522
Fire Protection Engineering	9	878,242	4	386,797	10	3,046,705	15	2,959,399	865,941	430,949
Mechanical Engineering	27	7,090,800	29	1,952,268	64	22,436,588	70	26,397,307	5,114,979	2,153,196
Engineering Subtotals	83	19,390,259	71	6,882,685	200	75,561,329	196	73,162,617	10,063,019	6,121,170
Interdisciplinary & Global Studies	2	293,290	3	180,131	2	19,988	5	985,392	106,417	74,174
Other	10	750,084	5	328,000	7	2,700,043	6	1,276,084	498,450	344,592
Grand Totals	146	\$ 25,121,063	140	\$ 18,149,913	345	\$ 148,079,871	340	\$ 207,378,460	\$ 18,379,939	\$ 14,819,675

Figure 1-2: Summary of FY2013 Activity (with comparative data for FY2012)

	<u>FY2013</u>	<u>FY2012</u>	<u>% Change</u>
1. Number of Proposal Submissions	345	340	1.5%
2. \$ Composition of Proposals Submitted			
Direct Costs	\$ 109,625,598	\$ 157,246,415	-30.3%
Indirect Costs	<u>\$ 38,454,273</u>	<u>\$ 50,132,046</u>	-23.3%
Totals Requested	\$ 148,079,871	\$ 207,378,461	-28.6%
Cost Sharing	<u>\$ 5,781,880</u>	<u>\$ 5,067,393</u>	14.1%
Total Project Costs Proposed	\$ 153,861,751	\$ 212,445,854	-27.6%
3. Number of Proposals (Net of Congressional Funding)	345	340	1.5%
4. \$ Volume of Proposals (Net of Congressional Funding)			
Direct Costs	\$ 109,625,598	\$ 157,246,415	-30.3%
Indirect Costs	<u>\$ 38,454,273</u>	<u>\$ 50,132,046</u>	-23.3%
Totals Requested	\$ 148,079,871	\$ 207,378,461	-28.6%
Cost Sharing	<u>\$ 5,781,880</u>	<u>\$ 5,067,393</u>	14.1%
Total Project Costs Proposed	\$ 153,861,751	\$ 212,445,854	-27.6%
5. Number of Award Actions	146	140	4.3%
6. \$ Composition of Award Actions Received			
Direct Costs	\$ 19,793,273	\$ 13,471,025	46.9%
Indirect Costs	<u>\$ 5,327,790</u>	<u>\$ 4,678,888</u>	13.9%
Total Award \$ Received	\$ 25,121,063	\$ 18,149,913	38.4%
Cost Sharing	<u>\$ 1,797,581</u>	<u>\$ 1,022,471</u>	75.8%
Total Project Costs	\$ 26,918,644	\$ 19,172,384	40.4%
7. Number of Award Actions (Net of Congressional Funding)	146	139	5.0%
8. \$ Composition of Awards (Net of Congressional Funding)			
Direct Costs	\$ 19,793,273	\$ 12,430,692	59.2%
Indirect Costs	<u>\$ 5,327,790</u>	<u>\$ 4,321,221</u>	23.3%
Total Award \$ Received	\$ 25,121,063	\$ 16,751,913	50.0%
Cost Sharing	<u>\$ 1,797,581</u>	<u>\$ 1,022,471</u>	75.8%
Total Project Costs (Net of Congressional Funding)	\$ 26,918,644	\$ 17,774,384	51.4%
9. Selected Proposal Coordination Form (PCF) "Special Considerations" Summary Data:			
a. Proposals Involving Human Participants	48	48	0.0%
b. Proposals Involving Use of Animals	20	25	-20.0%
c. Proposals Involving Hazardous Materials	31	10	210.0%
d. Proposals Requesting Support for Research Assistants	237	213	11.3%
e. Proposals Requesting Support for Non-Student Personnel	56	89	-37.1%
f. Proposals Including Funds for Consultants/Subcontractors	44	80	-45.0%
g. Proposals with Academic Year Faculty Salary Budgeted	37	49	-24.5%
h. Proposals Requesting Equipment Funds	66	122	-45.9%

2. Award Activity for Fiscal Year 2013

Figure 2-1: Awards by Dean/Department

Figure 2-1 below provides departmental data for award actions received in fiscal year 2013. It also includes summary information regarding indirect cost rates and cost sharing on awards (unaudited - for comparison purposes only) as well as a breakdown at the bottom of the report that shows total University award information and awards for science, technology, engineering and mathematics (STEM) departments only.

“Awards” are defined as funds which have been actually obligated and released by the sponsor. Some grants are awarded in yearly increments, subject to satisfactory progress and/or availability of funds. In such cases, only those increments actually received by WPI are counted as awards.

**Worcester Polytechnic Institute
Summary of Award Actions
July 1, 2012 to June 30, 2013**

<u>Department</u>	<u>No.</u>	<u>Direct Costs</u>	<u>Indirect Costs</u>	<u>Total Costs</u>	<u>Average Award Amount</u>	<u>Average Indirect Cost Rate¹</u>	<u>Actual Cost Sharing</u>	<u>Average Cost Sharing per Award</u>	<u>Cost Sharing Effective Rates²</u>	<u>Excess of Indirect Costs Over Cost Sharing</u>
Arts & Sciences										
BBT	10	\$ 249,283	\$ 127,347	\$ 376,630	\$ 37,663	51.1%	\$ -	\$ -	0.0%	\$ 127,347
CBC	2	221,739	23,072	244,811	122,406	10.4%	58,200	29,100	23.8%	(35,128)
CS	20	1,552,601	499,693	2,052,294	102,615	32.2%	108,988	5,449	5.3%	390,705
H&A	3	107,472	6,998	114,470	38,157	6.5%	-	-	0.0%	6,998
MA	9	785,550	259,649	1,045,199	116,133	33.1%	15,882	1,765	1.5%	243,767
PH	3	225,481	109,316	334,797	111,599	48.5%	-	-	0.0%	109,316
SSPS	2	312,309	164,920	477,229	238,615	52.8%	-	-	0.0%	164,920
A&S Totals	49	3,454,435	1,190,995	4,645,430	94,804.69	33.5%	183,070	5,188	3.9%	1,007,925
Business	2	42,000	-	42,000	21,000	0.0%	-	-	0.0%	-
Engineering										
BME	10	2,076,537	681,314	2,757,851	275,785	32.8%	63,503	6,350	2.3%	617,811
CHE	7	3,620,717	903,787	4,524,504	646,358	25.0%	1,057,383	151,055	23.4%	(153,596)
CEE	6	551,636	225,151	776,787	129,465	40.8%	26,961	4,494	3.5%	198,190
ECE	24	2,371,742	990,333	3,362,075	140,086	41.8%	36,996	1,542	1.1%	953,337
FPE	9	750,924	127,318	878,242	97,582	17.0%	92,592	10,288	10.5%	34,726
ME	27	5,956,279	1,134,521	7,090,800	262,622	19.0%	93,037	3,446	1.3%	1,041,484
Engineering Totals	83	15,327,835	4,062,424	19,390,259	233,617.58	29.4%	1,370,472	177,175	7.1%	2,691,952
IGSD	2	237,000	56,290	293,290	146,645	24.0%	212,977	106,489	73.0%	(156,687)
Corporate & Professi	1	135,084		135,084	135,084	1.5%	-	-	0.0%	-
K-12 Outreach	2	246,309	3,691	250,000	125,000	6.8%	75,214	37,607	30.1%	(71,523)
Office of Multicultur:	3	211,610	14,390	226,000	75,333	0.0%	32,608	10,869	14.4%	(18,218)
Student Developmer	1	50,000		50,000	50,000	0.0%	29,100	29,100	58.2%	(29,100)
Dean of Undergradu:	1	2,000		2,000	2,000	0.0%	1,184	1,184	59.2%	(1,184)
Associate Provost - O	2	87,000		87,000	43,500	0.0%	31,062	15,531	35.7%	(31,062)
Other	10	732,003	18,081	750,084	75,008.40	1.4%	169,168	15,715	22.6%	(151,087)
Totals	146	19,793,273	5,327,790	25,121,063	172,062	27.3%	1,935,687	304,567	7.7%	3,392,103
STEM Departments	129	18,674,798	5,246,421	23,921,219	185,436	33.7%	1,553,542	12,043	6.5%	3,692,879

¹ Average indirect cost rates are expressed as a simple percentage of the Total Direct Costs - actual rates will be somewhat higher based on MTDC

² Cost sharing effective rates are expressed as a simple percentage of Total Costs

Long-term historical award trends (institutional and department-specific) can be found in Appendix 2.

Figure 2-2: Awards by Sponsor

Figure 2.2 below provides a comparative breakdown by major sponsor in terms of numbers and dollar amounts of awards received in fiscal years 2013 and 2012.

Worcester Polytechnic Institute								
Comparative Summary of Awards Received by Sponsor								
FY2013 and FY2012								
Sponsor	FY2013				FY2012			
	No.	%	Amount	%	No.	%	Amount	%
Federal								
Air Force	6	4.1%	\$ 432,054	1.7%	6	4.3%	\$ 429,292	2.4%
Army	3	2.1%	\$ 6,037,029	24.0%	5	3.6%	\$ 1,754,327	9.7%
DARPA	1	0.7%	\$ 44,031	0.2%	5	3.6%	\$ 513,470	2.8%
Department of Energy	5	3.4%	\$ 4,371,717	17.4%	6	4.3%	\$ 1,532,729	8.4%
Department of Homeland Security	5	3.4%	\$ 1,244,004	5.0%	1	0.7%	\$ 138,698	0.8%
DHHS	10	6.8%	\$ 1,804,538	7.2%	7	5.0%	\$ 660,272	3.6%
NASA	6	4.1%	\$ 166,527	0.7%	3	2.1%	\$ 217,432	1.2%
Navy	9	6.2%	\$ 878,091	3.5%	3	2.1%	\$ 172,230	0.9%
NIST	2	1.4%	\$ 146,473	0.6%	2	1.4%	\$ 155,574	0.9%
NSF	47	32.2%	\$ 5,888,155	23.4%	53	37.9%	\$ 9,148,926	50.4%
U.S. Dept. of Veterans Affairs	2	1.4%	\$ 354,357	1.4%	2	1.4%	\$ 338,273	1.9%
US Dept. of Education	5	3.4%	\$ 834,734	3.3%	5	3.6%	\$ 1,058,182	5.8%
US Dept. of Interior	1	0.7%	\$ 397,055	1.6%	0	0.0%	\$ -	0.0%
US State Department	1	0.7%	\$ 224,377	0.9%	0	0.0%	\$ -	0.0%
Other Federal	5	3.4%	\$ 230,154	0.9%	6	4.3%	\$ 174,495	1.0%
<i>Subtotal - Federal</i>	<i>108</i>	<i>74.0%</i>	<i>\$ 23,053,296</i>	<i>91.8%</i>	<i>104</i>	<i>74.3%</i>	<i>\$ 16,293,900</i>	<i>89.8%</i>
Commonwealth of Massachusetts	3	2.1%	\$ 137,033	0.5%	5	3.6%	\$ 265,991	1.5%
Corporations	14	9.6%	\$ 489,291	1.9%	20	14.3%	\$ 797,207	4.4%
Foundations	4	2.7%	\$ 139,000	0.6%	4	2.9%	\$ 502,043	2.8%
Foreign Organizations	4	2.7%	\$ 259,836	1.0%	2	1.4%	\$ 138,660	0.8%
Private Organizations	13	8.9%	\$ 1,042,607	4.2%	5	3.6%	\$ 152,112	0.8%
<i>Subtotal - Non Federal</i>	<i>38</i>	<i>26.0%</i>	<i>\$ 2,067,767</i>	<i>8.2%</i>	<i>36</i>	<i>25.7%</i>	<i>\$ 1,856,013</i>	<i>10.2%</i>
Grand Totals	146	100%	\$ 25,121,063	100%	140	100%	\$ 18,149,913	100%

3. Expenditure Activity for Fiscal Year 2013

Figure 3-1: Sponsored Program Expenditures by Dean/Department

Worcester Polytechnic Institute								
Summary of Sponsored Program Expenditure Activity by Department								
July 1, 2012 - June 30, 2013								
Department	Compensation & Benefits	Equipment, Supplies & Materials	Travel	Subawards	Other Direct Costs	F&A Costs	Cost Sharing	Totals
Arts & Sciences								
BBT	124,633	49,644	2,680	-	46,441	101,294	(2,237)	322,455
CBC	856,268	113,014	22,083	229,604	108,677	557,115	(22,486)	1,864,274
CS	1,360,127	87,600	74,026	39,850	930,053	981,305	(386,563)	3,086,398
H&A	35,429	11,975	14,534	-	7,619	8,367	-	77,924
MA	399,820	1,406	38,039	152,604	191,262	264,060	(17,634)	1,029,556
PH	152,900	19,482	1,126	-	-	91,783	-	265,292
SSPS	<u>385,271</u>	<u>10,774</u>	<u>33,884</u>	<u>77,610</u>	<u>50,058</u>	<u>198,853</u>	<u>-</u>	<u>756,451</u>
A&S Totals	3,314,448	293,896	186,372	499,668	1,334,109	2,202,777	(428,919)	7,402,351
Business	137,627	3,087	5,782	62,302	14,477	86,428	-	309,703
Engineering								
BME	402,710	72,920	13,357	-	184,971	316,104	(144,165)	845,897
CHE	547,491	60,869	31,893	124,121	397,105	375,686	(59,394)	1,477,771
CEE	93,069	84,435	2,460	1,131	2,646	56,917	-	240,657
ECE	695,026	98,898	78,204	23,928	187,866	459,342	(23,127)	1,520,138
FPE	419,743	113,322	21,541	-	124,919	258,458	(74,406)	863,577
ME	<u>1,314,454</u>	<u>531,037</u>	<u>98,683</u>	<u>1,899,961</u>	<u>393,389</u>	<u>950,335</u>	<u>(72,879)</u>	<u>5,114,979</u>
Engineering Totals	3,472,493	961,481	246,137	2,049,140	1,290,896	2,416,841	(373,971)	10,063,018
IGSD	69,400	188	14,209	-	9,140	13,651	(171)	106,417
Other	<u>42,679</u>	<u>1,076</u>	<u>45,120</u>	<u>228,625</u>	<u>196,603</u>	<u>41,110</u>	<u>(56,763)</u>	<u>498,450</u>
Totals	<u>\$ 7,036,647</u>	<u>\$ 1,259,728</u>	<u>\$ 497,621</u>	<u>\$ 2,839,734</u>	<u>\$ 2,845,226</u>	<u>\$ 4,760,807</u>	<u>\$ (859,824)</u>	<u>\$ 18,379,939</u>
STEM Depts	\$ 6,751,512	\$ 1,243,401	\$ 417,975	\$ 2,548,808	\$ 2,617,387	\$ 4,611,251	\$ (802,890)	\$ 17,387,445

Figure 3-2: Comparison of FY 2013 and FY 2012

**Worcester Polytechnic Institute
Comparative Summary of Sponsored Program Expenditure Activity
FY2013 and FY2012**

<u>Element of Cost</u>	<u>FY2013 Expenses</u>	<u>FY2012 Expenses</u>	<u>% Change</u>
Salaries & Wages	\$6,151,938	\$5,880,805	4.6%
Fringe Benefits	884,709	868,189	1.9%
Equipment	594,427	301,477	97.2%
Other Direct Expenses	<u>6,847,882</u>	<u>4,099,691</u>	67.0%
Subtotal Direct Program Costs	\$14,478,956	\$11,150,162	29.9%
Indirect Costs	<u>4,760,807</u>	<u>4,066,577</u>	17.1%
Total Program Costs	\$19,239,763	\$15,216,739	26.4%
Less: WPI Cost Sharing ¹	<u>(859,824)</u>	<u>(397,064)</u>	116.5%
Total Sponsored Program Costs	<u><u>\$18,379,939</u></u>	<u><u>\$14,819,675</u></u>	24.0%

¹Due to the method used for recording expenditures, a breakdown of WPI cost sharing to net against direct sponsored program costs by category is not possible without further analysis.

4. Proposal Activity for Fiscal Year 2013

Figure 4-1: Proposals by Dean/Department

Figure 4-1 below provides a departmental summary of proposal submission statistics for fiscal year 2013. This summary includes information about requested direct and indirect costs, average proposal amounts and indirect cost rates requested, and cost sharing on proposal submissions. There are totals shown at the bottom of the schedule for both the entire University and for science, technology, engineering and mathematics (STEM) departments only.

Worcester Polytechnic Institute Summary of Proposal Activity July 1, 2012 to June 30, 2013										
Department	No.	Proposal Amounts			Average Proposal Amount	Average Indirect Cost Rate ¹	Actual Cost Sharing	Average Cost Sharing per Proposal	Cost Sharing Effective Rates ²	Excess of Indirect Costs Over Cost Sharing
		Direct Costs	Indirect Costs	Total Costs						
Arts & Sciences										
BBT	18	\$ 4,298,446	\$ 1,694,984	\$ 5,993,431	\$ 332,968	39.4%	\$ 224,301	\$ 74,767	3.7%	\$ 1,469,413
CBC	18	12,746,497	4,534,625	17,281,122	960,062	35.6%	1,221,516	203,586	7.1%	3,313,109
CS	54	24,883,078	8,864,145	33,747,223	624,949	35.6%	676,524	112,754	2.0%	8,187,621
H&A	3	707,876	280,940	988,816	329,605	39.7%	118,285	59,143	12.0%	162,655
MA	15	2,602,911	924,277	3,527,188	235,146	35.5%	155,819	155,819	4.4%	768,458
PH	10	1,639,014	623,051	2,262,065	226,207	38.0%	337,415	168,708	14.9%	285,636
SSPS	9	1,856,444	1,009,873	2,866,317	318,480	54.4%	-	-	0.0%	1,009,873
A&S Totals	127	48,734,266	17,931,895	66,666,162	524,930.00	36.8%	2,733,860	136,693	4.1%	15,196,765
Business	9	2,161,226	971,124	3,132,349	348,039	44.9%	-	-	0.0%	971,124
Engineering										
BME	25	10,453,633	4,033,009	14,486,641	579,466	38.6%	417,481	69,580	2.9%	3,615,528
CHE	25	6,529,050	2,090,847	8,619,898	344,785	32.0%	971,376	97,138	11.3%	1,119,471
CEE	32	5,512,214	1,849,504	7,361,718	230,054	33.6%	257,680	51,536	3.5%	1,591,824
ECE	44	15,075,573	4,534,206	19,609,779	444,540	32.3%	627,394	125,479	3.2%	3,995,694
FPE	10	2,470,558	576,147	3,046,705	304,671	23.3%	134,310	67,155	4.4%	441,837
ME	64	16,313,545	6,123,043	22,436,588	350,572	37.5%	444,173	63,453	2.0%	5,678,870
Engineering Totals	200	56,354,573	19,206,756	75,561,329	377,555.00	34.7%	2,852,414	81,498	3.8%	16,443,224
IGSD	2	14,415	5,573	19,988	9,994	38.7%	-	-	0.0%	5,573
Other	7	2,361,118	338,925	2,700,043	385,720.43	38.7%	195,606	27,944	0.1%	143,319
Totals	345	109,625,598	38,454,273	148,079,871	429,217	35.1%	5,781,880	16,759	0	32,672,393
STEM Departments	324	104,380,963	36,857,711	141,238,675	435,922	36.3%	5,467,989	16,877	5.0%	31,477,334

¹ Average indirect cost rates are expressed as a simple percentage of the Total Direct Costs - actual rates will be somewhat higher based on MTDC

² Cost sharing effective rates are expressed as a simple percentage of Total Costs

Long-term historical proposal trends (institutional and department-specific) can be found in Appendix 2.

Figure 4-2: Proposals by Sponsor

Figure 4.2 below provides a comparative breakdown by major sponsor in terms of numbers and dollar amounts of proposals submitted in fiscal years 2013 and 2012.

Worcester Polytechnic Institute								
Comparative Summary of Proposal Submissions by Sponsor								
FY2013 and FY2012								
Sponsor	FY2013				FY2012			
	No.	%	Amount	%	No.	%	Amount	%
Federal								
Air Force	6	1.7%	\$ 1,060,459	0.7%	8	2.4%	\$ 1,165,395	0.6%
Army	7	2.0%	2,349,700	1.6%	11	3.2%	10,451,919	5.0%
DARPA	4	1.2%	1,789,690	1.2%	11	3.2%	12,223,545	5.9%
US Dept. of Education	3	0.9%	5,280,208	3.6%	7	2.1%	19,315,986	9.3%
Department of Energy	13	3.8%	16,344,645	11.0%	9	2.6%	2,562,466	1.2%
Health & Human Services	40	11.6%	33,956,146	22.9%	41	12.1%	41,486,728	20.0%
Homeland Security	4	1.2%	2,367,899	1.6%	6	1.8%	1,791,430	0.9%
NASA	6	1.7%	962,453	0.6%	6	1.8%	600,958	0.3%
NEH	2	0.6%	588,000	0.4%	2	0.6%	591,217	0.3%
National Science Foundation	159	46.1%	67,484,071	45.6%	131	38.5%	78,602,098	37.9%
Navy	8	2.3%	3,742,515	2.5%	16	4.7%	4,869,997	2.3%
NIST	1	0.3%	32,724	0.0%	1	0.3%	49,086	0.0%
Dept. of Transportation	5	1.4%	743,054	0.5%	1	0.3%	68,325	0.0%
U.S. Dept. of Veterans Affairs	2	0.6%	345,891	0.2%	2	0.6%	53,801	0.0%
Other Federal	16	4.6%	2,122,034	1.4%	15	4.4%	4,020,528	1.9%
<i>Subtotal - Federal</i>	<i>276</i>	<i>80.0%</i>	<i>\$139,169,489</i>	<i>94.0%</i>	<i>267</i>	<i>78.5%</i>	<i>\$177,853,479</i>	<i>85.8%</i>
Commonwealth of Massachusetts	4	1.2%	\$ 166,831	0.1%	6	1.8%	\$ 21,197,846	10.2%
Corporations	19	5.5%	743,043	0.5%	32	9.4%	2,443,379	1.2%
Foundations	9	2.6%	2,086,260	1.4%	13	3.8%	1,954,707	0.9%
Foreign Organizations	9	2.6%	1,648,481	1.1%	1	0.3%	100,000	0.0%
Private Organizations	24	7.0%	3,008,912	2.0%	19	5.6%	1,249,049	0.6%
Public Organizations (local gov't)	4	1.2%	1,256,855	0.8%	2	0.6%	2,580,000	1.2%
<i>Subtotal - Non Federal</i>	<i>69</i>	<i>20.0%</i>	<i>8,910,382</i>	<i>6.0%</i>	<i>73</i>	<i>21.5%</i>	<i>29,524,981</i>	<i>14.2%</i>
Grand Totals	345	100.0%	\$148,079,871	100.0%	340	100.0%	\$207,378,460	100.0%

Figure 4-3: Preliminary Proposal Activity

In recent years, preliminary proposals have become a more important aspect of our sponsored programs activities, particularly as some sponsors (including NSF) have begun to require pre-proposals in an effort to reduce the number of full proposals submitted. We record here the number of pre-proposals submitted by each dean/department, along with the estimated dollar value, if applicable. It should be noted that the majority of pre-proposals are submitted without budgets. Detailed analysis of their financial impact is therefore not feasible.

**Worcester Polytechnic Institute
Summary of Pre-Proposal Activity
July 1, 2012 to June 30, 2013**

<u>Department</u>	<u>No.</u>	<u>Estimated Total Cost (if applicable)</u>
Arts & Sciences		
BBT	2	
CBC	2	978,933
CS	9	
H&A	1	
MA	-	
PH	2	
SSPS	2	
Other	1	2,600,000
A&S Totals	19	978,933
Business	-	
Engineering		
BME	3	
CHE	2	
CEE	1	
ECE	3	
FPE	2	
ME	9	3,800,000
Engineering Totals	20	3,800,000
IGSD	-	
Other	<u>1</u>	
Totals	<u>40</u>	<u>4,778,933</u>
STEM Departments	38	4,778,933

5. Faculty Participation and Productivity

This section contains information relating to the faculty’s level of productivity as it pertains to sponsored programs. Productivity, in this sense, is the rate at which faculty receive awards and/or participate in proposals, whether as a principal investigator or as a co-principal investigator.

Figure 5-1: Faculty and Non-Faculty Activity

The following pie charts show the distribution of FY 2013 proposals and awards among the various classes of employees. Faculty, primarily tenured and tenure-track faculty, account for most proposals and awards. (Note: the following charts are based on the employee classification of the principal investigator.)

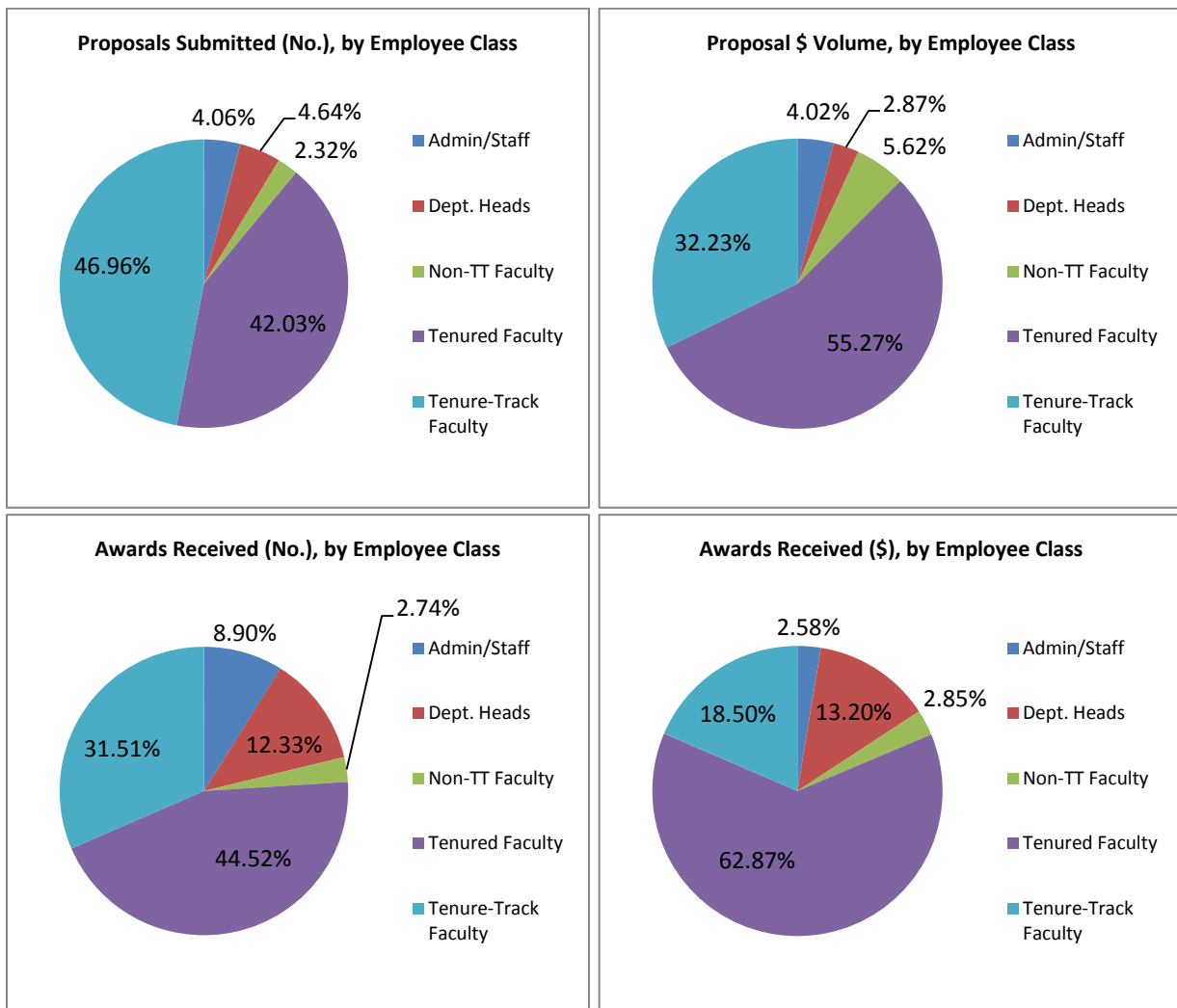


Figure 5-2: Faculty Award Productivity - Overall

Figure 5-2 shows the number of faculty, per department, who received awards in fiscal year 2013 – whether they served as a principal investigator, co-principal investigator, or both.

Worcester Polytechnic Institute							
Number of Faculty Participating as PI or Co-PI on FY 2013 Awards							
(Tenured & Tenure-track Faculty Only)							
Department	# of faculty	# of faculty receiving awards as PI only	# of faculty receiving awards as co-PI only	# of faculty receiving awards as PI and co-PI	Total faculty receiving awards	Overall participation rate	
Arts & Sciences							
BBT	12	3	0	0	3	25.0%	
CBC	9	2	0	0	2	22.2%	
CS	25	5	5	5	15	60.0%	
H&A	33	3	1	0	4	12.1%	
MA	25	5	1	3	9	36.0%	
PH	13	3	0	0	3	23.1%	
SSPS	11	0	0	0	0	0.0%	
A&S Total	128	21	7	8	36	28.1%	
Business	18	1	5	1	7	38.9%	
Engineering							
BME	10	3	2	2	7	70.0%	
CHE	10	4	1	1	6	60.0%	
CEE	13	5	5	0	10	76.9%	
ECE	21	7	2	2	11	52.4%	
FPE	5	1	0	3	4	80.0%	
ME	30	5	8	6	19	63.3%	
Engineering Total	89	25	18	14	57	64.0%	
IGSD	2	1	0	0	1	50.0%	
Totals	237	48	30	23	101	42.6%	
STEM Depts	184	43	24	22	89	48.4%	

Figure 5-3: Faculty Proposal Participation - Overall

Figure 5-3 shows the number of faculty, per department, who submitted proposals in fiscal year 2013 – whether as a principal investigator, co-principal investigator, or both. Preliminary proposals are not counted in this report.

Worcester Polytechnic Institute						
Number of Faculty Participating as PI or Co-PI on FY 2013 Proposals						
(Tenured & Tenure-track Faculty Only)						
Department	# of faculty	# of faculty submitting proposals as PI only	# of faculty submitting proposals as co-PI only	# of faculty submitting proposals as PI and co-PI	Total faculty submitting proposals	Overall participation rate
Arts & Sciences						
BBT	12	6	2	0	8	66.7%
CBC	9	5	0	1	6	66.7%
CS	25	6	4	9	19	76.0%
H&A	33	2	1	0	3	9.1%
MA	25	5	2	6	13	52.0%
PH	13	2	0	5	7	53.8%
SSPS	11	3	4	2	9	81.8%
A&S Total	128	29	13	23	65	50.8%
Business	18	3	2	2	7	38.9%
Engineering						
BME	10	6	0	4	10	100.0%
CHE	10	3	3	3	9	90.0%
CEE	13	4	0	6	10	76.9%
ECE	21	8	4	7	19	90.5%
FPE	5	3	1	1	5	100.0%
ME	30	9	3	10	22	73.3%
Engineering Total	89	33	11	31	75	84.3%
IGSD	2	0	0	0	0	0.0%
Totals	237	65	26	56	147	62.0%
STEM Depts.	184	60	23	54	137	74.5%

Figure 5-4: Faculty Award Productivity by PI Department

Figure 5-4 shows the award productivity of tenured and tenure-track faculty PIs in each department.

Worcester Polytechnic Institute										
Award Productivity by Department (Tenured & Tenure Track Faculty as PI Only)										
Fiscal Year 2013										
Department	# of faculty	# receiving awards	% receiving awards	# of Awards	Awards Per Faculty Member	Total \$ Awarded	\$ IDC Awarded	\$ Awarded per faculty member	\$ IDC awarded per faculty member	
Arts & Sciences										
BBT	12	3	25%	4	0.33	\$ 324,820	\$ 108,257	\$ 27,068	\$ 9,021	
CBC	9	2	22%	2	0.22	244,811	23,072	27,201	2,564	
CS	25	10	40%	19	0.76	2,037,294	499,693	81,492	19,988	
H&A	33	3	9%	3	0.09	114,470	6,998	3,469	212	
MA	25	8	32%	9	0.36	1,045,199	259,649	41,808	10,386	
PH	13	3	23%	3	0.23	334,797	109,316	25,754	8,409	
SSPS	11	0	0%	0	0.00	-	-	-	-	
A&S Totals	128	29	23%	40	0.31	4,101,391	1,006,985	32,042	7,867	
Business	18	2	11%	2	0.11	42,000	-	2,333	-	
Engineering										
BME	10	5	50%	10	1.00	2,757,851	681,314	275,785	68,131	
CHE	10	5	50%	7	0.70	4,524,504	903,787	452,450	90,379	
CEE	13	5	38%	6	0.46	776,787	225,151	59,753	17,319	
ECE	21	9	43%	24	1.14	3,362,075	990,333	160,099	47,159	
FPE	5	4	80%	9	1.80	878,242	127,318	175,648	25,464	
ME	30	11	37%	30	1.00	7,243,800	1,134,521	241,460	37,817	
Engineering Totals	89	39	44%	86	0.97	19,543,259	4,062,424	219,587	45,645	
IGSD	2	1	50%	1	0.50	68,913	-	34,457	-	
TOTALS	237	71	30%	129	0.54	\$ 23,755,563	\$ 5,069,409	\$ 100,234	\$ 21,390	
STEM Departments	184	65	35%	123	0.67	\$ 23,530,180	\$ 5,062,411	\$ 127,881	\$ 27,513	

Figure 5-5: Faculty Proposal Activity by PI Department

Figure 5-5 shows the proposal activity of tenured and tenure-track faculty PIs in each department. Preliminary proposals are not counted in this report.

Worcester Polytechnic Institute Proposal Participation by Department (Tenured & Tenure Track Faculty as PI Only) Fiscal Year 2013											
Department	# of faculty	# submitting proposals	Participation rate	# of proposals submitted	Proposals per faculty member	Proposals per participating faculty member	Proposal \$ volume	\$ requested per Faculty member	\$ requested per participating faculty member	Average proposal amount	
Arts & Sciences											
BBT	12	6	50%	11	0.92	1.83	\$ 3,658,586	\$ 304,882	\$ 609,764	\$ 332,599	
CBC	9	6	67%	18	2.00	3.00	\$ 17,281,122	\$ 1,920,125	2,880,187	960,062	
CS	25	15	60%	49	1.96	3.27	\$ 33,498,739	\$ 1,339,950	2,233,249	683,648	
H&A	33	2	6%	3	0.09	1.50	\$ 988,816	\$ 29,964	494,408	329,605	
MA	25	11	44%	15	0.60	1.36	\$ 3,527,188	\$ 141,088	320,653	235,146	
PH	13	7	54%	9	0.69	1.29	\$ 2,221,806	\$ 170,908	317,401	246,867	
SSPS	11	5	45%	9	0.82	1.80	\$ 2,866,317	\$ 260,574	573,263	318,480	
A&S Totals	128	52	41%	114	0.89	2.19	64,042,574	500,333	1,231,588	561,777	
School of Business	18	5	28%	9	0.50	1.80	3,132,349	174,019	626,470	348,039	
Engineering											
BME	10	10	100%	25	2.50	2.50	14,486,641	1,448,664	1,448,664	579,466	
CHE	10	6	60%	25	2.50	4.17	8,619,898	861,990	1,436,650	344,796	
CEE	13	10	77%	32	2.46	3.20	7,361,718	566,286	736,172	230,054	
ECE	21	15	71%	44	2.10	2.93	19,609,779	933,799	1,307,319	445,677	
FPE	5	4	80%	10	2.00	2.50	3,046,705	609,341	761,676	304,671	
ME	30	19	63%	64	2.13	3.37	22,436,588	747,886	1,180,873	350,572	
Engineering Totals	89	64	72%	200	2.25	3.13	75,561,329	849,004	1,180,646	377,807	
IGSD	2	0	0%	0	0.00	-	-	-	-	-	
TOTALS	237	121	51%	323	1.36	2.67	\$ 142,736,252	\$ 602,263	\$ 1,179,638	\$ 441,908	
STEM Departments	184	114	62%	311	1.69	2.73	\$ 138,615,087	\$ 753,343	\$ 1,215,922	\$ 609,978	

Figure 5-6: Co-PI Award Productivity

Figure 5.6 shows the number of tenured and tenure track faculty in each department that served as a co-PI on an award received in fiscal year 2013.

Worcester Polytechnic Institute
Co-Principal Investigator Participation on Awards Received in Fiscal 2013
listed by Co-PI's department

Department	# of Awards Joined	# of Dept Personnel Serving as Co-PIs	Total Value of Awards Joined	Average Award Amount
Biomedical Engineering	5	4	\$ 2,413,322	\$ 482,664.40
Chemical Engineering	1	2	399,906	399,906
Civil & Environmental Engineering	2	5	185,000	92,500
Computer Science	10	20	1,490,895	149,090
Electrical & Computer Engineering	6	4	1,770,517	295,086
Fire Protection Engineering	4	3	1,512,381	378,095
Humanities & Arts	1	1	94,470	94,470
Mathematical Sciences	4	4	990,843	247,711
Mechanical Engineering	11	14	4,826,723	438,793
School of Business	6	6	933,482	155,580

Figure 5-7: Co-PI Participation in Proposals

Figure 5.7 shows the number of tenured and tenure track faculty in each department that participated as a co-PI on a proposal submitted during fiscal year 2013. Preliminary proposals are not counted in this report.

Worcester Polytechnic Institute
Co-Principal Investigator Participation on Proposals Submitted in Fiscal 2013
listed by Co-PI's department

Department	# of Proposals Joined	# of Dept Personnel Serving as Co-PIs	Total Value of Proposals Joined	Average Proposal Amount
Biology & Biotechnology	2	2	\$ 3,754,365	\$ 1,877,183
Biomedical Engineering	5	4	6,227,937	1,245,587
Chemical Engineering	7	6	6,157,843	879,692
Chemistry & Biochemistry	2	2	5,774,268	2,887,134
Civil & Environmental Engineering	10	6	2,399,759	239,976
Computer Science	28	13	26,535,243	947,687
Electrical & Computer Engineering	16	10	13,407,476	837,967
Fire Protection Engineering	2	2	1,021,243	510,622
Humanities & Arts	1	1	5,000	5,000
Mathematical Sciences	6	8	3,953,369	658,895
Mechanical Engineering	17	13	12,171,127	715,949
Physics	8	5	1,598,935	199,867
School of Business	5	4	1,447,146	289,429
Social Sciences	7	6	5,828,237	832,605

6. Success of FY2012 proposals

It takes, on average, approximately seven months to receive a funding decision on each proposal that we submit. Because of this, it is still too soon to know how our FY 2013 proposals have fared – almost half are still awaiting a decision. We can, however, look at our proposals from FY 2012. These proposals were submitted prior to June 30, 2012 and have had ample time to be reviewed by the funding agencies.

The success rates for FY 2012 proposals are shown in figure 6-1 below.

Figure 6-1

Worcester Polytechnic Institute
Status of Proposals Submitted in FY 2012
(as of 10/31/2013)

Status	Number	%	\$ Value¹	%
Funded	108	31%	\$ 30,113,281	14%
Declined	207	57%	\$ 163,030,640	78%
Pending	26	12%	\$ 14,569,419	8%
Total	341	99%	\$ 207,713,340	100%

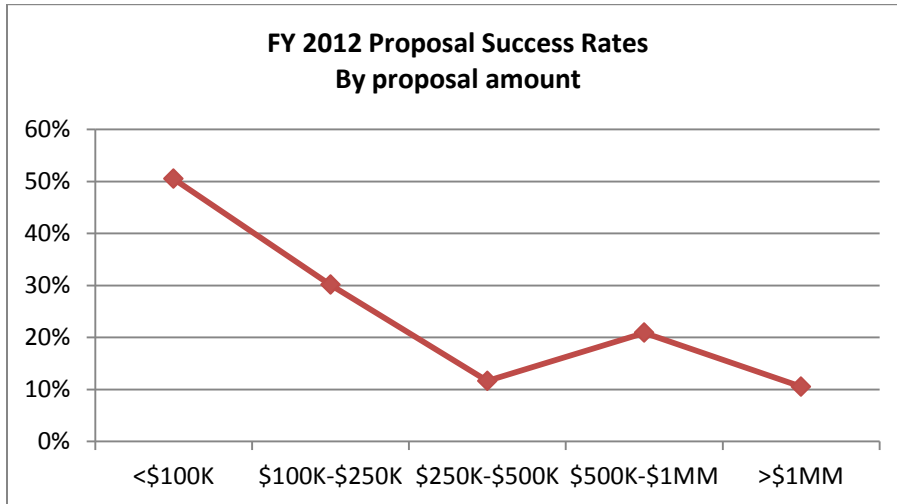
1 Based on amount of original proposal; assumes full amount will be awarded

It should be noted that, although 31% of proposals were funded, these proposals represented only 14% of the funds requested. Funding rates were generally lower for larger proposals, as illustrated in figure 6-2.

Figure 6-2

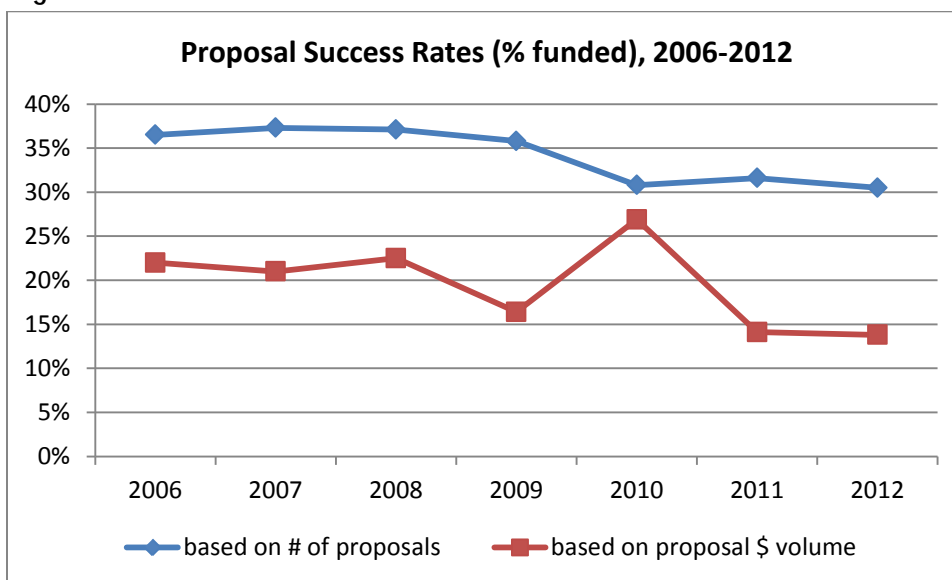
Worcester Polytechnic Institute
Proposal Success Rates, By Proposal \$ Value
Based on \$ amount requested/funded
Proposals submitted July 1, 2011 to June 30, 2012

	<\$100K	\$100K-\$250K	\$250K-\$500K	\$500K-\$1MM	>\$1MM
Awarded	51%	30%	12%	21%	11%
Declined	38%	62%	77%	72%	83%
Pending	11%	8%	11%	7%	7%
Total	100%	100%	100%	100%	100%



Overall, proposal success rates were lower in 2011 and 2012 than in previous years, as shown in figure 6-3

Figure 6-3



7. Subaward Activity

WPI's sponsored programs activity often involves formal collaborations with outside institutions, usually in the form of subawards/subcontracts. WPI is both a recipient and a provider of subawards. In fiscal year 2013, the subawards we received (i.e. funds allocated to WPI by another institution) accounted for 12.3% of new award dollars. WPI issued subawards amounting to 13.9% of our new award volume.

Figure 7-1

Worcester Polytechnic Institute Subaward Activity FY 2013 and FY 2012			
	<u>2013</u>	<u>2012</u>	<u>% Change</u>
<i>Subawards Received</i>			
Number of subawards	37	43	-14%
Total \$ Value	\$ 3,082,200	\$ 3,388,382	-9%
Average \$ Value	\$ 83,303	\$ 78,800	6%
<i>% of all awards (based on \$ value)</i>	12.3%	18.7%	
<i>Number of collaborating institutions</i>	19	29	
<i>Subawards Issued</i>			
Number of subawards	20	15	33%
Total \$ Value	\$ 3,492,242	\$ 843,462	314%
Average \$ Value	\$ 174,612	\$ 56,231	211%
<i>% of all awards (based on \$ value)</i>	13.9%	4.6%	
<i>Number of collaborating institutions</i>	17	9	

8. Historical Review of Proposals, Awards, and Expenditures

Figure 8-1 below provides a snapshot of all proposal, award, and expenditure totals for the most recent ten years. Figure 8-2 on the following page is a similar report, but the amounts shown are net of the impact of Congressional appropriations (“earmarks”), thus illustrating the results of conventional, peer-reviewed proposals only.

Figure 8-1

Worcester Polytechnic Institute
Ten-Year Historical Summary of Sponsored Program Activity (Including Congressional Funding)
FY2004 (Base Year) to FY2013

Fiscal Year	Proposal Volume				Award Volume				Expenditure Volume ¹		
	No.	Amount	% Change from Prior Yr.	% Change from Base Yr.	No.	Amount	% Change from Prior Yr.	% Change from Base Yr.	Amount	% Change from Prior Yr.	% Change from Base Year
Base 2004	207	72,503,900			122	13,593,899			11,740,812		
2005	209	82,590,969	13.9%	13.9%	111	11,488,805	-15.5%	-15.5%	11,965,468	1.9%	1.9%
2006	219	69,308,920	-16.1%	-4.4%	122	16,654,758	45.0%	22.5%	12,645,331	5.7%	7.7%
2007	217	53,058,847	-23.4%	-26.8%	120	11,436,003	-31.3%	-15.9%	11,736,587	-7.2%	0.0%
2008	274	91,400,387	72.3%	26.1%	126	14,631,997	27.9%	7.6%	12,129,731	3.3%	3.3%
2009	312	126,584,577	38.5%	74.6%	139	13,706,844	-6.3%	0.8%	12,426,357	2.4%	5.8%
2010	344	185,350,701	46.4%	155.6%	152	17,374,461	26.8%	27.8%	15,117,369	21.7%	28.8%
2011	288	113,086,144	-39.0%	56.0%	136	18,072,893	4.0%	32.9%	17,629,987	16.6%	50.2%
2012	340	207,378,461	83.4%	186.0%	140	18,149,913	0.4%	33.5%	14,819,675	-15.9%	26.2%
2013	345	148,079,871	-28.6%	104.2%	146	25,121,063	38.4%	84.8%	18,379,939	24.0%	56.5%

¹Source: Sponsored Programs and Research Accounting files

Figure 8-2

Worcester Polytechnic Institute
Ten-Year Historical Summary of Sponsored Program Activity (Net of Congressional Funding)
FY2004 (Base Year) to FY2013

Fiscal Year	Proposal Volume				Award Volume				Expenditure Volume ¹		
	No.	Amount	% Change from Prior Yr.	% Change from Base Yr.	No.	Amount	% Change from Prior Yr.	% Change from Base Yr.	Amount	% Change from Prior Yr.	% Change from Base Year
Base 2004	207	72,503,900			120	11,784,261			10,378,145		
2004	207	72,503,900	0.0%	0.0%	120	11,784,261	0.0%	0.0%	10,378,145	0.0%	0.0%
2005	203	74,570,618	2.9%	2.9%	108	9,748,383	-17.3%	-17.3%	10,099,745	-2.7%	-2.7%
2006	216	65,283,920	-12.5%	-10.0%	117	10,661,472	9.4%	-9.5%	9,917,665	-1.8%	-4.4%
2007	217	63,058,847	-3.4%	-13.0%	120	11,436,003	7.3%	-3.0%	9,254,134	-6.7%	-10.8%
2008	272	89,692,387	42.2%	23.7%	123	12,084,997	5.7%	2.6%	11,240,643	21.5%	8.3%
2009	311	124,379,627	38.7%	71.5%	139	13,706,844	13.4%	16.3%	11,519,641	2.5%	11.0%
2010	344	185,350,701	49.0%	155.6%	151	17,129,461	25.0%	45.4%	13,957,224	21.2%	34.5%
2011	287	112,152,541	-39.5%	54.7%	134	17,019,290	-0.6%	44.4%	16,889,260	21.0%	62.7%
2012	340	207,378,461	84.9%	186.0%	139	15,621,290	-8.2%	32.6%	14,372,751	-14.9%	38.5%
2013	345	148,079,913	-28.6%	104.2%	146	25,121,063	60.8%	113.2%	17,589,880	22.4%	69.5%

¹Source: Sponsored Programs and Research Accounting files

Appendix I: Historical and Supplementary Data

Appendix II contains several supplemental charts and schedules that look back a number of years to provide information about proposals, awards, and expenditures through fiscal year 2013.

Figure A-1-1

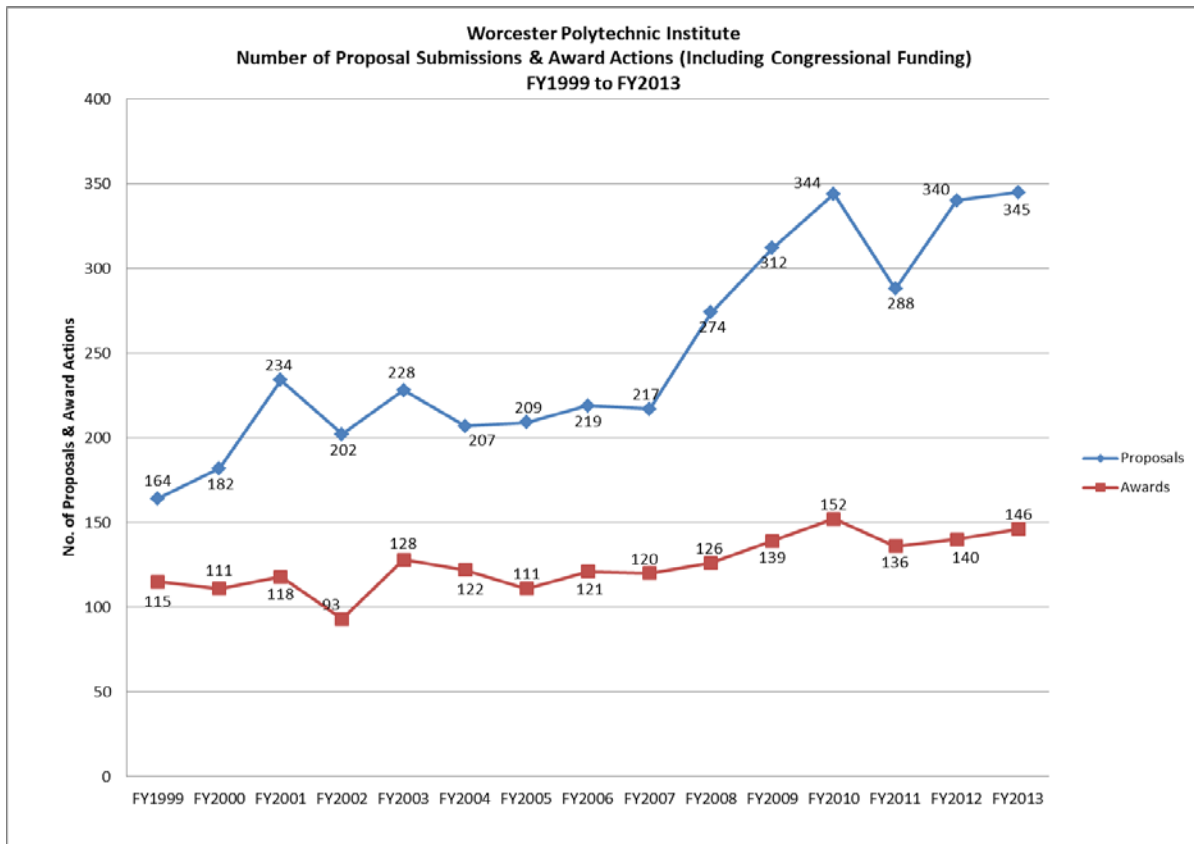


Figure A-1-2

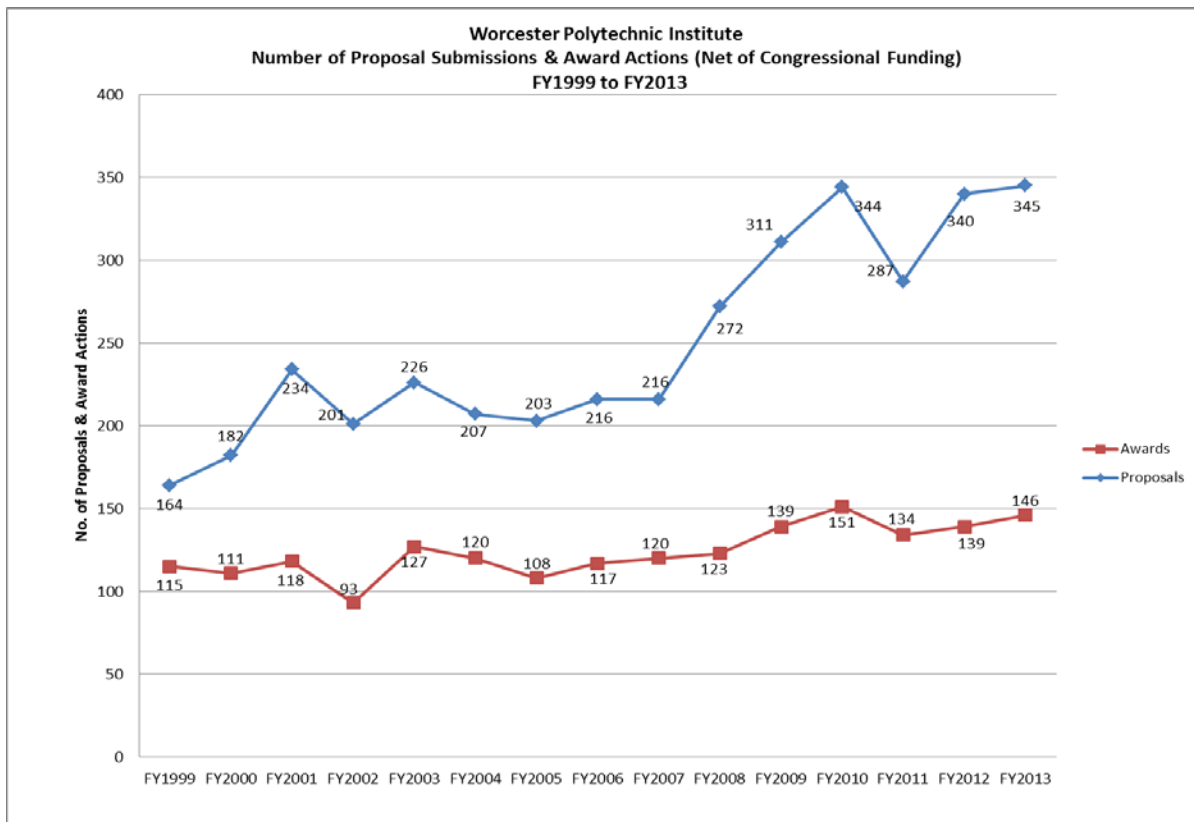


Figure A-1-3

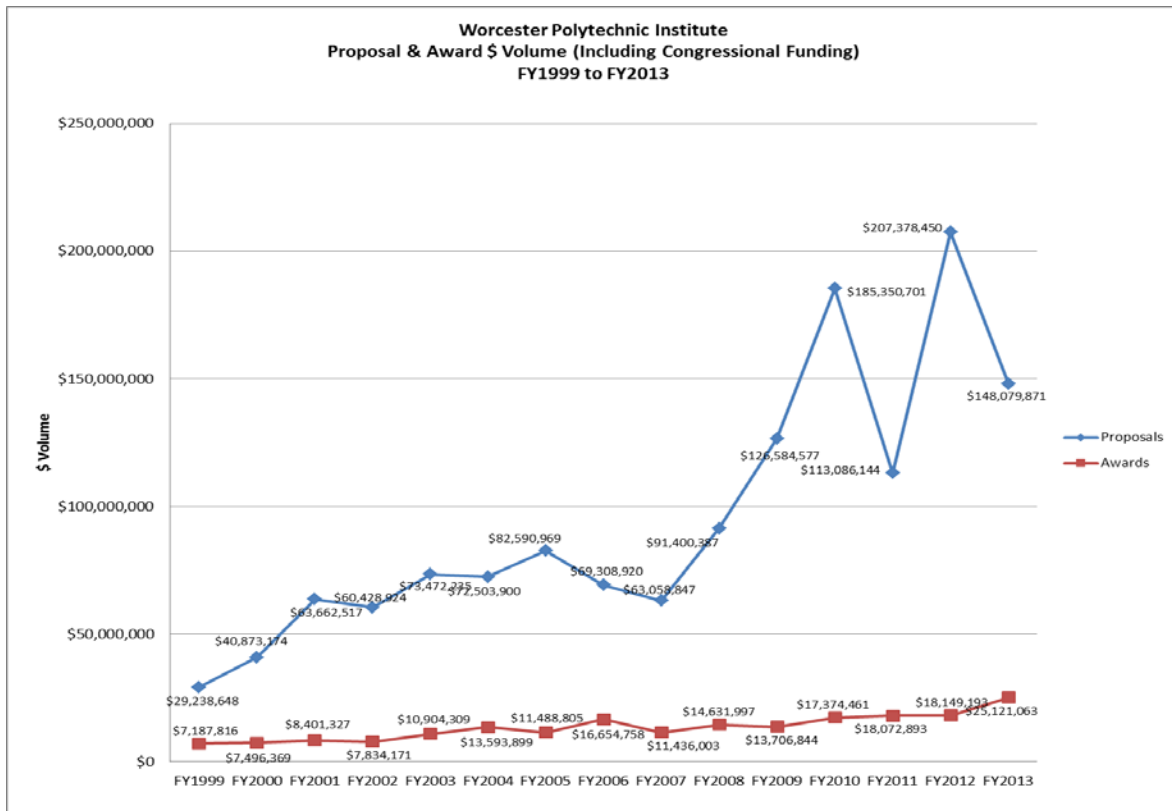


Figure A-1-4

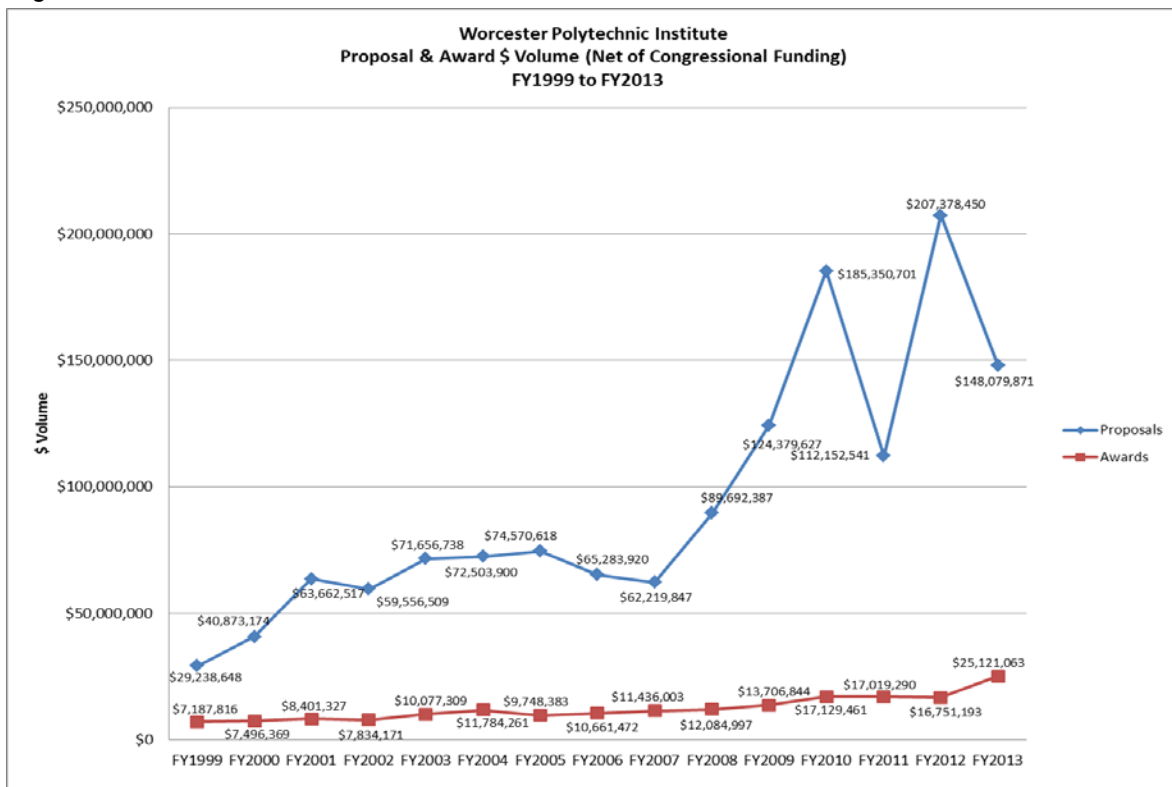


Figure A-1-5

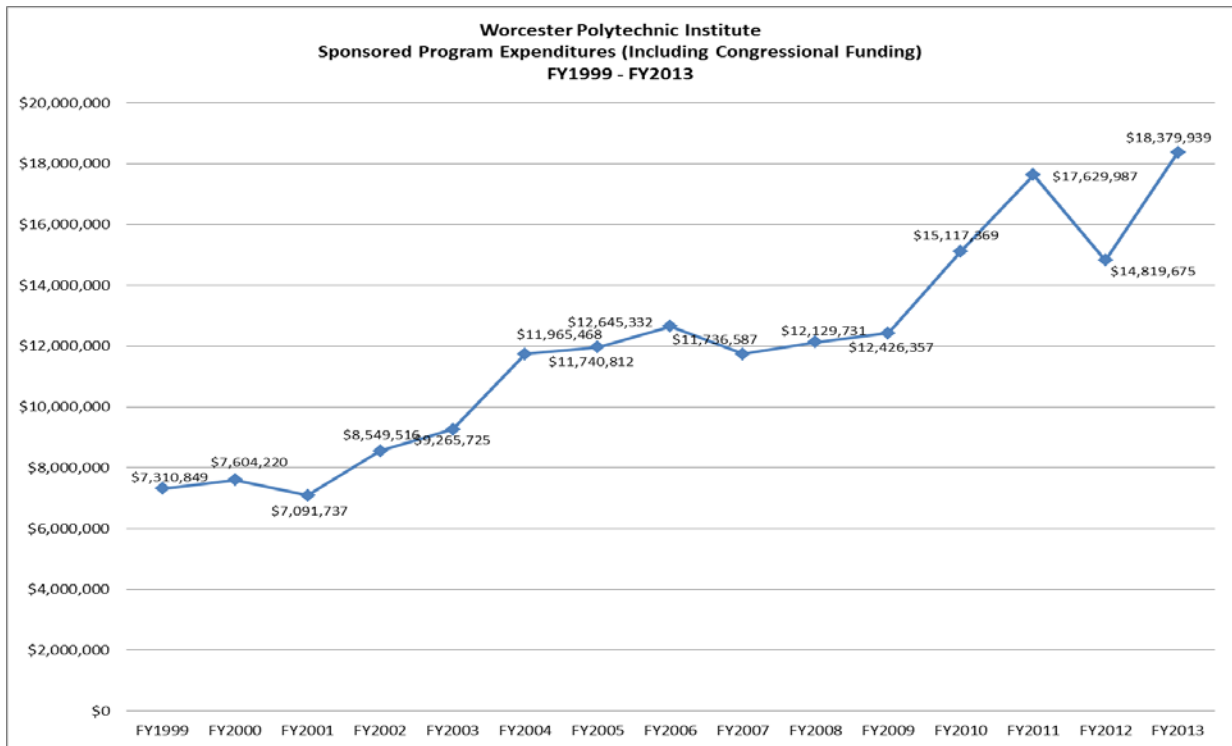


Figure A-1-6

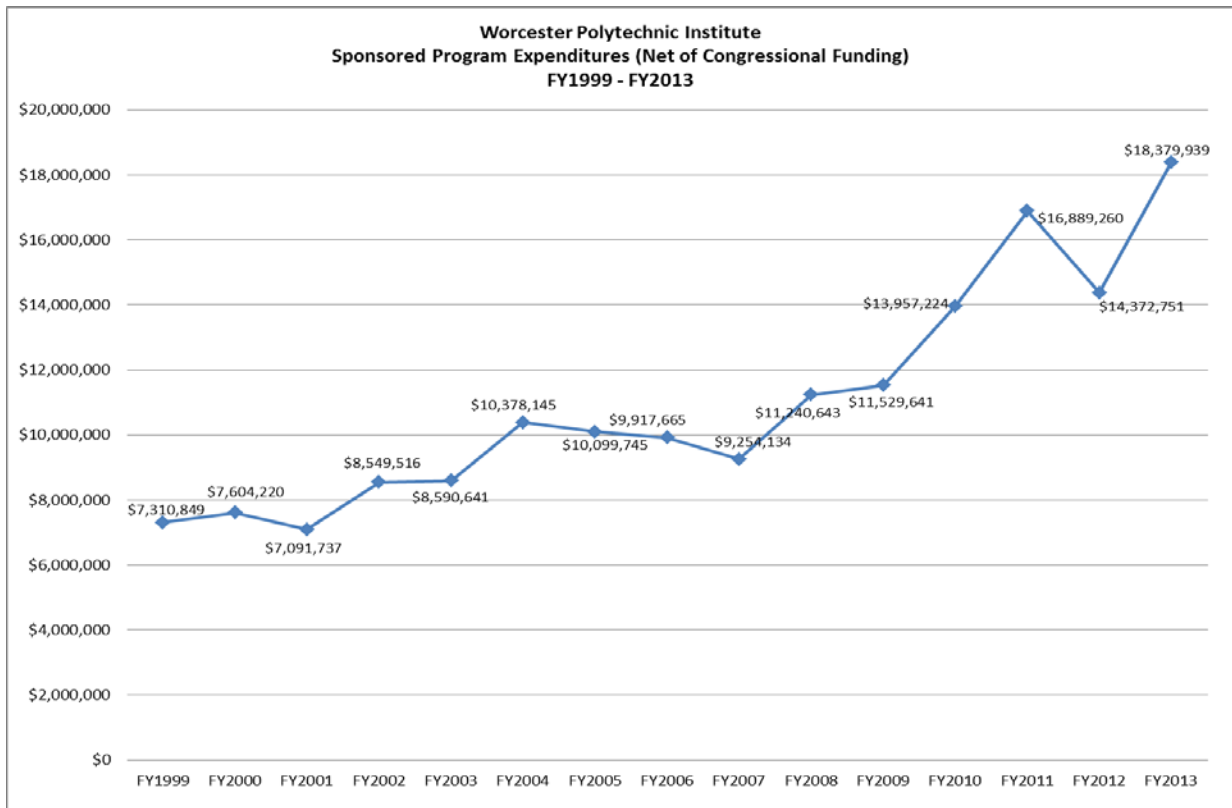
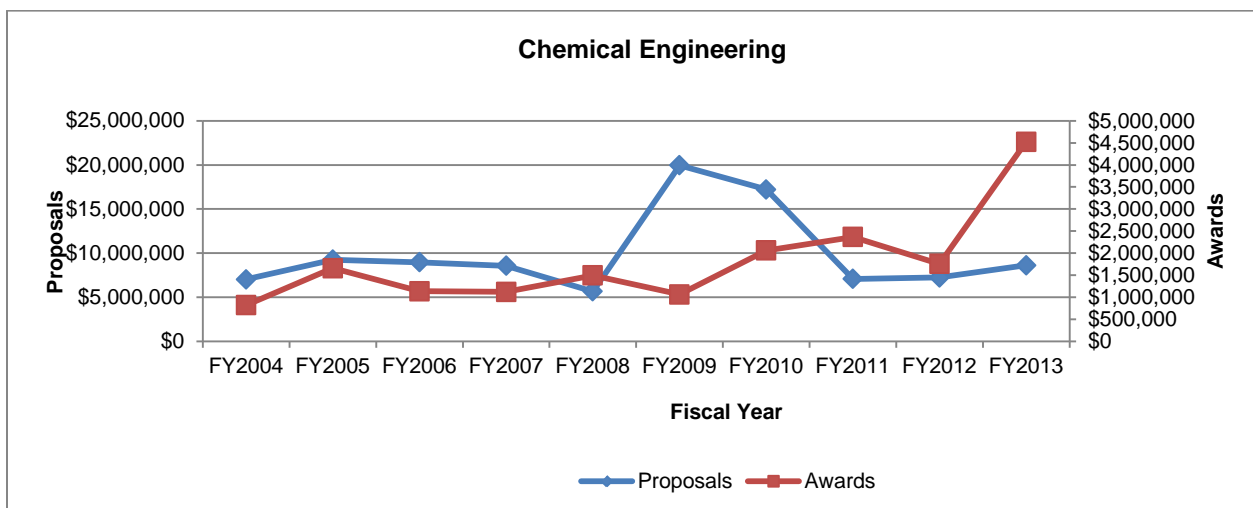
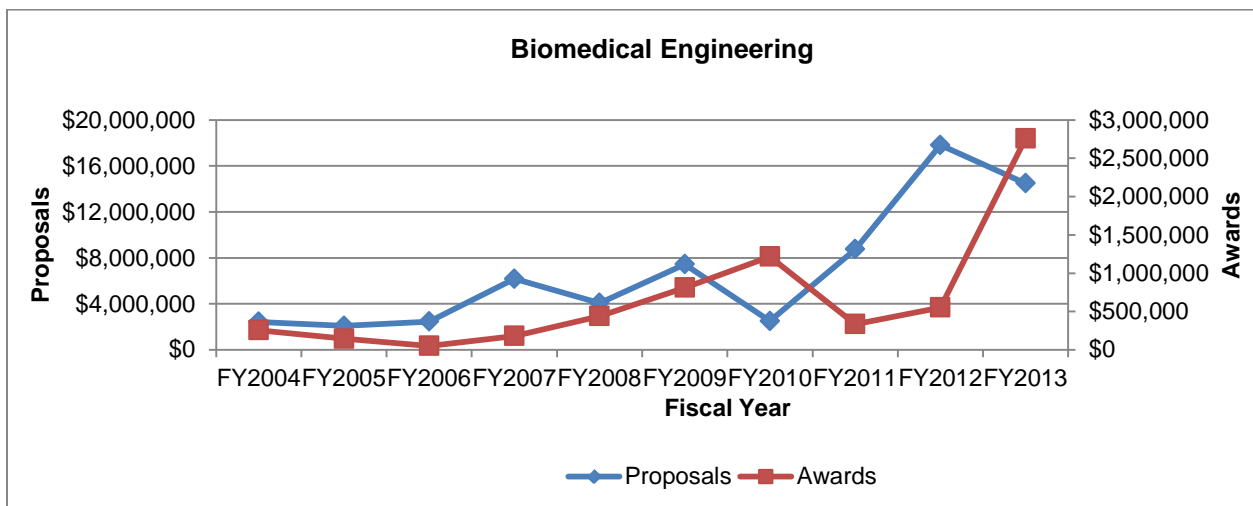
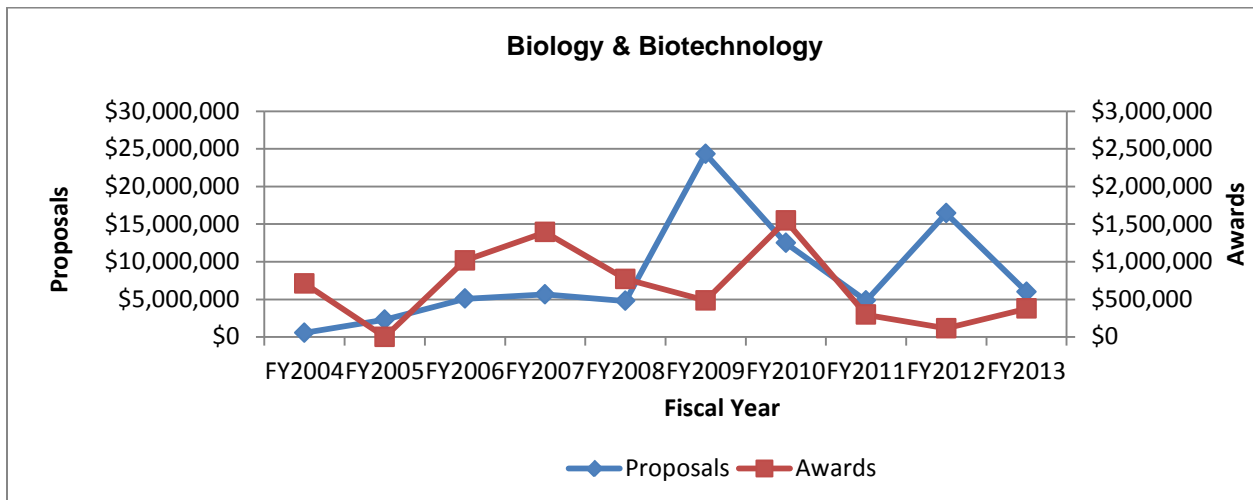
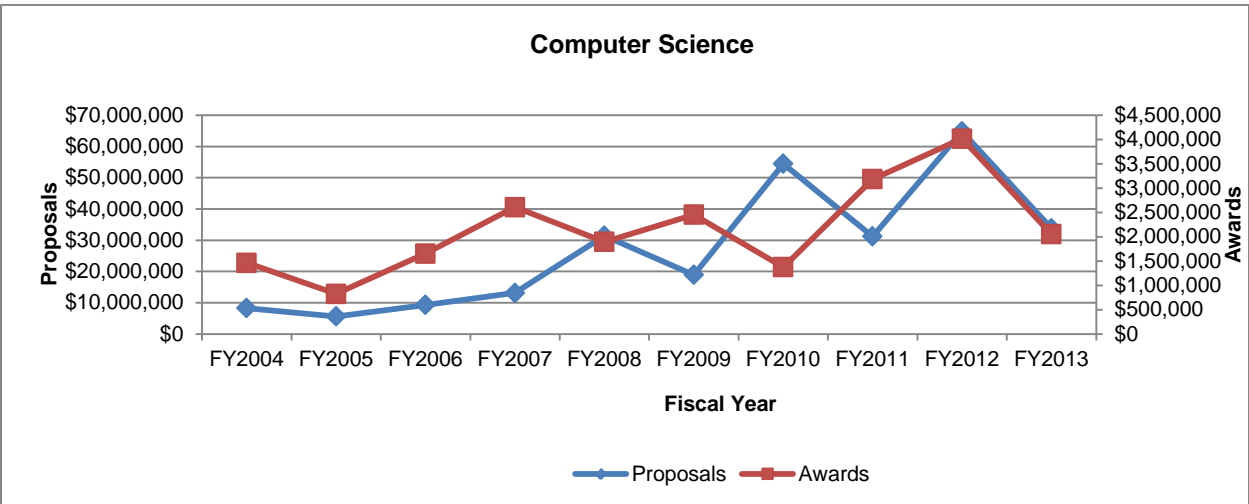
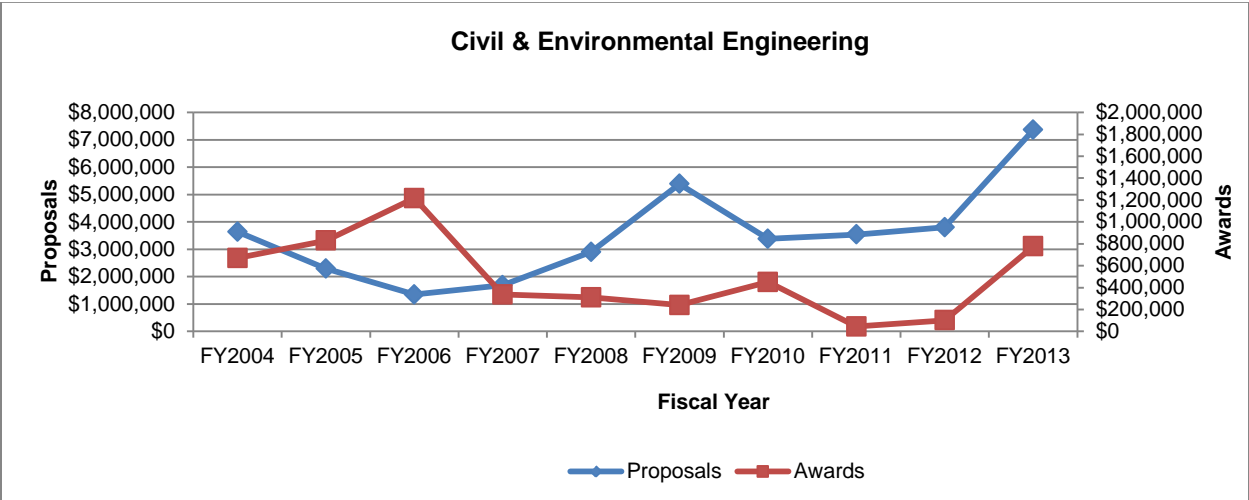
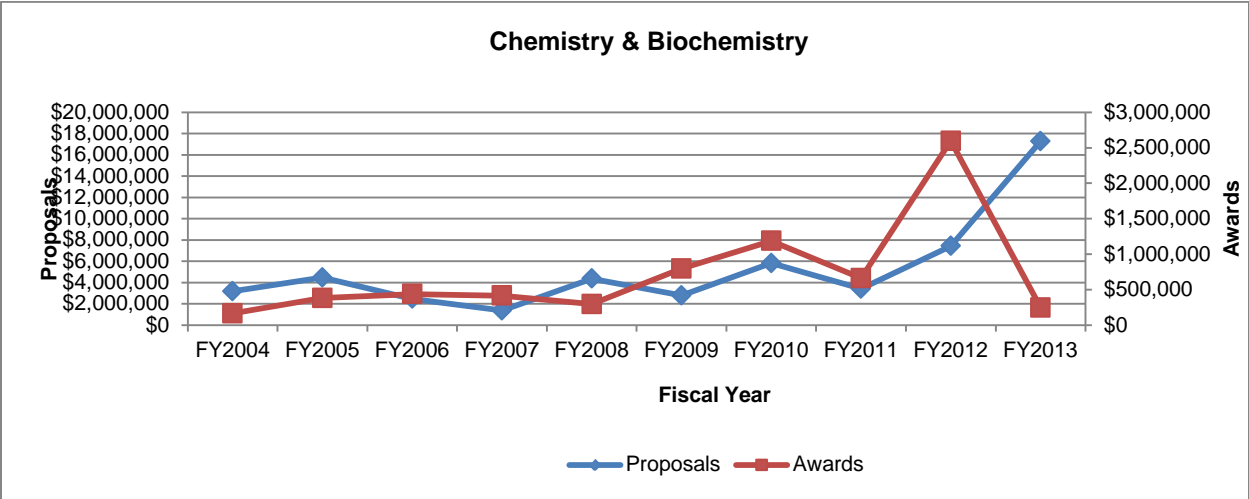
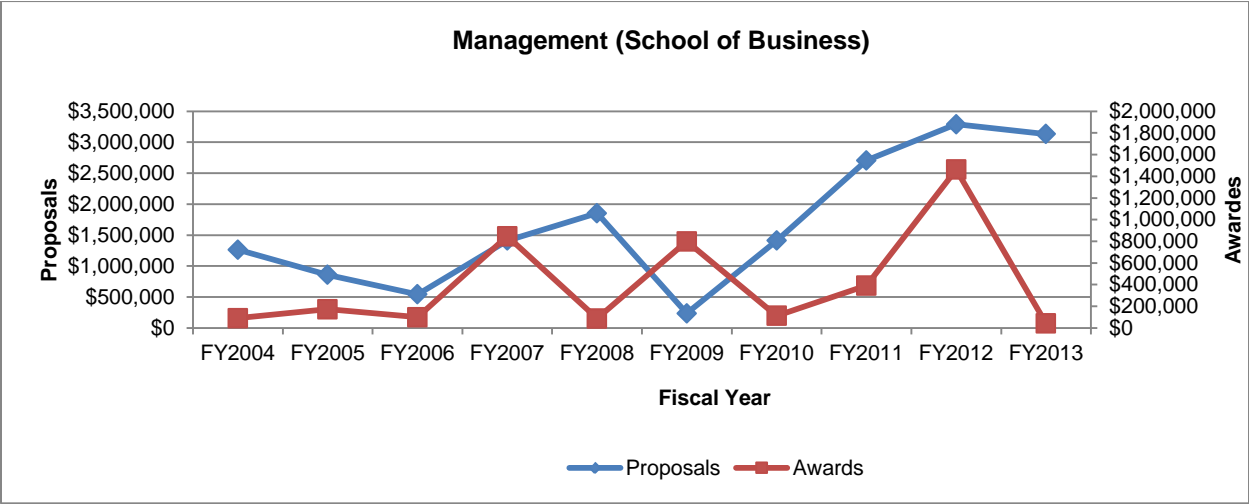
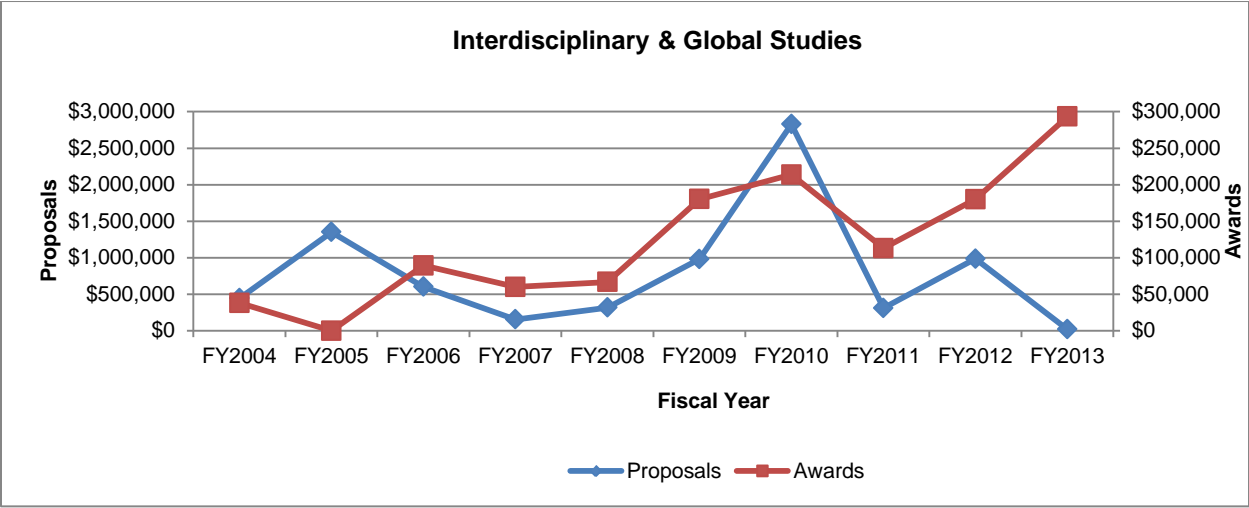
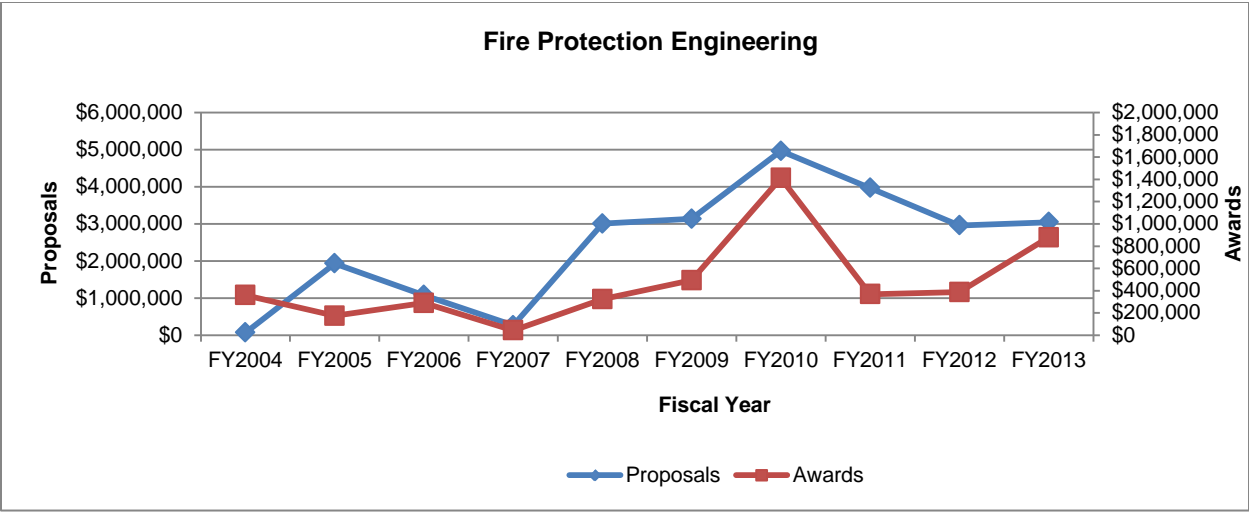
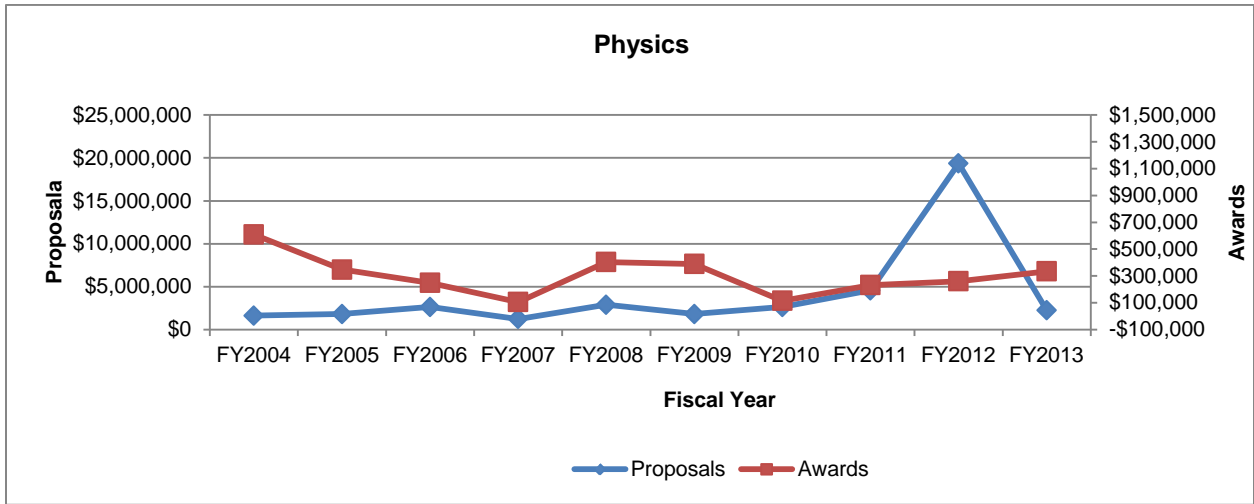
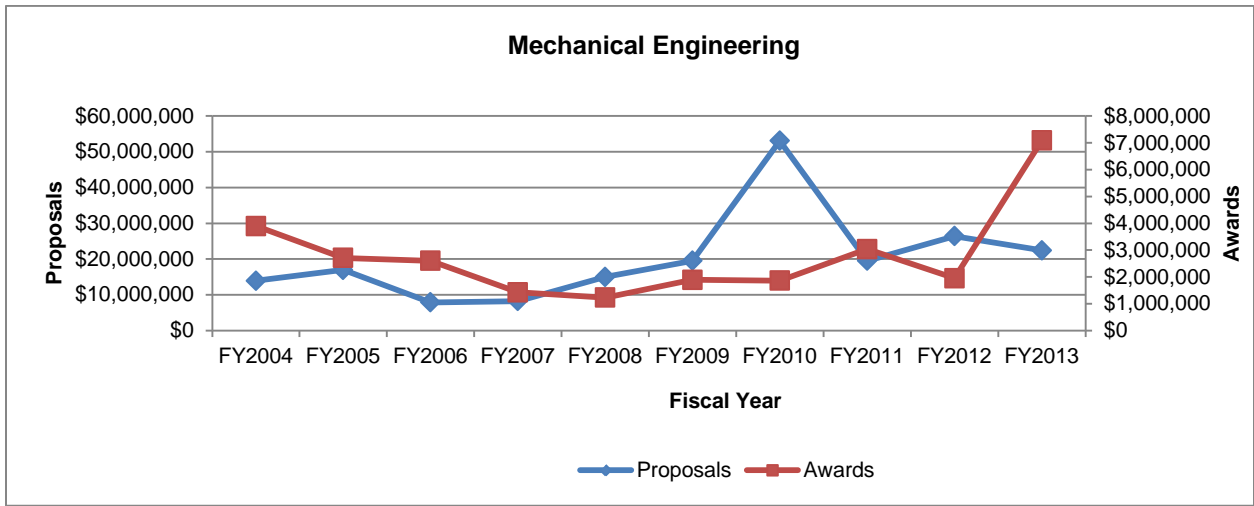
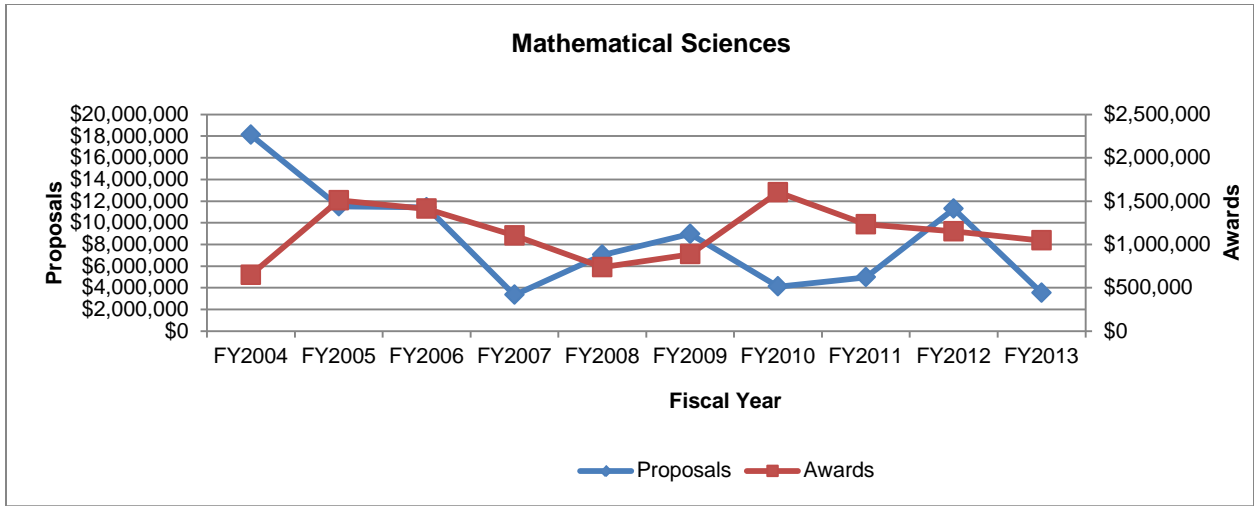


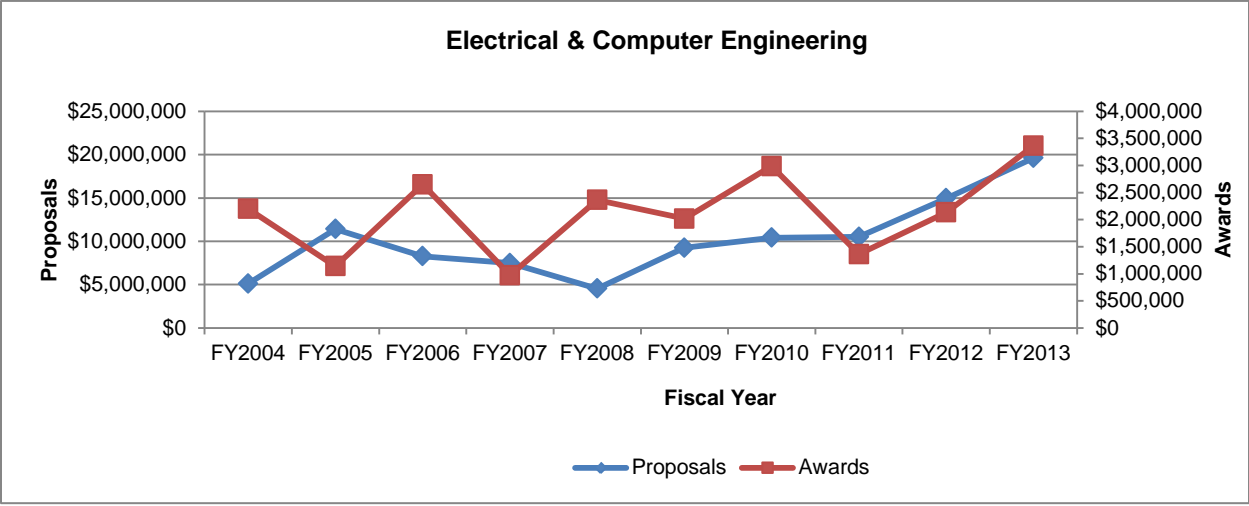
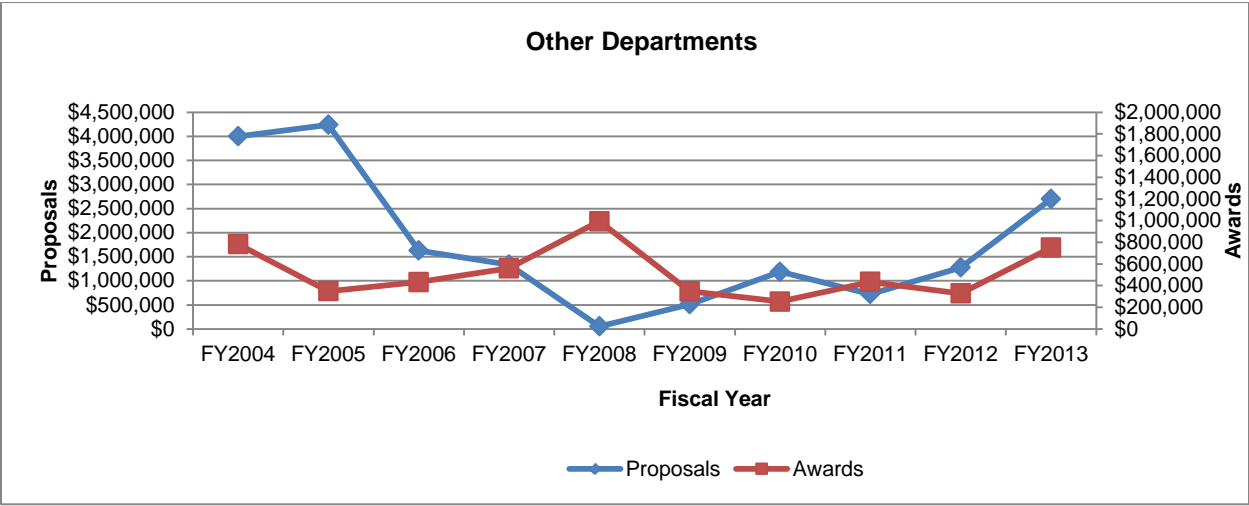
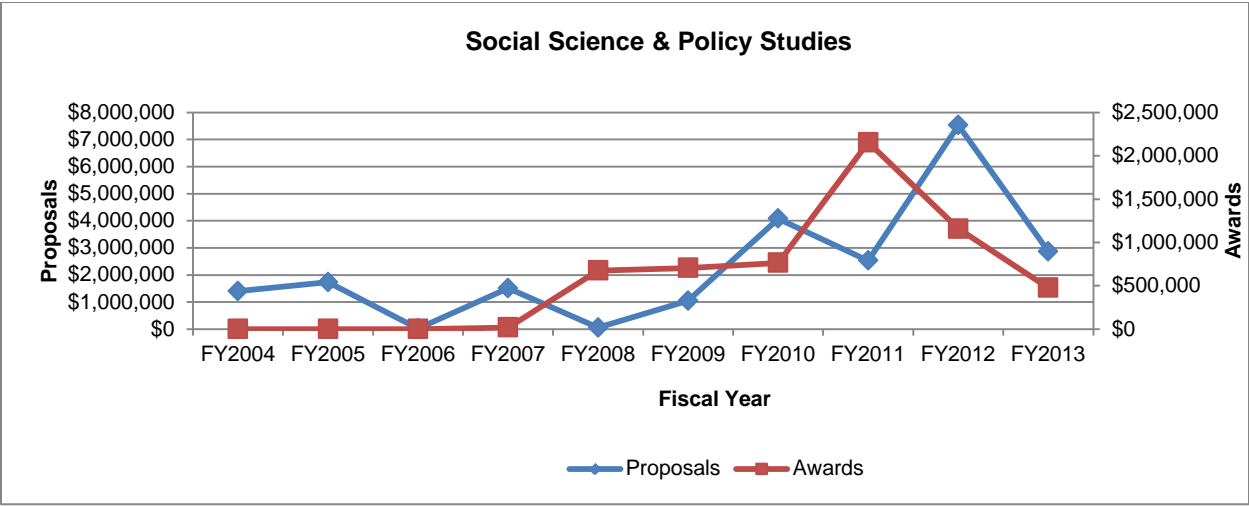
Figure A-1-7: Ten Year Departmental Trend Line Summaries

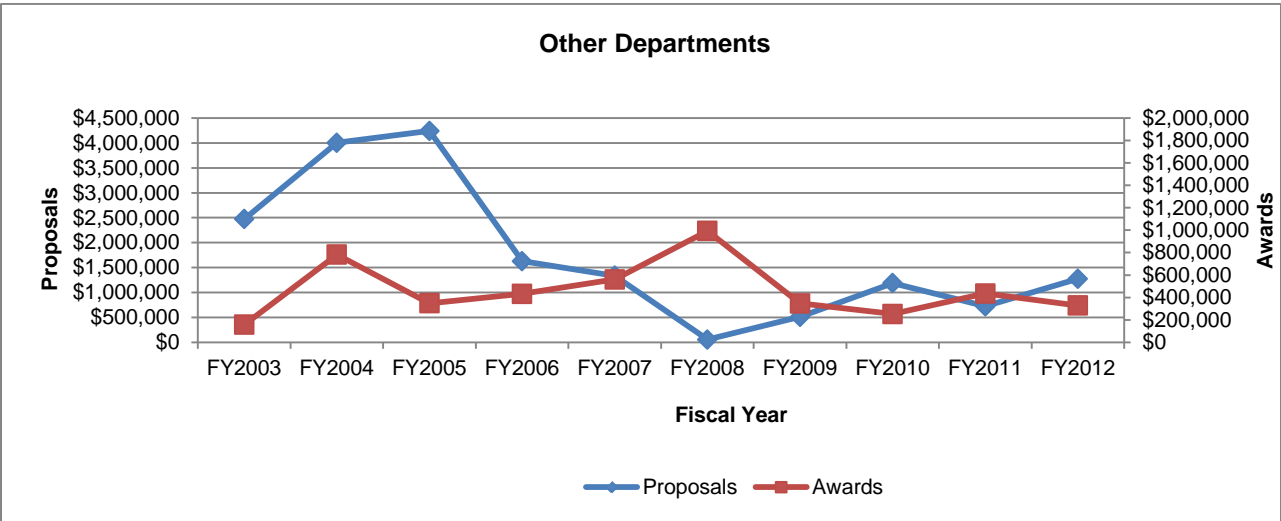
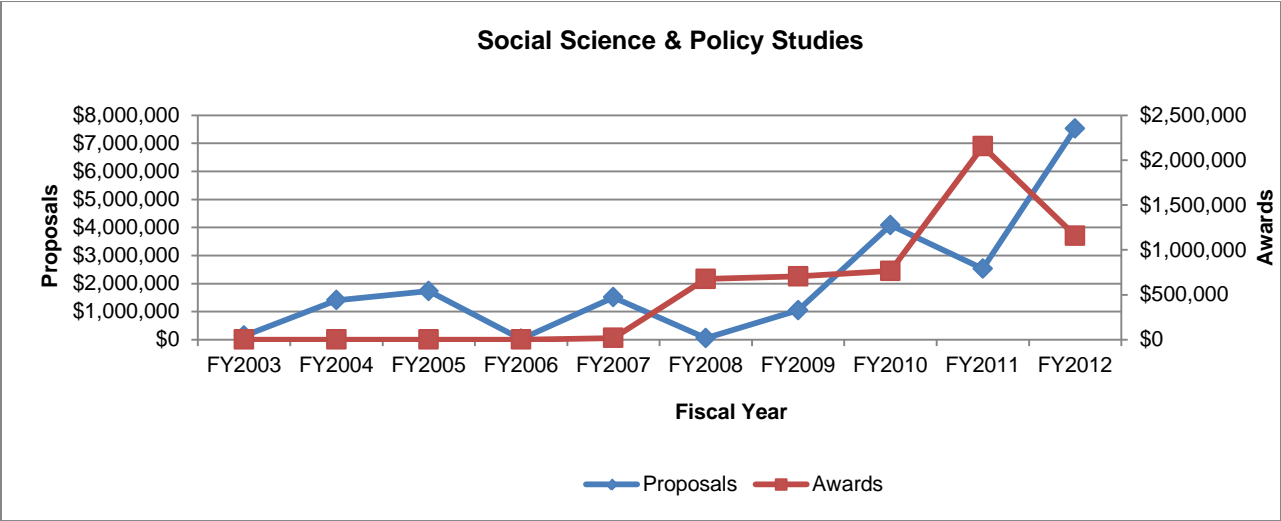
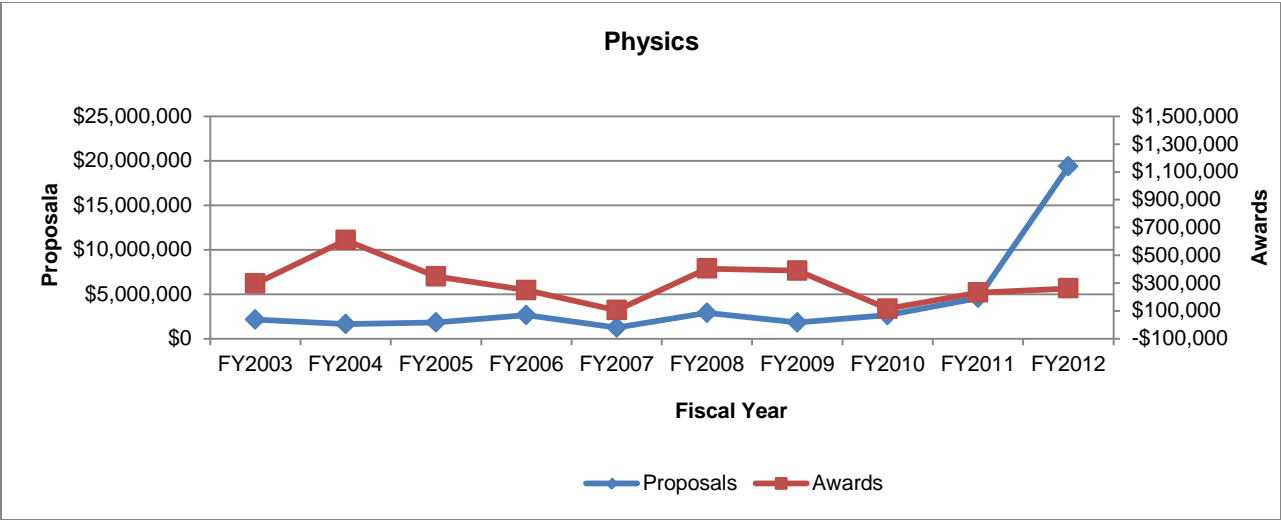




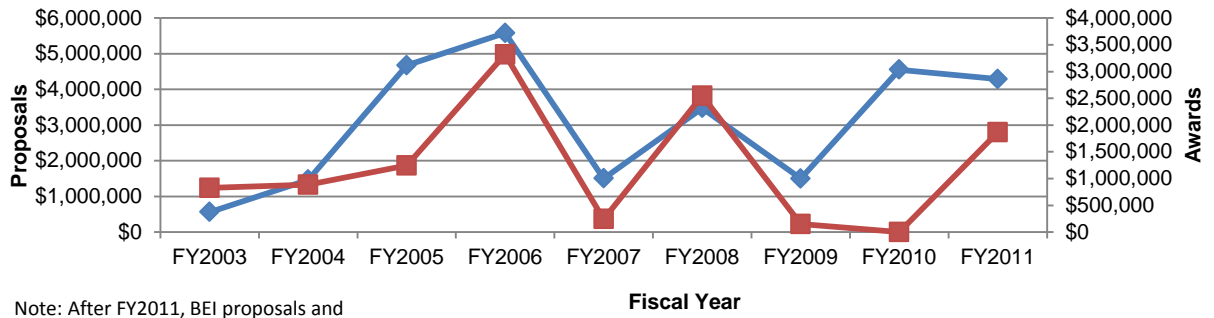








Bioengineering Institute



Note: After FY2011, BEI proposals and awards are credited to the academic department of the PI.

Proposals Awards

Appendix II: Fiscal Year 2013 Award Listings

**AWARDS RECEIVED
BIOLOGY
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Easson, David D.		E. Coli Fermentations	Xtal BioStructures, Inc.	\$40,800 *
Easson, David D.		E.Coli Fermentations	GreenLight Biosciences, Inc.	\$11,010 *
Prusty Rao, Reeta		Test Antimicrobiol Technology on Pathogens	Bacteria Controls, Inc.	\$40,707
Ryder, Elizabeth F.		Collaborative Research: Modeling from Molecules to Moose: Teaching Students to Develop Agent-Based Simulations in Biology	National Science Foundation	\$127,288
Vidali, Luis		CAREER: Role of Plant Myosin XI in Polarized Secretion and Actin Dynamics	National Science Foundation	\$151,925
Vidali, Luis		RIG: Analysis of the Role of Myosin XI in Plant Cell Polarized Growth	National Science Foundation	\$4,900
Total (10)				\$376,630

* These award totals each reflect 3 increments.

**AWARDS RECEIVED
BIOMEDICAL ENGINEERING
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Albrecht, Dirk		Investigating Neural Circuit Dynamics and Behavior Using Microtechnology	Burroughs Wellcome Co.	\$360,000
Chon, Ki H.		Assessment of the Autonomic Nervous System Utilizing Principal Dynamic Mode Analysis During Mental, Physical and Hyperbaric Stress	Office of Naval Research	\$202,312 *
Chon, Ki H.	Yitzhak Mendelson	Wearable Wireless Sensor For Multi-Scale Physiological Monitoring	US Army	\$1,902,036
Chon, Ki H.		360 Degree Image Viewer for Tablet & Phone Devices Development and Support	Science Applications International Corp.	\$30,000
Chon, Ki H.	George D Pins	Evaluation and Testing of Carbon-Based Hydrophobic Electrocardiogram Electrodes	Office of Naval Research	\$172,279 *
Gaudette, Glenn R.		Celgene ECM in Acute Myocardial Infarction	Celgene Corporation	\$35,050
Mendelson, Yitzhak		Paul Dasari Dissertation Research Grant: Investigation of the Correlation Between External Markers as Measured by a Visual Tracking System and Internal Motion of Organs as Measured by MRI	UMass Memorial Medical Center	\$19,542
Pins, George D	Raymond L. Page, Jonathan Mark Grasman	Designing Fibrin Microthread Scaffolds for Skeletal Muscle Regeneration	National Institutes of Health	\$36,632
Total (10)				\$2,757,851

* These award totals each reflect 2 increments.

**AWARDS RECEIVED
CHEMICAL ENGINEERING
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Camesano, Terri Anne		Environmental Cytotoxicity of Nanoparticles: Differentiating "Nanoparticulate" from "Molecular Scale" Effects	National Science Foundation	\$2,000
Camesano, Terri Anne		Efficacy of Cranberry Compounds in Reducing Developing and Established Biofilms of E. Coli	Cranberry Institute	\$33,749
Datta, Ravindra		Supported Molten-Salt Electrolyte (SMSE) Hydrogen-Bromine Unitized Regenerative Fuel Cell (URFC) for Microgrid Electricity Storage	Irving A. Backman & Associates, LLC	\$110,000
Deskins, N Aaron		Binary Palladium-Based Anode Catalysts for the Ethanol Oxidation Reaction in an Alkaline Medium	University of New Hampshire	\$128,997
Deskins, N Aaron		Iridium-Based Alloy as an Alternative Catalyst for Ethanol Oxidation Fuel Cell Reaction: Experimental and First Principles-based Investigation	University of New Hampshire	\$149,852
Dixon, Anthony G.		Realizing the Selectivity of Exothermic Partial Oxidation Reactions	American Chemical Society	\$100,000
Ma, Yi Hua	Anthony G. Dixon, Federico Guazzone, Nikolaos K. Kazantzis	Engineering Design of Advanced H ₂ - CO ₂ and Pd/Alloy Composite Membrane Separations and Process Intensification	Department of Energy	\$3,999,906
Total (7)				\$4,524,504

AWARDS RECEIVED
CHEMISTRY
JULY 1, 2012 TO JUNE 30, 2013

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Emmert, Marion H Gericke, Arne		Acylation of Arenes via Catalytic C-H Bond Functionalization and Aerobic Alcohol Oxidation Physicochemical Characterization of Lipid Phosphomonoester Group Mediated Cell Signaling Events	American Chemical Society National Science Foundation	\$100,000 \$144,811
Total (2)				\$244,811

**AWARDS RECEIVED
CIVIL & ENVIRONMENTAL ENGINEERING
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
El-Korchi, Tahar	Leonard D. Albano, Mark L. Claypool, Lorraine D. Higgins, Yeesock Kim, Fred J. Looft, Brian Jay Meacham, Roberto Pietroforte, Guillermo F. Salazar	Team Belgium-Massachusetts-New York (BE-MA-NY) 2013 Solar Decathlon-China	Peking University	\$100,000
Hart, Frederick L.	John Andrew Bergendahl	The Treatment of Today's Waters and Wastewaters Using a Photocatalysis Process Using TiO2 With Natural and Artificial	Stantec	\$85,000
Rahbar, Nima		CAREER: Mechanics of Bioinspired Multilayered Structures	National Science Foundation	\$400,000
Sakulich, Aaron R.	Kathy Ann Notarianni	Summer Undergraduate Research Fellowship (SURF) Nist Gaithersburg Programs	NIST	\$17,202
Sakulich, Aaron R.		Mitigation of Steel Reinforcement Corrosion Via Bioactive Agents	American Concrete Institute	\$10,000
Tao, Mingjiang		Collaborative Research: An Integrated Experimental and Computational Multiscale Study of Geopolymers for Next Generation Soil Improvement	National Science Foundation	\$164,585
Total (6)				\$776,787

**AWARDS RECEIVED
COMPUTER SCIENCE
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Beck, Joseph E.		Intelligent Digital Mathematics Tutoring for K-12 Level	University of Massachusetts Amherst	\$25,519
Berenson, Dmitry	Sonia Chernova, Robert W. Lindeman	DRC-Hubo - Leveraging a 7-Hubo Infrastructure and Unified Algorithmic Framework for the DARPA Robotics Challenge	Drexel University	\$63,000
Chernova, Sonia		HCC: Small: Collaborative Research: Cloud Primer: Leveraging Common Sense Computing to Learn Parent-Child Interaction Models for Early Childhood Literacy	National Science Foundation	\$90,723
Chernova, Sonia		CAREER: Towards the Development of Robots that Learn from Everyday People	National Science Foundation	\$101,747 *
Dougherty, Daniel J.		TC: Small: Analysis for a Cloud of Policies: Foundations and Tools	National Science Foundation	\$199,197
Dougherty, Daniel J.	Kathryn Fisler, Joshua D. Guttman	TC: Small: Analysis for a Cloud of Policies: Foundations and Tools	National Science Foundation	\$192,590
Gennert, Michael A.	Allen H. Hoffman, John M. Sullivan	Patient Motion Detection and Compensation in SPECT	UMass Medical School	\$157,137 *
Heffernan, Neil	Joseph E. Beck	Building an Effective and Efficient OPEN Tutor Platform for Multiple Populations	University of Massachusetts Amherst	\$115,999
Heffernan, Neil		National Center for Cognitive and Mathematics Instruction (NCCMI)	WestEd	\$102,832
Heffernan, Neil		Efficacy of ASSISTments: Evaluation of a Computer-Supported Nightly Homework and Reporting System	SRI International	\$326,478
Heffernan, Neil	Matthew Oliver Ward	Fellowships in Computer Science to Support the Learning Sciences and Security	US Dept. of Education	\$177,688
Heffernan, Neil		Design Note: Linking PML and ASSISTments Accounts	CFY	\$27,973
Rundensteiner, Elke A.		III:Small: Complex Event Analytics	National Science Foundation	\$16,000
Sarkozy, Gabor N		Paul Erdos 100th Birthday Conference	National Science Foundation	\$15,000
Shue, Craig A.		ORNL CTES Security Review of Wide-area Monitoring Control	UT-Battelle LLC	\$44,991
Venkatasubramanian, Krishna Kumar		TRUSTFORGE: Flexible Access Control for VehicleForge.mil Collaborative Environment	University of Pennsylvania	\$44,031
Ward, Matthew Oliver	Huong N. Higgins, Elke A. Rundensteiner	III:CGV:Small: Model-Driven Visual Analytics on Streams	National Science Foundation	\$351,389 *
Total (20)				\$2,052,294

*These award totals each reflect 2 increments

**AWARDS RECEIVED
ELECTRICAL & COMPUTER ENGINEERING
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Brown, Donald R.		Distributed Coherence: Fundamental Building Blocks, System Concepts, and Experimental Demonstration	National Science Foundation	\$213,436
Cyganski, David	R. James Duckworth, Kathy Ann Notarianni	Improving Firefighter Health and Safety With Uninterrupted Real Time Personal Sensors	Federal Emergency Management Agency	\$998,124
Duckworth, R. James	David Cyganski	Development and Support of WPI August 2012 Workshop	Department of Homeland Security	\$50,000
Duckworth, R. James	David Cyganski	Precision Indoor Personnel Location and Tracking for Emergency Responders	Department of Homeland Security	\$20,000
Duckworth, R. James	David Cyganski	Three-Dimensional Modeling to Support Indoor Location-Real-Time Image Capture System, PHASE 2	Astrium Services	\$105,911
Eisenbarth, Thomas		CAREER: Practical Leakage Resilience: Provable Side-Channel Resistance for Embedded Systems	National Science Foundation	\$189,994 *
Eisenbarth, Thomas		TWC: Medium: Collaborative: A Unified Statistics-based Framework for Side-channel Attack Analysis and Security Evaluation of Cryptosystems	National Science Foundation	\$275,955
Lai, Lifeng		CIF: Small: Collaborative Research: Interface Management for Visible Light Communications via Poisson Model	National Science Foundation	\$224,957
Lai, Lifeng		ATD: Collaborative Research: Mathematical Challenges in Distributed Quickest Detection	National Science Foundation	\$186,852
Lai, Lifeng		CAREER: Building Secure Wireless Communication Systems via Physical Layer Resources	National Science Foundation	\$336,457 *
Lai, Lifeng		TC: Small: Collaborative Research: Exploiting Network Dynamics for Secret Key Generation	National Science Foundation	\$175,886
Lai, Lifeng		Information Theory Enabled Secure Wireless Networking: Scaling Laws, Network Control, and Implementation	Qatar University	\$28,925
McNeill, John A.		Mixed Signal Techniques for Analog to Digital Converter Design with Sub-Picosecond Time-Domain Performance in Nanometer CMOS	National Science Foundation	\$263,845
Padir, Taskin		CPS:Medium: Collaborative Research: Holistic Design Methodology for Automated Implementation of Human-in-the-Loop Cyber-Physical Systems	National Science Foundation	\$16,000
Padir, Taskin		Oryx: A Space Exploration Rover	National Institute of Aerospace	\$10,000 *
Padir, Taskin		Design and Realization of an Intelligent-Portable Aerial Surveillance System (I-PASS)	Ohio Aerospace Institute	\$8,000
Padir, Taskin		Draper Laboratory Fellow Program	Charles Stark Draper Laboratory, Inc.	\$37,434
Pahlavan, Kaveh		Wireless Health Monitoring and Location Tracking Rapid Product Development Center	University of California Los Angeles	\$37,182
Wyglinski, Alexander		Reconfigurable Wireless Platforms for Spectrally Agile Coexistence	ORB Analytics	\$75,000
Wyglinski, Alexander		FPGA Design of Communication Systems	MIT Lincoln Laboratory	\$68,117
Wyglinski, Alexander		Practical Wireless Communication Systems Employing Autonomous Learning in Realistic Vehicular Dynamic Spectrum Access Environments	Toyota Infotechnology Center, U.S.A. , Inc	\$40,000
Total (24)				\$3,362,075

*These award totals each reflect 2 increments

**AWARDS RECEIVED
FIRE PROTECTION ENGINEERING
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Meacham, Brian Jay		Quantification of Fire Risk, Performance Levels, Design Fires and Acceptance Criteria for Use in Performance-Based Codes and Fire Safety Design	NIST	\$129,271
Meacham, Brian Jay		Safety Challenges of Green Buildings	Fire Protection Research Foundation	\$15,000
Meacham, Brian Jay		Analysis and Prediction of Post-Earthquake Fire Performance Buildings	Society of Fire Protection Engineers	\$15,000
Notarianni, Kathy Ann		High-Rise Tool Kit	CFAI-Risk, Inc.	\$138,698
Rangwala, Ali S.		Characterization of Agiltron Imager in Smokey Conditions	Agiltron, Inc.	\$24,000
Rangwala, Ali S.	Albert Simeoni	Spread and Burning Behavior of Oil in Icy Conditions	US Dept. of Interior	\$397,055
Simeoni, Albert	Simon Evans	Study of Wind/Tree Interaction to Improve CFD Fire-Spread Models	US Department of Agriculture	\$54,996
Simeoni, Albert		Effectiveness of Fuel Reduction Treatments Measured in Three Dimensions at the Landscape Scale and Evaluated Using WFDS	US Department of Agriculture	\$69,222
Simeoni, Albert		Investigation of Wildland Porous Fuel Ignition	FM Global Research	\$35,000
Total (9)				\$878,242

**AWARDS RECEIVED
HUMANITIES
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Boudreau, Kristin	Tracey Leger-Hornby, Linda Carre Loof	The Big Read: Their Eyes Were Watching God	National Endowment for the Arts	\$15,000
Manzo, Vincent Joseph		Interactive Music System and Curriculum for Special Needs Composition and Performance	Technology Institute for Music Educators	\$5,000
Rudolph, Jennifer	Amy Z. Zeng, Jennifer deWinter	Integrating Chinese Area Studies into the WPI STEM & Business Curricula	US Dept. of Education	\$94,470
Total (3)				\$114,470

**AWARDS RECEIVED
IGSD
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Clancy, Edward A.	Richard Francis Vaz	2012 Implementation of a WPI Project Center at MIT Lincoln Laboratory	MIT Lincoln Laboratory	\$68,913
Shockey, Ingrid K.	Richard Francis Vaz	Building Capacity for a New Student Study Project Center in Mandi, India	US State Department	\$224,377
Total (2)				\$293,290

**AWARDS RECEIVED
MATHEMATICAL SCIENCES
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Fehribach, Joseph D.	Burt S. Tilley, Suzanne L. Weekes	Collaborative Research: Expanding Links with Industry through Collaborative Research and Education in Applied Mathematics	National Science Foundation	\$67,348
Larsen, Christopher J.		New Variational Methods for Quasi-static and Dynamic Material Defect Evolution	National Science Foundation	\$111,874
Martin, William J.		Some Problems on Association Schemes	National Security Agency	\$40,936
Tang, Dalin		3D MRI-based Modeling for Computer-Aided Right Ventricle Remodeling Surgery	Boston Children's Hospital	\$150,678
Tang, Dalin	Kristen Billiar, Joseph D. Petrucci	In Vivo IVUS Image-Based Modeling for Human Coronary Plaque Assessment	National Institutes of Health	\$302,375
Tilley, Burt S.		Thermal Transport Models for Layered Materials	Air Force Office of Scientific Research	\$57,817
Walker, Homer F.		Anderson Acceleration for Fixed-Point Iterations	Department of Energy	\$142,500
Weekes, Suzanne L.	Zheyang Wu, Vadim V. Yakovlev, Marcel Y. Blais	REU Site: Research Experience for Undergraduates in Industrial Mathematics and Statistics	National Science Foundation	\$124,638
Wu, Zheyang		Analysis of Deep Sequencing Data to Identify Genes Causative for Neurodegenerative Diseases	UMass Medical School	\$47,033
Total (9)				\$1,045,199

AWARDS RECEIVED
MECHANICAL ENGINEERING
JULY 1, 2012 TO JUNE 30, 2013

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Apelian, Diran		Collaborative Research: Center for Resource Recovery and Recycling (CR3)	National Science Foundation	\$161,500 *
Apelian, Diran	Yan Wang	Collaborative Research: A Fundamental Investigation of High Efficiency Low Temperature Recycling Technology for Lithium Ion Batteries	National Science Foundation	\$119,584
Bar-On, Isa	Christopher A. Brown, Selcuk Gucer, Sharon Johnson, Jianyu Liang, Richard D. Sisson	GAANN: Leaders in Advanced Manufacturing and Healthcare System Innovation	US Dept. of Education	\$133,266
Bar-On, Isa	Sharon Johnson, Bengisu Tulu, Renata Konrad	New England Healthcare Engineering Partnership (NEHCEP)	U.S. Dept. of Veterans Affairs	\$354,357 *
Blandino, John J.	Nikolaos A. Gatsonis	Characterization and Modeling of a High-Current Negative Hydrogen Ion Source	Busek Company, Inc.	\$174,349
Brown, Christopher A.		Axiomatic Design of Operations	Supfina Machine Company, Inc.	\$24,997
Demetriou, Michael A.	Nikolaos A. Gatsonis	Detection of a Moving Gas Source and Estimation of its Concentration with a Sensing Aerial Vehicle: Integration of Theoretical Controls and Computational Fluid	Air Force Office of Scientific Research	\$129,207
Fischer, Gregory S.		Enabling Technologies for MRI-Guided Prostate Interventions	Brigham & Women's Hospital	\$215,805
Fischer, Gregory S.	Reinhold Ludwig, Zheyang Wu	MR-Guided Precision Conformal Ablation Therapy for Brain Tumors	National Institutes of Health	\$496,482
Furlong-Vazquez, Cosme		Computer-based Holography and Middle Ear Function	Massachusetts Eye and Ear Infirmary	\$406,133 *
Furlong-Vazquez, Cosme		Shape Measurements by Advanced Fringe Projection Methods: Stage 1	Symbotic, LLC	\$40,117
Lados, Diana A.		CAREER: On the Engineering of Light Metals for Enhanced Dynamic Properties and Fatigue Performance	National Science Foundation	\$105,005
Sisson, Richard D.	Diran Apelian, Nikolaos A. Gatsonis, Jianyu Liang, Makhlof M. Makhlof	Center for Thermomechanical Processing of Materials by Design	US Army	\$3,999,909
Wang, Yan		Multiscale Capability for Exploring Transport Phenomena in Battery	Lawrence-Livermore National Laboratory	\$9,971
Wang, Yan	Diran Apelian	High Energy Density Flow Batteries	Massachusetts Clean Energy Center	\$40,000
Wang, Yan		High Energy Density Ni/Zn Flow Batteries	Irving A. Backman & Associates, LLC	\$70,000

AWARDS RECEIVED
MECHANICAL ENGINEERING (continued)
JULY 1, 2012 TO JUNE 30, 2013

Yagoobi, Jamal	Two-phase Heat Transport Device Driven by Electric Conduction Mechanism in Micro and Macro Scale	NASA	\$156,527 **
Yagoobi, Jamal	Design of EHD Conduction Pumping Electrodes for Integrated Thermal Control of a Grid Stiffened Panel	LoadPath	\$100,000
Yagoobi, Jamal	Heat Transfer Characteristics of Fluid with Nano-Encapsulated Phase Change Materials	National Science Foundation	\$269,695
Yagoobi, Jamal	Electrically Driven Dielectric Fluid Flows with Phase Change in Micro- And Nano-Scales	National Science Foundation	\$67,621
Yagoobi, Jamal	John J. Blandino, David C. Brown, Simon Evans, Cosme Furlong-Vazquez	Collaborative Research: Planning Grant: I/UCRC for AREA National Science Foundation	\$16,275
Total (27)			\$7,090,800

* These award totals each reflect 2 increments

** This award total reflects 4 increments

**AWARDS RECEIVED
PHYSICS
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Quimby, Richard S.		Mid-IR Fiber Laser	Thorlabs Inc	\$25,000
Ram-Mohan, L.R.		A First-Principles Approach to the Electron-Phonon Coupling in Technologically Important Semiconductors	Office of Naval Research	\$270,501
Tuzel, Erkan		Kinesin and +TIP Based Microtubule Steering	Pennsylvania State University	\$39,296
Total (3)				\$334,797

**AWARDS RECEIVED
SCHOOL OF BUSINESS
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Hoy, Francis		Coleman Foundation Faculty Entrepreneurship Fellows Program	Coleman Foundation	\$29,000
Strong, Diane M.	Emmanuel O. Agu	SHB: Medium: Self-Care Management: Patient-Centered Diabetic Wound Care Using Smart Phones	National Science Foundation	\$13,000
Total (2)				\$42,000

**AWARDS RECEIVED
SOCIAL SCIENCE AND POLICY STUDIES
JULY 1, 2012 TO JUNE 30, 2013**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Baker, Ryan Shaun	Neil Heffernan	Research: Predicting STEM Career Choice From Computational Indicators of Student Engagement Within Middle School Mathematics Classes	National Science Foundation	\$477,229 *
Total (2)				\$477,229

* This award total reflects 2 increments

**AWARDS RECEIVED
OTHER DEPARTMENTS
JULY 1, 2011 TO JUNE 30, 2011**

Principal Investigator	CoPI(s)	Project Title	Sponsor	Amount
Cesar, Gregory	Stacy Chiaramonte, Rachel I. LeBlanc	Systems Engineering Graduate Certificate Program	US Army	\$135,084
Cyr, Martha	Theresa Schmidt Adams	Expanding Science, Technology, Engineering, and Mathematics in Grades 6-12 Using Project Lead The Way Curriculum Programs in MA	Massachusetts Board of Higher Education	\$50,000
Cyr, Martha	Theresa A. Adams	Expanding Science, Technology, Engineering, and Mathematics in Grades 6 - 12 Using Project Lead the Way Curriculum Programs in MA	Linde Family Foundation	\$200,000
Hall, Bonnie J.		ExxonMobil Bernard Harris Summer Science Camp	Harris Foundation	\$80,000
Sisson, Richard D.		Graduate Research Fellowship Program	National Science Foundation	\$87,000 *
Sisson, Richard D.	Gregory A. Snoddy	Louis Stokes Alliance for Minority Participation Phase III Grant	University of Massachusetts Amherst	\$66,000
Tolles, Erica L.		Building Coalitions to Foster Change on College Campuses: A Four Campus Coordinated Multilevel Violence Prevention and Intervention Program	Clark University	\$50,000
Trammell, NaTonia		Exxon Mobil Bernard Harris Summer Science Camp at WPI 2012	Harris Foundation	\$80,000
Wobbe, Kristin K.	Chrysanthe Demetry	Engage WPI	Institute Stevens	\$2,000
Total (10)				\$750,084

* This award total reflects 2 increments

FY2013 Grand Total (146) \$25,121,063