



## FOOTHILL COLLEGE

### Institutional Research and Planning

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RE: STEM Students and STEM Center Usage, 2012-13 to 2014-15

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#### Overview

Students who enrolled in courses offered in the PSME division and BIOL department in 2012-13, 2013-14 and 2014-15 were identified and tracked to determine whether they were F1 (international) or non-F1 status, accessed STEM Center services and if they successfully passed their courses. The analysis focuses primarily on STEM courses, especially MATH.

#### *Highlights*

- Over the past three years, a higher percentage of students who successfully complete their STEM course accessed STEM Center services. The appendix tables provide overall success, nonsuccess and withdraw rates by F1/non-F1 status, subject and STEM Center use.
- In MATH, the percentage rate among successful students accessing the STEM Center increased by 17-percentage points among F1 students (53% to 70%) and non-F1 students (47% to 65%) between 2012-13 and 2014-15 (53% to 70%).
- Non-F1 students enrolled in MATH and accessed the STEM Center successfully completed the course at a higher percentage rate compared to those who did not access the center (2012-13: 56% vs. 50%; 2013-14: 74% vs. 52%; 2014-15: 63% vs. 57%).
- Over the three years, non-F1 students who enrolled in MATH and accessed the STEM Center successfully completed their course at increasingly higher percentage rates (2012-13: 53% vs. 2014-15: 61%). Meanwhile, a decreasing success rate occurred among non-F1 students who did not access the STEM Center (2012-13: 51% vs. 2014-15: 45%).
- F1 students who accessed the STEM Center services tend to pass their MATH course at a higher percentage rate compared to non-F1 students (F1 three-yr avg: 76%; non-F1 three yr-avg: 58%). Note that this does not take into account student preparation, placement test result or prior Math course experience at Foothill or another college.
- Non-F1 students who accessed the STEM Center services for non-MATH courses experienced roughly a 60% course success rate. Those who did not access the STEM Center experienced a course success rate that was typically a few percentage points lower (between 2-to 4-percentage points lower).
- Among non-F1 students, targeted students who accessed the STEM Center services demonstrated a higher percentage rate of success compared to those who did not visit the center (2012-13: +12%; 2013-14: +20%; 2014-15: +22%).

- The success gap between targeted and non-targeted student groups who accessed the STEM Center services decreased between 2012-13 and 2014-15, from 24-to 5-percentage points (2012-13: 35% vs. 59%; 2014-15: 57% vs. 62%).
- While participation in the STEM Center increased between 2012-13 and 2014-15, the greatest percent increase is in tutoring among F1 and non-F1 students.
- By 2014-15, MATH course success rates among students participating in both tutoring and workshops is higher than participation in just tutoring or workshops alone (Both services: F1-93% and non-F1-70%; Tutoring: F1-79% and non-F1-61%; Workshop: F1-87% and non-F1-53%).

Table 1. STEM Center Use and Successful Course Completion by Student Status, 2012-13 to 2014-15.

Student Status	Subject	STEM Ctr Ind	2012-13		2013-14		2014-15	
			Enr	Percent	Enr	Percent	Enr	Percent
F1	C S	Y	30	53%	87	76%	113	67%
		N	27	47%	28	24%	55	33%
		Total	57	100%	115	100%	168	100%
	CHEM	Y	88	63%	112	72%	140	70%
		N	51	37%	43	28%	60	30%
		Total	139	100%	155	100%	200	100%
	MATH	Y	127	53%	200	67%	228	70%
		N	112	47%	97	33%	97	30%
		Total	239	100%	297	100%	325	100%
	PHYS	Y	88	69%	603	58%	178	72%
		N	39	31%	439	42%	69	28%
		Total	127	100%	1042	100%	247	100%
	Other crse	Y	362	36%	128	75%	738	56%
		N	630	64%	42	25%	589	44%
		Total	992	100%	170	100%	1327	100%
Non F1	C S	Y	86	20%	151	22%	210	25%
		N	354	80%	543	78%	622	75%
		Total	440	100%	694	100%	832	100%
	CHEM	Y	271	48%	329	59%	326	55%
		N	294	52%	229	41%	271	45%
		Total	565	100%	558	100%	597	100%
	MATH	Y	126	47%	197	61%	256	65%
		N	144	53%	126	39%	138	35%
		Total	270	100%	323	100%	394	100%
	PHYS	Y	197	44%	2138	33%	298	57%
		N	254	56%	4336	67%	226	43%
		Total	451	100%	6474	100%	524	100%
	Other crse	Y	936	17%	220	52%	2357	33%
		N	4697	83%	201	48%	4833	67%
		Total	5633	100%	421	100%	7190	100%

In the C S department, a higher percentage of students who accessed the STEM Center services compared to those who did were successful in completing their course(s). Among F1 students, over 70% who accessed the STEM Center passed their course(s). Enrollment in STEM Center services increased over three years from 42 in 2012-13 to 147 in 2013-14. Note that the nonsuccess percentage rate among STEM Center users declined from 17% in 2012-13 to 9% in 2014-15.

Table 2. Computer Science Course Success by STEM Center Use among F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	2012-13		2013-14		2014-15	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	30	71%	87	78%	113	77%
Y	Nonsuccess	7	17%	7	6%	13	9%
Y	Withdraw	5	12%	17	15%	21	14%
Y	Total	42	100%	111	100%	147	100%
N	Success	27	69%	28	62%	55	70%
N	Nonsuccess	7	18%	8	18%	11	14%
N	Withdraw	5	13%	9	20%	13	16%
N	Total	39	100%	45	100%	79	100%

Among non-F1 students, there appears to be a declining success rate among STEM Center users (2012-13: 65%; 2014-15: 59%). However, there is roughly triple the STEM Center enrollment among non-F1 students.

Table 3. Computer Science Course Success by STEM Center Use among Non-F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	2012-13		2013-14		2014-15	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	86	65%	151	58%	210	59%
Y	Nonsuccess	16	12%	22	8%	28	8%
Y	Withdraw	31	23%	89	34%	115	33%
Y	Total	133	100%	262	100%	353	100%
N	Success	354	55%	543	60%	622	60%
N	Nonsuccess	89	14%	116	13%	106	10%
N	Withdraw	200	31%	241	27%	316	30%
N	Total	643	100%	900	100%	1044	100%

Chemistry course success rates among F1 students suggests a higher rate of completion among those who access the STEM Center services (2014-15: 81% vs. 76%).

Table 4. Chemistry Course Success by STEM Center Use among F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	<u>2012-13</u>		<u>2013-14</u>		<u>2014-15</u>	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	88	94%	112	85%	140	81%
Y	Nonsuccess	4	4%	17	13%	24	14%
Y	Withdraw	2	2%	3	2%	8	5%
Y	Total	94	100%	132	100%	172	100%
N	Success	51	77%	43	67%	60	76%
N	Nonsuccess	13	20%	15	23%	15	19%
N	Withdraw	2	3%	6	9%	4	5%
N	Total	66	100%	64	100%	79	100%

Among non-F1 student, there appears to a slightly higher CHEM course success rate experience among those who access the STEM Center (2014-15: 62% vs. 60%). However, this completion rate seems to be declining, especially when compared to 2012-13 when there was a seven-percentage point difference (68% vs. 61%).

Table 5. Chemistry Course Success by STEM Center Use among non-F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	<u>2012-13</u>		<u>2013-14</u>		<u>2014-15</u>	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	271	68%	329	62%	326	62%
Y	Nonsuccess	65	24%	95	18%	109	21%
Y	Withdraw	61	23%	106	20%	94	18%
Y	Total	397	100%	530	100%	529	100%
N	Success	294	61%	229	59%	271	60%
N	Nonsuccess	86	18%	70	18%	98	22%
N	Withdraw	103	21%	90	23%	82	18%
N	Total	483	100%	389	100%	451	100%

MATH course success rates among F1 students suggest that they appear to benefit from using the STEM Center as nonsuccess rates are much higher among those who do not access the center (2014-15: 16% vs. 29%).

Table 6. Math Course Success by STEM Center Use among F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	2012-13		2013-14		2014-15	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	127	74%	200	78%	228	77%
Y	Nonsuccess	37	22%	39	15%	46	16%
Y	Withdraw	7	4%	19	7%	22	7%
Y	Total	171	100%	258	100%	296	100%
N	Success	112	66%	97	65%	97	58%
N	Nonsuccess	37	22%	32	21%	48	29%
N	Withdraw	21	12%	20	13%	21	13%
N	Total	170	100%	149	100%	166	100%

Among non-F1 students, the MATH course success rates appear to have increased over the past three years among those who access the STEM Center services (2012-13: 53%; 2014-15: 61%). Meanwhile, the nonsuccess/withdraw rates among those who do not access the center demonstrate an increasing trend (2012-13: 49%; 2014-15: 55%) suggesting that MATH success is more likely with STEM Center use. Note that a success rate gap exists between F1 and non-F1 students who accessed the STEM Center, with F1 students completing MATH at about a 16-percentage point difference (2014-15: F1-77% vs. non-F1: 61%).

Table 7. Math Course Success by STEM Center Use among Non-F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	2012-13		2013-14		2014-15	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	126	53%	197	61%	256	61%
Y	Nonsuccess	76	32%	83	26%	103	24%
Y	Withdraw	35	15%	43	13%	62	15%
Y	Total	237	100%	323	100%	421	100%
N	Success	144	51%	126	43%	138	45%
N	Nonsuccess	72	26%	91	31%	82	27%
N	Withdraw	66	23%	78	26%	85	28%
N	Total	282	100%	295	100%	305	100%

F1 students who access the STEM Center services appear to successfully complete PHYS at a higher percentage rate compared to those who did not use the center (gap between 5-to 10-percentage points).

Table 8. Physics Course Success by STEM Center Use among F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	<u>2012-13</u>		<u>2013-14</u>		<u>2014-15</u>	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	88	75%	128	72%	178	71%
Y	Nonsuccess	25	21%	34	19%	44	17%
Y	Withdraw	5	4%	17	9%	30	12%
Y	Total	118	100%	179	100%	252	100%
N	Success	39	65%	42	65%	69	66%
N	Nonsuccess	15	25%	17	26%	25	24%
N	Withdraw	6	10%	6	9%	11	10%
N	Total	60	100%	65	100%	105	100%

Non-F1 students who access the STEM Center services appear to experience a slightly higher percentage rate of course success in PHYS compared to those who did not demonstrate STEM Center use (2014-15: +3%).

Table 9. Physics Course Success by STEM Center Use among Non-F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	<u>2012-13</u>		<u>2013-14</u>		<u>2014-15</u>	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	197	62%	220	61%	298	65%
Y	Nonsuccess	56	18%	72	20%	58	13%
Y	Withdraw	64	20%	67	19%	101	22%
Y	Total	317	100%	359	100%	457	100%
N	Success	254	61%	201	61%	226	62%
N	Nonsuccess	70	17%	54	16%	65	18%
N	Withdraw	92	22%	75	23%	73	20%
N	Total	416	100%	330	100%	364	100%

STEM Center use also appears to facilitate course success rates in other courses among F1 students, resulting in an average completion rate around 72% compared to 66% for those who did not access the center's services.

Table 10. Other Course Success by STEM Center Use among F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	2012-13		2013-14		2014-15	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	362	75%	603	71%	738	70%
Y	Nonsuccess	90	19%	173	20%	249	23%
Y	Withdraw	28	6%	74	9%	74	7%
Y	Total	480	100%	850	100%	1061	100%
N	Success	630	67%	439	65%	589	66%
N	Nonsuccess	212	23%	178	27%	215	24%
N	Withdraw	99	11%	54	8%	90	10%
N	Total	941	100%	671	100%	894	100%

Similarly, their non-F1 peers who also access the STEM Center services appear to demonstrate a higher completion rate in other courses (3-yr average: 62% vs. 58%).

Table 11. Other Course Success by STEM Center Use among Non-F1 Students, 2012-13 to 2014-15.

STEM Ctr Ind	Crse Outcome	2012-13		2013-14		2014-15	
		Enr	Percent	Enr	Percent	Enr	Percent
Y	Success	936	61%	2138	63%	2357	63%
Y	Nonsuccess	335	22%	761	22%	811	22%
Y	Withdraw	258	17%	495	15%	562	15%
Y	Total	1529	100%	3394	100%	3730	100%
N	Success	4697	57%	4336	57%	4833	59%
N	Nonsuccess	1843	23%	1715	23%	1789	22%
N	Withdraw	1637	20%	1543	20%	1571	19%
N	Total	8177	100%	7594	100%	8193	100%

Non-F1 students enrolled in MATH and accessed the STEM Center services experience a much higher course success rate compared to those who did not use the center. By 2014-15, over half (57%) of STEM Center users successfully completed their course compared to roughly one-third of those who passed and did not access the center (35%). Note that in this three-year time frame, the targeted student enrollment increased from 111 to 170 (53% increase).

Table 12. Non-F1 MATH Course Success and STEM Center Use by Student Group, 2012-13 to 2014-15.

Student Group	STEM Ctr Ind	Crse Outcome	2012-13		2013-14		2014-15	
			Enr	Percent	Enr	Percent	Enr	Percent
Targeted Groups	Y	Success	21	35%	32	46%	61	57%
		Nonsuccess	24	40%	27	39%	28	26%
		Withdraw	15	25%	11	16%	18	17%
		Total	60	100%	70	100%	107	100%
	N	Success	24	47%	16	26%	22	35%
		Nonsuccess	15	29%	19	31%	25	40%
		Withdraw	12	24%	22	35%	16	26%
		Total	51	100%	57	92%	63	102%
Non Targeted Groups	Y	Success	105	59%	165	65%	195	62%
		Nonsuccess	52	29%	56	22%	75	24%
		Withdraw	20	11%	32	13%	44	14%
		Total	177	38%	253	100%	314	100%
	N	Success	120	52%	110	46%	116	48%
		Nonsuccess	57	25%	72	30%	57	24%
		Withdraw	54	23%	56	24%	69	29%
		Total	231	100%	238	100%	242	100%

Tables 13, 14 and 15 show the STEM Center use by activity, F1/non-F1 status, subject and course success. Roughly half of the non-F1 students who did not access the STEM Center services appear to successfully complete their MATH course during the three-year period (2012-13: 50% to 2014-15: 57%). STEM Center use appears to facilitate MATH course success as completion rates are higher among those who participate in tutoring, workshops or both. The exception is with workshops in 2014-15 but this finding may be due to the lower participation compared to the two previous years.



Table 13. Course Success and STEM Center Use by Subject and Student Status, 2012-13.

Student Status	Subject	STEM Ctr Use	Success		Nonsuccess		Withdraw		Total	
			Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
F1	C S	None	27	72%	7	15%	5	13%	39	100%
		Tutor	19	68%	5	25%	3	7%	27	100%
		Workshop	4	36%	2	59%	1	5%	7	100%
		Both	7	100%			1	0%	8	100%
		Total	57	87%	14	11%	10	3%	81	100%
	CHEM	None	51	82%	13	16%	2	2%	66	100%
		Tutor	41	88%	2	8%	2	4%	45	100%
		Workshop	16	100%					16	100%
		Both	31	93%	2	7%			33	100%
		Total	139	93%	17	6%	4	1%	160	100%
	MATH	None	112	64%	37	23%	21	13%	170	100%
		Tutor	45	73%	14	21%	4	6%	63	100%
		Workshop	39	81%	12	19%	1	0%	52	100%
		Both	43	72%	11	27%	2	1%	56	100%
		Total	239	73%	74	24%	28	3%	341	100%
	PHYS	None	39	72%	15	21%	6	7%	60	100%
		Tutor	51	82%	16	17%	3	1%	70	100%
		Workshop	13	60%	4	38%	2	1%	19	100%
		Both	24	91%	5	9%			29	100%
		Total	127	83%	40	17%	11	1%	178	100%
	Other crse	None	630	74%	212	19%	99	7%	941	100%
		Tutor	212	79%	54	17%	17	4%	283	100%
		Workshop	74	84%	23	14%	5	2%	102	100%
		Both	76	89%	13	8%	6	3%	95	100%
		Total	992	84%	302	12%	127	4%	1421	100%
	Total		1554	84%	447	13%	180	3%	2181	100%
Not F1	C S	None	354	58%	89	13%	200	30%	643	100%
		Tutor	56	73%	13	12%	23	15%	92	100%
		Workshop	15	96%	3	3%	2	1%	20	100%
		Both	15	89%			6	11%	21	100%
		Total	440	79%	105	6%	231	16%	776	100%
	CHEM	None	294	64%	86	17%	103	19%	483	100%
		Tutor	169	70%	50	18%	45	12%	264	100%
		Workshop	44	90%	5	2%	6	8%	55	100%
		Both	58	85%	10	5%	10	10%	78	100%
		Total	565	81%	151	8%	164	11%	880	100%
	MATH	None	144	50%	72	27%	66	24%	282	100%
		Tutor	41	54%	37	33%	15	13%	93	100%
		Workshop	35	57%	15	36%	8	7%	58	100%
		Both	50	56%	24	27%	12	18%	86	100%
		Total	270	55%	148	29%	101	15%	519	100%

PHYS	None	254	64%	70	16%	92	20%	416	100%
	Tutor	129	67%	45	15%	45	18%	219	100%
	Workshop	23	63%	2	1%	9	36%	34	100%
	Both	45	82%	9	4%	10	14%	64	100%
Total		451	76%	126	7%	156	17%	733	100%
Other crse	None	4697	65%	1843	19%	1637	16%	8177	100%
	Tutor	672	68%	267	20%	204	12%	1143	100%
	Workshop	132	82%	31	11%	31	8%	194	100%
	Both	132	82%	37	10%	23	8%	192	100%
Total		5633	73%	2178	15%	1895	12%	9706	100%
Total		7359	73%	2708	14%	2547	13%	12614	100%

Table 14. Course Success and STEM Center Use by Subject and Student Status, 2013-14.

Student Status	Subject	STEM Ctr Use	Success		Nonsuccess		Withdraw		Total	
			Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
F1	C S	None	28	76%	8	5%	9	19%	45	100%
		Tutoring	32	76%	3	5%	8	19%	43	100%
		Workshop	16	94%	2	4%	2	2%	20	100%
		Both	39	91%	2	1%	7	8%	48	100%
		Total	115	88%	15	2%	26	10%	156	100%
	CHEM	None	43	79%	15	19%	6	2%	64	100%
		Tutoring	31	91%	7	6%	1	3%	39	100%
		Workshop	30	85%	4	14%	1	0%	35	100%
		Both	51	83%	6	5%	1	12%	58	100%
		Total	155	84%	32	6%	9	10%	196	100%
	MATH	None	97	81%	32	14%	20	6%	149	100%
		Tutoring	58	89%	11	10%	3	1%	72	100%
		Workshop	62	84%	16	13%	11	3%	89	100%
		Both	80	89%	12	11%	5	0%	97	100%
		Total	297	87%	71	11%	39	1%	407	100%
	PHYS	None	42	64%	17	33%	6	3%	65	100%
		Tutoring	40	88%	13	6%	6	6%	59	100%
		Workshop	25	95%	7	4%	2	1%	34	100%
		Both	63	72%	14	17%	9	11%	86	100%
		Total	170	76%	51	14%	23	9%	244	100%
	Other crse	None	439	71%	178	23%	54	6%	671	100%
		Tutoring	211	88%	56	11%	19	2%	286	100%
		Workshop	172	86%	54	6%	30	9%	256	100%
		Both	220	86%	63	10%	25	4%	308	100%
		Total	1042	86%	351	10%	128	4%	1521	100%
Total	Total	1779	84%	520	10%	225	6%	2524	100%	
Not F1	C S	None	543	65%	116	9%	241	25%	900	100%
		Tutoring	62	55%	12	8%	49	38%	123	100%
		Workshop	41	65%	3	3%	20	32%	64	100%

	Both	48	79%	7	3%	20	18%	75	100%
	Total	694	74%	138	4%	330	22%	1162	100%
CHEM	None	229	66%	70	16%	90	19%	389	100%
	Tutoring	138	70%	52	16%	50	14%	240	100%
	Workshop	69	87%	11	4%	25	9%	105	100%
	Both	122	75%	32	12%	31	13%	185	100%
	Total	558	74%	165	13%	196	13%	919	100%
MATH	None	126	52%	91	31%	78	17%	295	100%
	Tutoring	61	70%	28	20%	13	10%	102	100%
	Workshop	38	70%	23	21%	17	9%	78	100%
	Both	98	75%	32	14%	13	11%	143	100%
	Total	323	73%	174	16%	121	11%	618	100%
PHYS	None	201	67%	54	19%	75	14%	330	100%
	Tutoring	106	83%	32	10%	27	7%	165	100%
	Workshop	34	77%	17	4%	14	19%	65	100%
	Both	80	81%	23	7%	26	12%	129	100%
	Total	421	81%	126	8%	142	11%	689	100%
Other crse	None	4336	70%	1715	15%	1543	14%	7594	100%
	Tutoring	1131	76%	391	16%	268	8%	1790	100%
	Workshop	508	79%	177	11%	117	10%	802	100%
	Both	499	78%	193	12%	110	10%	802	100%
	Total	6474	77%	2476	13%	2038	10%	10988	100%
Total		8470	77%	3079	12%	2827	11%	14376	100%

Table 15. Course Success and STEM Center Use by Subject and Student Status, 2014-15.

Student Status	Subject	STEM Ctr Use	Success		Nonsuccess		Withdraw		Total	
			Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
F1	C S	None	55	67%	11	9%	13	24%	79	100%
		Tutoring	71	82%	10	5%	15	13%	96	100%
		Workshop	15	90%	3	3%	4	7%	22	100%
		Both	27	94%			2	6%	29	100%
	Total	168	85%	24	4%	34	11%	226	100%	
CHEM		None	60	73%	15	8%	4	18%	79	100%
		Tutoring	92	84%	21	11%	7	5%	120	100%
		Workshop	13	81%	1	19%			14	100%
		Both	35	95%	2	4%	1	1%	38	100%
	Total	200	86%	39	9%	12	5%	251	100%	
MATH		None	97	59%	48	24%	21	18%	166	100%
		Tutoring	145	79%	31	16%	16	4%	192	100%
		Workshop	30	87%	6	9%	3	4%	39	100%
		Both	53	93%	9	5%	3	2%	65	100%
	Total	325	81%	94	14%	43	5%	462	100%	
PHYS		None	69	74%	25	14%	11	12%	105	100%
		Tutoring	111	77%	31	17%	19	6%	161	100%
		Workshop	20	98%	3	1%	3	2%	26	100%

		Both	47	77%	10	14%	8	9%	65	100%
		Total	247	78%	69	16%	41	7%	357	100%
	Other crse	None	589	73%	215	17%	90	10%	894	100%
		Tutoring	478	79%	170	17%	46	4%	694	100%
		Workshop	102	86%	29	10%	14	5%	145	100%
		Both	158	84%	50	12%	14	5%	222	100%
		Total	1327	80%	464	15%	164	5%	1955	100%
	Total		2267	81%	690	14%	294	6%	3251	100%
Not F1	C S	None	622	67%	106	10%	316	23%	1044	100%
		Tutoring	147	66%	23	8%	91	27%	261	100%
		Workshop	29	78%	4	4%	8	18%	41	100%
		Both	34	72%	1	0%	16	27%	51	100%
		Total	832	67%	134	6%	431	26%	1397	100%
	CHEM	None	271	70%	98	17%	82	13%	451	100%
		Tutoring	223	64%	85	18%	72	18%	380	100%
		Workshop	41	65%	9	8%	8	27%	58	100%
		Both	62	73%	15	11%	14	16%	91	100%
		Total	597	66%	207	17%	176	17%	980	100%
	MATH	None	138	57%	82	25%	85	18%	305	100%
		Tutoring	153	61%	68	26%	40	14%	261	100%
		Workshop	27	53%	12	27%	9	20%	48	100%
		Both	76	70%	23	24%	13	6%	112	100%
		Total	394	62%	185	25%	147	12%	726	100%
	PHYS	None	226	72%	65	13%	73	15%	364	100%
		Tutoring	203	75%	39	10%	70	14%	312	100%
		Workshop	25	67%	10	27%	7	6%	42	100%
		Both	70	77%	9	5%	24	18%	103	100%
		Total	524	75%	123	9%	174	15%	821	100%
	Other crse	None	4833	70%	1789	15%	1571	14%	8193	100%
		Tutoring	1653	78%	577	14%	390	8%	2620	100%
		Workshop	334	74%	120	17%	83	9%	537	100%
		Both	370	82%	114	10%	89	8%	573	100%
		Total	7190	77%	2600	14%	2133	9%	11923	100%
	Total		9537	74%	3249	14%	3061	12%	15847	100%

### Methodology

F1 students are identified based on visa status and from the census data of each academic term. Non-F1 students include domestic students as well other visa status holders (not F1/FC/FZ). STEM Center use was determined based on enrollment in NCBS 405.

The targeted subject was grouped using the STEM definition where CHEM includes CHEM 1A, 1B, 1C; C S includes C S 1A, 1B, 1C, 2C, 10; MATH includes MATH 1A; PHYS includes PHYS includes 2A, 4A, 4B, 4C, 4D, 5A, 5B, 5C. Other courses includes all other courses not identified in the previous sentence, including ASTR, BIOL, and other MATH courses.

STEM Center activity was identified through SARS and shared with Institutional Research.

Targeted students include African Americans, Filipinos, Latinos, Native Americans and Pacific Islanders. Non-targeted students include Asians, Whites, Decline to State and Unknown.

Data includes all enrollment in courses from all terms in an academic year and may be duplicated (so numbers will not match the Math 1A-1B-1C pathway memo that counts students based on fall, winter, spring MATH 1A enrollment and is unduplicated).

Source

FHDA IR&P, ODS [Registration Analysis, Kuo STEM Center Tutor, Kuo STEM Center Workshop]

Appendix 1. Course Success and STEM Center Use by Student Status, 2012-13.

			Success		Nonsuccess		Withdraw		Total	
		STEM Ctr Ind	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
F1	C S	Y	30	88%	7	10%	5	2%	42	100%
		N	27	72%	7	15%	5	13%	39	100%
		Total	57	87%	14	11%	10	3%	81	100%
	CHEM	Y	88	94%	4	6%	2	0%	94	100%
		N	51	82%	13	16%	2	2%	66	100%
		Total	139	93%	17	6%	4	1%	160	100%
	MATH	Y	127	74%	37	24%	7	1%	171	100%
		N	112	64%	37	23%	21	13%	170	100%
		Total	239	73%	74	24%	28	3%	341	100%
	PHYS	Y	88	83%	25	16%	5	1%	118	100%
		N	39	72%	15	21%	6	7%	60	100%
		Total	127	83%	40	17%	11	1%	178	100%
	Other crse	Y	362	86%	90	11%	28	3%	480	100%
		N	630	74%	212	19%	99	7%	941	100%
		Total	992	84%	302	12%	127	4%	1421	100%
Total			1554	84%	447	13%	180	3%	2181	100%
Not F1	C S	Y	86	88%	16	3%	31	9%	133	100%
		N	354	58%	89	13%	200	30%	643	100%
		Total	440	79%	105	6%	231	16%	776	100%
	CHEM	Y	271	83%	65	7%	61	10%	397	100%
		N	294	64%	86	17%	103	19%	483	100%
		Total	565	81%	151	8%	164	11%	880	100%
	MATH	Y	126	56%	76	30%	35	14%	237	100%
		N	144	50%	72	27%	66	24%	282	100%
		Total	270	55%	148	29%	101	15%	519	100%
	PHYS	Y	197	77%	56	6%	64	17%	317	100%
		N	254	64%	70	16%	92	20%	416	100%
		Total	451	76%	126	7%	156	17%	733	100%
	Other crse	Y	936	79%	335	13%	258	9%	1529	100%
		N	4697	65%	1843	19%	1637	16%	8177	100%
		Total	5633	73%	2178	15%	1895	12%	9706	100%
Total			7359	73%	2708	14%	2547	13%	12614	100%

Appendix 2. Course Success and STEM Center Use by Student Status, 2013-14.

			Success		Nonsuccess		Withdraw		Total	
		STEM Ctr Ind	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
F1	C S	Y	87	88%	7	2%	17	10%	111	100%
		N	28	76%	8	5%	9	19%	45	100%
		Total	115	88%	15	2%	26	10%	156	100%
	CHEM	Y	112	84%	17	6%	3	10%	132	100%
		N	43	79%	15	19%	6	2%	64	100%
		Total	155	84%	32	6%	9	10%	196	100%
	MATH	Y	200	88%	39	11%	19	1%	258	100%
		N	97	81%	32	14%	20	6%	149	100%
		Total	297	87%	71	11%	39	1%	407	100%
	Other crse	Y	603	86%	173	9%	74	4%	850	100%
		N	439	71%	178	23%	54	6%	671	100%
		Total	1042	86%	351	10%	128	4%	1521	100%
	PHYS	Y	128	77%	34	14%	17	10%	179	100%
		N	42	64%	17	33%	6	3%	65	100%
		Total	170	76%	51	14%	23	9%	244	100%
Total			1779	84%	520	10%	225	6%	2524	100%
Not F1	C S	Y	151	75%	22	4%	89	22%	262	100%
		N	543	65%	116	9%	241	25%	900	100%
		Total	694	74%	138	4%	330	22%	1162	100%
	CHEM	Y	329	75%	95	12%	106	13%	530	100%
		N	229	66%	70	16%	90	19%	389	100%
		Total	558	74%	165	13%	196	13%	919	100%
	MATH	Y	197	74%	83	16%	43	11%	323	100%
		N	126	52%	91	31%	78	17%	295	100%
		Total	323	73%	174	16%	121	11%	618	100%
	Other crse	Y	2138	78%	761	13%	495	9%	3394	100%
		N	4336	70%	1715	15%	1543	14%	7594	100%
		Total	6474	77%	2476	13%	2038	10%	10988	100%
	PHYS	Y	220	81%	72	8%	67	11%	359	100%
		N	201	67%	54	19%	75	14%	330	100%
		Total	421	81%	126	8%	142	11%	689	100%
Total			8470	77%	3079	12%	2827	11%	14376	100%

Appendix 3. Course Success and STEM Center Use by Student Status, 2014-15.

		STEM Ctr Ind	Success		Nonsuccess		Withdraw		Total	
			Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
F1	C S	Y	113	86%	13	3%	21	11%	147	100%
		N	55	67%	11	9%	13	24%	79	100%
		Total	168	85%	24	4%	34	11%	226	100%
	CHEM	Y	140	87%	24	9%	8	4%	172	100%
		N	60	73%	15	8%	4	18%	79	100%
		Total	200	86%	39	9%	12	5%	251	100%
	MATH	Y	228	83%	46	13%	22	3%	296	100%
		N	97	59%	48	24%	21	18%	166	100%
		Total	325	81%	94	14%	43	5%	462	100%
	PHYS	Y	178	78%	44	16%	30	6%	252	100%
		N	69	74%	25	14%	11	12%	105	100%
		Total	247	78%	69	16%	41	7%	357	100%
	Other crse	Y	738	81%	249	15%	74	4%	1061	100%
		N	589	73%	215	17%	90	10%	894	100%
		Total	1327	80%	464	15%	164	5%	1955	100%
Total			2267	81%	690	14%	294	6%	3251	100%
Not F1	C S	Y	210	68%	28	6%	115	27%	353	100%
		N	622	67%	106	10%	316	23%	1044	100%
		Total	832	67%	134	6%	431	26%	1397	100%
	CHEM	Y	326	65%	109	17%	94	18%	529	100%
		N	271	70%	98	17%	82	13%	451	100%
		Total	597	66%	207	17%	176	17%	980	100%
	MATH	Y	256	63%	103	25%	62	12%	421	100%
		N	138	57%	82	25%	85	18%	305	100%
		Total	394	62%	185	25%	147	12%	726	100%
	PHYS	Y	298	76%	58	9%	101	16%	457	100%
		N	226	72%	65	13%	73	15%	364	100%
		Total	524	75%	123	9%	174	15%	821	100%
	Other crse	Y	2357	78%	811	14%	562	8%	3730	100%
		N	4833	70%	1789	15%	1571	14%	8193	100%
		Total	7190	77%	2600	14%	2133	9%	11923	100%
Total			9537	74%	3249	14%	3061	12%	15847	100%