FOOTHILL COLLEGE
Institutional Research and Planning

DATE: August 1, 2013

TO: Peter Murray, Dean, Physical Sciences, Mathematics & Engineering

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RE: STEM Transfer Students

Overview

Students who enrolled in at least one college-level math in the 2012-13 academic year were invited to participate in a survey regarding their math experiences. Additional data were collected from those respondents indicating they would be transferring to a four-year college or university in the upcoming fall term (397 out of 1,100 students; 36%). Among those who planned to transfer, 40% will be pursuing a STEM major (158 out of 397 students).

The top nine transfer destinations among STEM students are primarily within the UC system, with the exception of three CSU institutions (Table 1). Students who plan on attending these nine institutions represent almost three-fourths of all STEM transfers (116 out of 158 students).

Table 1. Top Transfer Institutions among Foothill STEM Students for Fall 2013.

Rank	School	STEM Majors
1	San Jose State University	27
2	UC Davis	24
3	UC Berkeley	23
4	UC San Diego	12
5	UCLA	12
6	UC Santa Cruz	5
7	UC Irvine	5
8	Cal Poly San Luis Obispo	5
9	San Francisco State University	3
	Total	116

Note: There were six students who indicated they were undecided about their transfer destination.

Table 2 shows the breakdown of the STEM majors among the students transferring to these nine institutions. While half of the students transferring to the three CSUs plan on majoring in Engineering, only about one-fourth of students transferring to the UC system will pursue some form of Engineering.

Table 2. STEM Transfer Majors by Top Transfers Institutions for Fall 2013.

STEM Major		SJSU	UCD	UCB	UCSD	UCLA	UCSC	UCI	Cal Poly SLO	SFSU
Astronomy	N	0	0	0	0	0	0	1	0	0
	%	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(20%)	(0%)	(0%)
Biochemistry	N	0	1	0	1	0	1	0	0	0
	%	(0%)	(4%)	(0%)	(8%)	(0%)	(20%)	(0%)	(0%)	(0%)
Bioengineering	N	0	0	1	0	0	0	0	0	0
	%	(0%)	(0%)	(4%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)
Biological Sciences	N	3	7	1	1	1	0	1	0	2
	%	(11%)	(29%)	(4%)	(8%)	(8%)	(0%)	(20%)	(0%)	(67%)
Biotechnology	N	1	0	0	0	0	0	0	0	0
	%	(4%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)
Chemical Engineering	N	0	0	1	1	0	0	1	0	0
	%	(0%)	(0%)	(4%)	(8%)	(0%)	(0%)	(20%)	(0%)	(0%)
Chemistry	N	3	2	1	0	1	0	0	0	0
	%	(11%)	(8%)	(4%)	(0%)	(8%)	(0%)	(0%)	(0%)	(0%)
Civil engineering	N	3	0	0	0	0	0	0	1	0
	%	(11%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(20%)	(0%)
Computer Engineering	N	2	0	3	1	0	0	0	1	0
	%	(7%)	(0%)	(13%)	(8%)	(0%)	(0%)	(0%)	(20%)	(0%)
Computer Science	N	3	2	3	4	2	2	2	0	0
	%	(11%)	(8%)	(13%)	(33%)	(17%)	(40%)	(40%)	(0%)	(0%)
Electrical Engineering	N	1	1	0	3	0	0	0	1	0
	%	(4%)	(4%)	(0%)	(25%)	(0%)	(0%)	(0%)	(20%)	(0%)
Environmental Engineering	N	0	2	0	0	0	0	0	1	0
	%	(0%)	(8%)	(0%)	(0%)	(0%)	(0%)	(0%)	(20%)	(0%)
Geology	N	0	1	0	0	0	0	0	0	0
	%	(0%)	(4%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)
Industrial Engineering	N	2	0	0	0	0	0	0	0	0
	%	(7%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)
Information Sciences	N	2	0	0	0	0	0	0	0	0
	%	(7%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)
Mathematics	N	1	2	6	1	6	0	0	0	0
	%	(4%)	(8%)	(26%)	(8%)	(50%)	(0%)	(0%)	(0%)	(0%)
Mechanical Engineering	N	4	1	2	0	0	0	0	1	1
	%	(15%)	(4%)	(9%)	(0%)	(0%)	(0%)	(0%)	(20%)	(33%)
Neuroscience	N	0	0	0	0	0	1	0	0	0
	%	(0%)	(0%)	(0%)	(0%)	(0%)	(20%)	(0%)	(0%)	(0%)
Physics	N	0	2	1	0	2	1	0	0	0
	%	(0%)	(8%)	(4%)	(0%)	(17%)	(20%)	(0%)	(0%)	(0%)
Statistics	N	2	3	4	0	0	0	0	0	0
	%	(7%)	(13%)	(17%)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)
Total	N	27	24	23	12	12	5	5	5	3
	%	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)

Methodology

Survey participants were identified if they enrolled in a college-level math course during Fall 2012, Winter 2013 or Spring 2013. College-level math includes MATH 1A, 1B, 1C, 1D, 2A, 2B, 2C, 10, 11, 12, 22, 42, 44, 48A, 48B, 48C, 57. Students enrolled in Fall 2012 or Winter 2013 were invited to participate if they received a final grade in their math course. All students who were enrolled in Spring 2013, as of June 7, 2013, were also invited to participate. A total of 3,739 students were invited to respond to the survey.

The following majors were collapsed into existing categories:

Applied Mathematics=Mathematics

Business MIS and System Engineering=Information Sciences

Industrial Technology=Industrial Engineering

Motorsports Engineering=Mechanical Engineering

Neuroscience and Wildlife & Conservation Biology =Biological Sciences

Software Engineering=Computer Science

Structural Engineering=Civil Engineering

Only STEM transfers were analyzed for this memo. For additional information, refer to the Math Experiences Survey results (July 30, 2013).

Source

FHDA IR&P, 2013 Math Experiences Survey