Cal-PASS
California Partnership for Achieving Student Success

Community College to University Math Transitions

The data below are from De Anza Community College and San Jose State University. Data are available from 1996 thru 2006 for the community college and 2003 through 2007 for the university. 5,297 students transitioned in the time period studied. Fourty-three percent of this cohort have completed 56 or more units at the community college, and the average number if units completed at the community college is 59. Overall, 9% of students who transition to the university subsequently attempt a math course. The time between the last math course in community college and first university math course ranges between 0 and 9 years, with a mean of 2 years. Compared to the highest level attempted in community college, 25% of students' first university math class attempts are lower level, 32% are equal level, and 43% are higher level. One percent of students who transition to this university from community college enroll in a basic math course as their first university math course. There are no students who enroll in Pre-Algebra or Beginning Algebra as their first math course. About 40% of students enroll in Statistics or Finite Math and a similar proportion enroll in Calculus or higher math. The overall success rate for students' first university math course is 75%. Students completing university geometry have the highest success rate (97%), while students who complete Basic Math have the lowest success rate (63%). About 22% of students complete Statistics or Finite Math at the university after completing a higher level of math in community college. This might indicate the students changing from a STEM (Science, Technology, Engineering, Math) pathway to a non-STEM pathway. Males and Hispanics are more likely to attempt a lower level math course.

Course Transition Matrix

The following table may provide an indication of the degree of alignment between community college and university Math curriculum. The table should be read row wise by selecting a community college Math level and reading across that row to see what percent of those students took a given level of Math in university as their next Math course and their success rate in that course. Success is defined as earning a grade of C or better. Please note that the math categories have been assigned by research staff, and will need to be verified by local faculty.

		First math class attempted at university									
		Basic Math	Pre-Alg	Beg Alg	Geo	Int Alg	Stats/ Finite	Precalc	Calc	Lin Algebra	Count
Highest level of math in community college successfully completed	Basic Math	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	Pre-Alg	*	0%	0%	0%	0%	*	*	0%	0%	*
	Beg Alg	*	0%	0%	0%	*	*	*	0%	*	12
	Geo	0%	0%	0%	0%	0%	0%	*	0%	0%	*
	Int Alg	3%	0%	0%	27%	*	53%	*	5%	3%	78
	Stats/ Finite	0%	0%	0%	6%	11%	54%	*	12%	15%	187
	Precalc	0%	0%	0%	*	*	29%	8%	39%	18%	77
	Calc	0%	0%	0%	0%	*	25%	*	25%	47%	114
	Lin Algebra	0%	0%	0%	0%	0%	28%	*	*	66%	32
	Total	*	0	0	35	32	208	18	85	120	506

**Cell counts suppressed to protect student confidentiality*
Red = transitioned down at least one level from high school to college
Yellow = stayed at same level in college as in high school
Green = transitioned up at least one level from high school to college
Turquoise= Possible transfer from STEM to non-STEM pathway change
Pink= Possible non-STEM to STEM pathway change