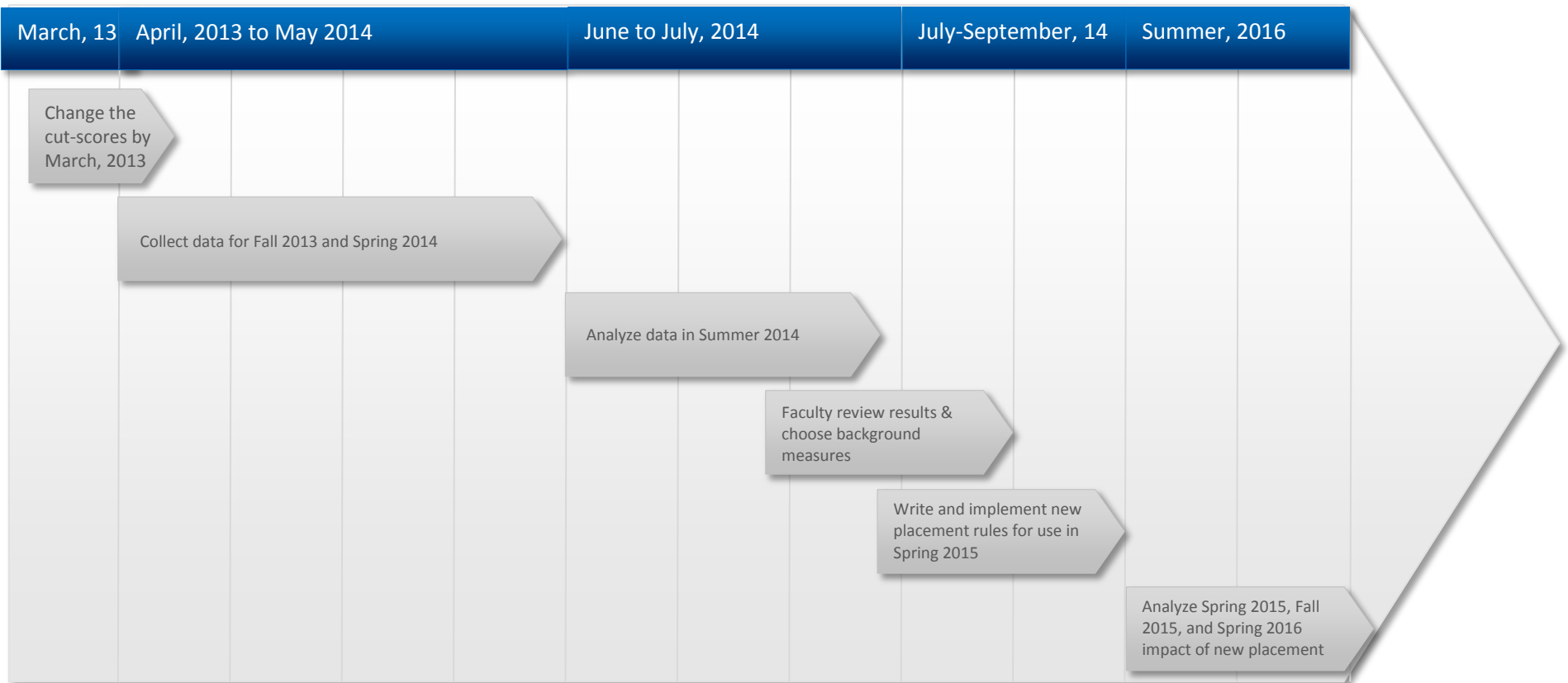


TIMELINE FOR IDENTIFYING AND IMPLEMENTING NEW BACKGROUND MEASURES USED TO PLACE STUDENTS INTO MATH COURSES

2013 to 2015



Identifying Background Measures

The process for identifying the background measures that predict success for students taking math courses at Crafton will take approximately 18 months (i.e. March 2013 to September 2014). Title V Education Code (§55003(g)) allows colleges two years to collect data, conduct research, and implement the background measures.

Confidence Intervals – The confidence intervals for each math assessment test were determined by examining the number of students who placed in the cut-score range from June 1st, 2009 to June 22nd, 2012 and calculating the standard deviation. The standard deviation was added to the low end of the cut-score range and subtracted from the high end of the cut-score range. As an illustration, 984 students scored from 43 to 72.9 on the Accuplacer Arithmetic Assessment. The standard deviation for those students was 8.6, 8.6 was added to 43 to get 51.6 and subtracted from 72.9 to get 64.3. Accordingly, students who score from 43 – 51.6 will need to meet one of the background measures that predicts success in MATH-952/953 to remain in the MATH-952/953 placement range. In addition, students who score 64.3-72.9 will need to meet all the background measures that predict success in MATH-090 to be branched to the Elementary Algebra Assessment and have the opportunity to place into MATH-090 or higher. In order to identify the best predictors for students who might move-up a placement range, initially we will need to place every student in the upper confidence intervals into the next highest course placement. For instance, students who score a 37 on the Arithmetic Assessment will need to be placed into MATH-952, rather than MATH-942, to identify the educational background measures that best predict success in MATH-952.

Table 1: Current Accuplacer Arithmetic Cut-Scores, Confidence Intervals, New Placement Cut-Score Ranges, and Descriptive Statistics by Crafton Hills College Math Courses.

Course	Current Cut-Scores	Confidence Intervals	New Placement for Spring 2013 and Fall 2013	Descriptive Statistics Used to Generate CIs
Take the Elementary Algebra Test (73 – 120)	120		Students who score 64.3 or Higher will branch to take the Elementary Algebra Assessment	N = 643 M = 90.7 SD = 12.6
		85.6		
	73.0			
MATH-952/953 (43 – 72.9)	72.9		Students who score from 36.3 to 64.2 will be placed into MATH-952/953	N = 984 M = 55.0 SD = 8.6
		64.3		
		64.2		
		51.6		
MATH-942/943 (37.9 & below)	42.9		Students who score 36.2 or lower will be placed into MATH-942/943	N = 2,445 M = 29.5 SD = 6.6
		36.3		
		36.2		
	20.0			

Table 2: Current Accuplacer Elementary Algebra Cut-Scores, Confidence Intervals, New Placement Cut-Score Ranges, and Descriptive Statistics by Crafton Hills College Math Courses.

Course	Current Cut-Scores	Confidence Intervals	New Placement for Spring 2013 and Fall 2013	Descriptive Statistics Used to Generate CIs
Take the College Level Math Test (109.1 – 120)*	120.0		Students who score 100.9 or Higher will branch to take the College Level Math Assessment	N = 145 M = 113.8 SD = 2.9
		112.0		
	109.1			
MATH-095 (80.1 – 109.0)	109.0		Students who score from 75.5 to 100.8 will be placed into MATH-095	N = 1,069 M = 93.7 SD = 8.1
		100.9		
		100.8		
		88.11		
	80.01			
MATH-0 90 (65.0 – 80.0)	80.0		Students who score from 52.6 to 75.4 will be placed into MATH-090	N = 1,006 M = 72.2 SD = 4.5
		75.5		
		75.4		
		69.5		
	65.0			
Take the Arithmetic Test (<= 64.9)	64.9		Students who score 52.1 or lower will branch to take the Arithmetic Assessment	N = 3,271 M = 42.5 SD = 12.3
		52.6		
		52.1		
	20.0			

*Currently, to branch to the College Level Math test from the Elementary Algebra Assessment the score on the Elementary Algebra test needs to be 80 or higher and the student needs to have taken Trigonometry, College-Level Algebra, Mathematical Analysis, Pre-Calculus, Calculus, or Higher Math. Based on the Cut-Score analysis completed by the Math Department in 2001 the standard error was used to identify a cut-score to move students to the College Level Math Assessment.

Table 3: Current Accuplacer College Level Math Cut-Scores, Confidence Intervals, New Placement Cut-Score Ranges, and Descriptive Statistics by Crafton Hills College Math Courses.

Course	Current Cut-Scores	Confidence Intervals	New Placement for Spring 2013 and Fall 2013	Descriptive Statistics Used to Generate CIs
MATH-250 (104-120)	120.0		Students who score 99.6 or Higher will place into MATH-250	N = 8 M = 111 SD = 4.7
		108.7		
	104.0			
MATH-141/160 (88 – 103.9)	103.9		Students who score from 84.6 to 99.5 will be placed into MATH-141/160	N = 23 M = 94. SD = 4.3
		99.6		
		99.5		
		92.3		
	88.0			
MATH-103 (76 – 87.9)	87.9		Students who score from 72 to 84.5 will be placed into MATH-103	N = 64 M = 81.9 SD = 3.3
		84.6		
		84.5		
		79.3		
	76.0			
MATH-102 (62 – 75.9)	75.9		Students who score from 60.7 to 71.9 will be placed into MATH-102	N = 164 M = 67.0 SD = 3.9
		72.0		
		71.9		
		65.9		
	62.0			
MATH-108/115 (58 – 61.9)	61.9		Students who score from 47.3 to 60.6 will be placed into MATH-108/115	N = 50 M = 59.6 SD = 1.2
		60.7		
		60.6		
		59.2		
	58.0			
Take the Elementary Algebra Test (20 – 57.9)*	57.9		Students who score 47.2 or lower will branch to take the Elementary Algebra Assessment	N = 1,853 M = 33.2 SD = 10.6
		47.3		
		47.2		
	20			

*Currently, a College Level Math cut-score range to branch the student to the Elementary Algebra Assessment is not defined; however, students need to score 58 or higher to receive any college level course placement. Accordingly, 57.9 or lower was used as the cut-score range to branch students to the Elementary Algebra Assessment.