

El Camino College

Accelerated Math Progression Study

Spring 2012-Summer 2016



This report summarizes progression for two accelerated math courses at El Camino College: Basic Accelerated Mathematics (BAM) and General Education Algebra (GEA).

Progression Tracking

Each BAM/GEA cohort was tracked for the following cohort years:

- BAM Spring 2012 & Fall 2012 Cohorts – two, three, and four-year tracking
- BAM Spring 2013 & Fall 2013 Cohorts – two and three-year tracking
- BAM Spring 2014 & Fall 2014 Cohorts – two-year tracking
- GEA Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014 Combined Cohort – two-year tracking

Methodology

Students included in this study were placed into a cohort based on the first math course attempted at El Camino College.

Accelerated Cohort	Comparison Cohort
Math-37 ¹ (BAM)	Math-12 (Arithmetic)
Math-67 ² (GEA)	Math-40 (Elementary Algebra)

Students in the comparison cohort were removed from the study if they left the traditional math sequence and took the comparable accelerated course during the tracking period. A description of the math sequences for the accelerated and comparison cohorts can be found in the appendix of this report.

Summary Findings – BAM Progression

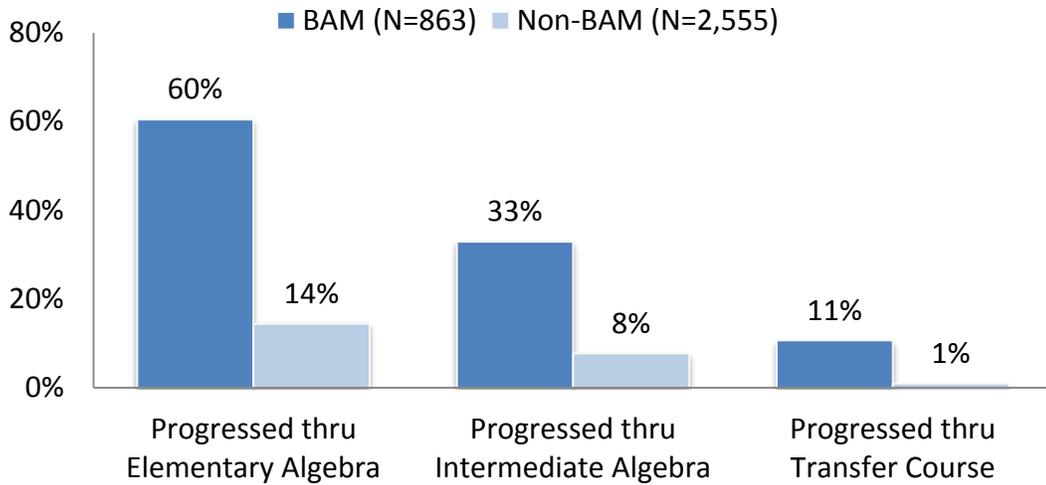
Progression is defined as the percentage of the original cohort that successfully completes the next course(s) in the math sequence. Students in the BAM cohort were much more likely to progress through levels of math sequence up through transfer-level compared to students in the non-BAM cohort. When progressions of BAM and non-BAM cohorts were disaggregated by ethnicity, all four of the largest groups (African American, Asian, Latino, and White) had higher rates in the BAM cohort than the non-BAM cohort. Although all groups saw increases in progression in the BAM cohort, equity gaps increased with larger differences between the groups. Other ethnic groups could not be included in the disaggregation due to small numbers of students in the cohorts. Progression rates for each cohort were also disaggregated by financial aid recipients and students who did not receive financial aid. Slightly less than three-quarters (73%) of students in the BAM cohorts received financial aid and 77% of students in the non-BAM cohorts received financial aid. There were not large differences in progression rates between financial aid recipients and students who did not receive financial aid.

¹ Effective Fall 2013, the *BAM* course number is Math-37. The previous numbering for this course was Math-50D.

² Effective Fall 2013, the *GEA* course number is Math-67. The previous numbering for this course was Math-50C.

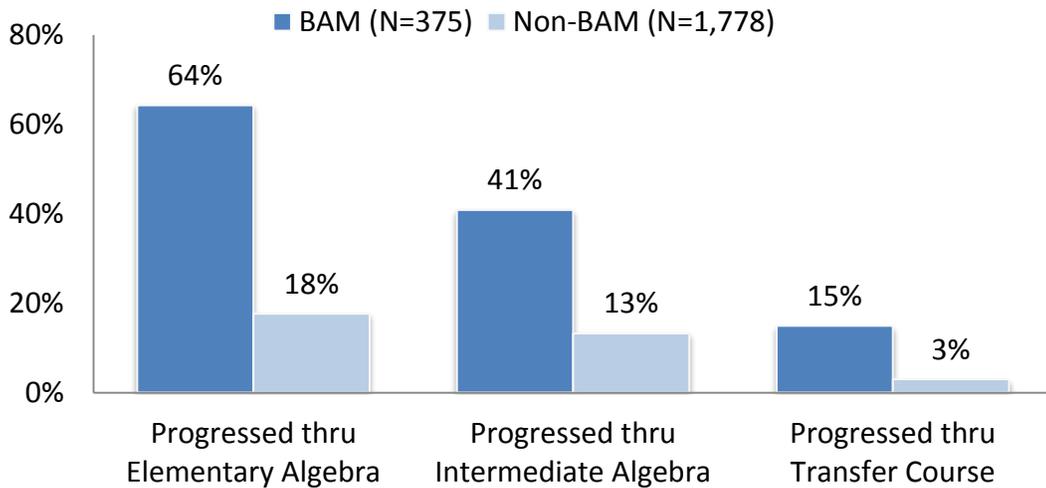
Two-Year Math Progression - BAM

Spring 2012-Fall 2014 Combined



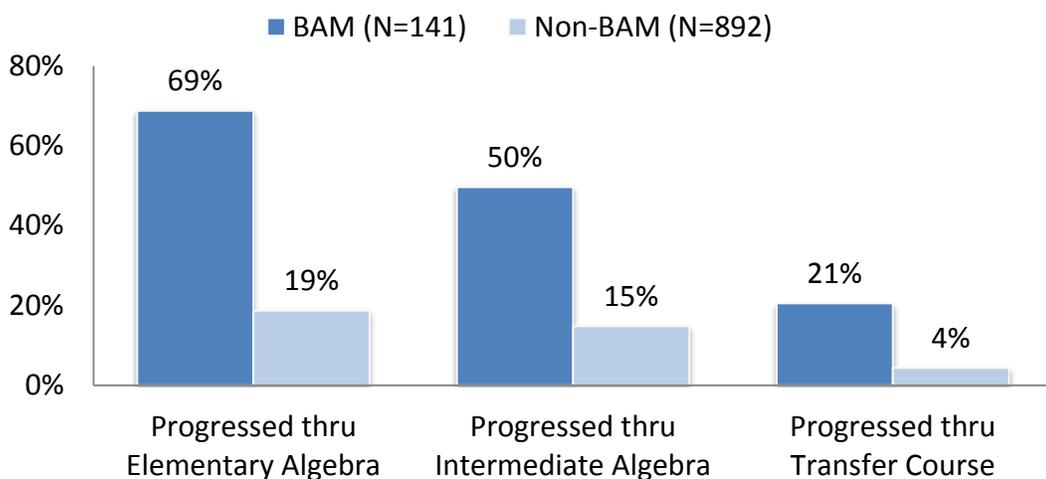
Three-Year Math Progression - BAM

Spring 2012-Fall 2013 Combined



Four-Year Math Progression - BAM

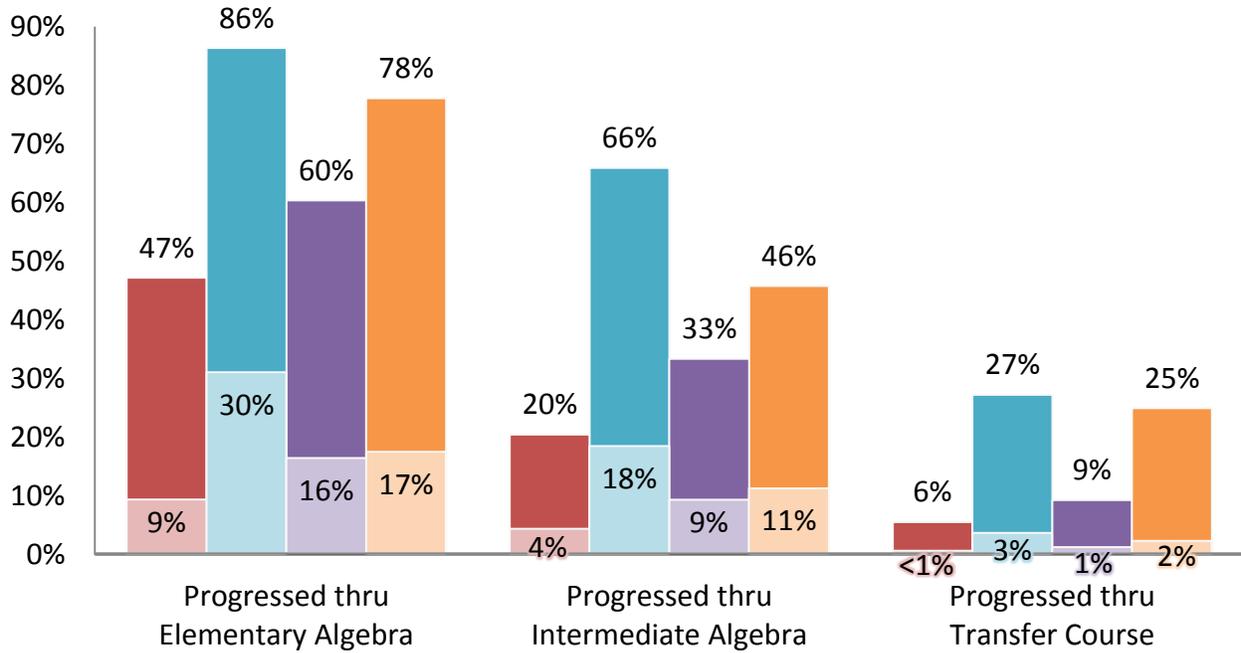
Spring 2012-Fall 2012 Combined



Two-Year Math Progression – BAM by Ethnicity

Spring 2012-Fall 2014 Combined

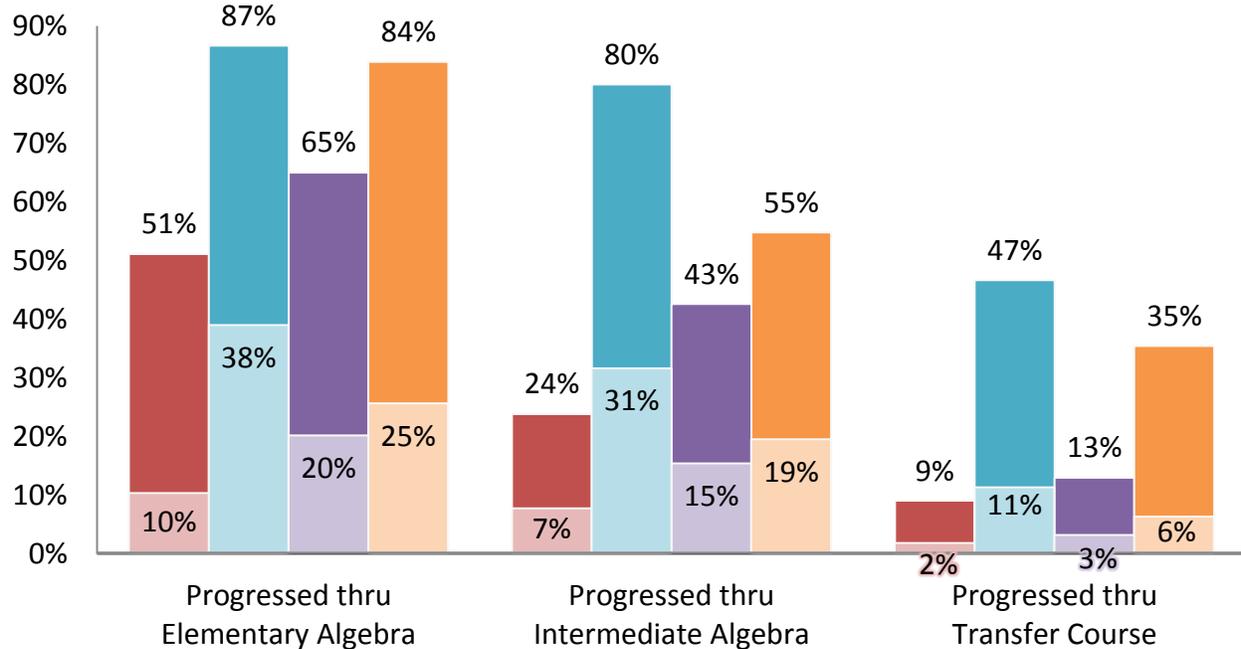
BAM: African American Asian Latino White
 Non-BAM: African American Asian Latino White



Three-Year Math Progression – BAM by Ethnicity

Spring 2012-Fall 2013 Combined

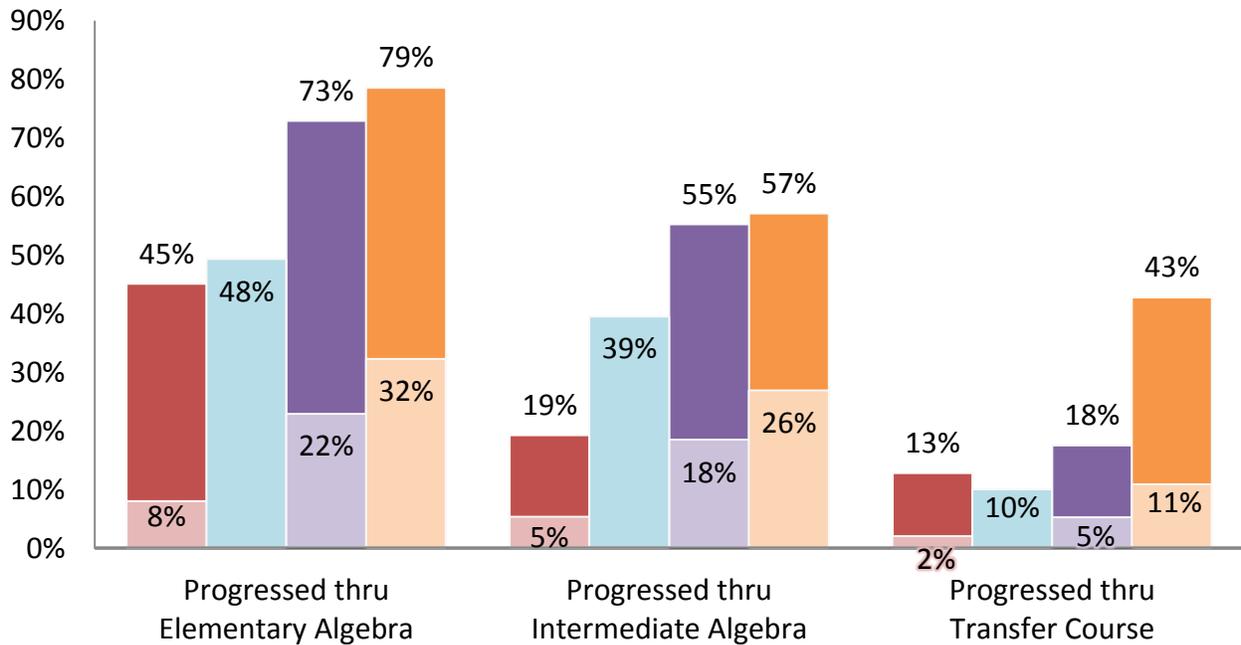
BAM: African American Asian Latino White
 Non-BAM: African American Asian Latino White



Four-Year Math Progression – BAM by Ethnicity

Spring 2012-Fall 2012 Combined

BAM: African American Asian* Latino White
 Non-BAM: African American Asian* Latino White

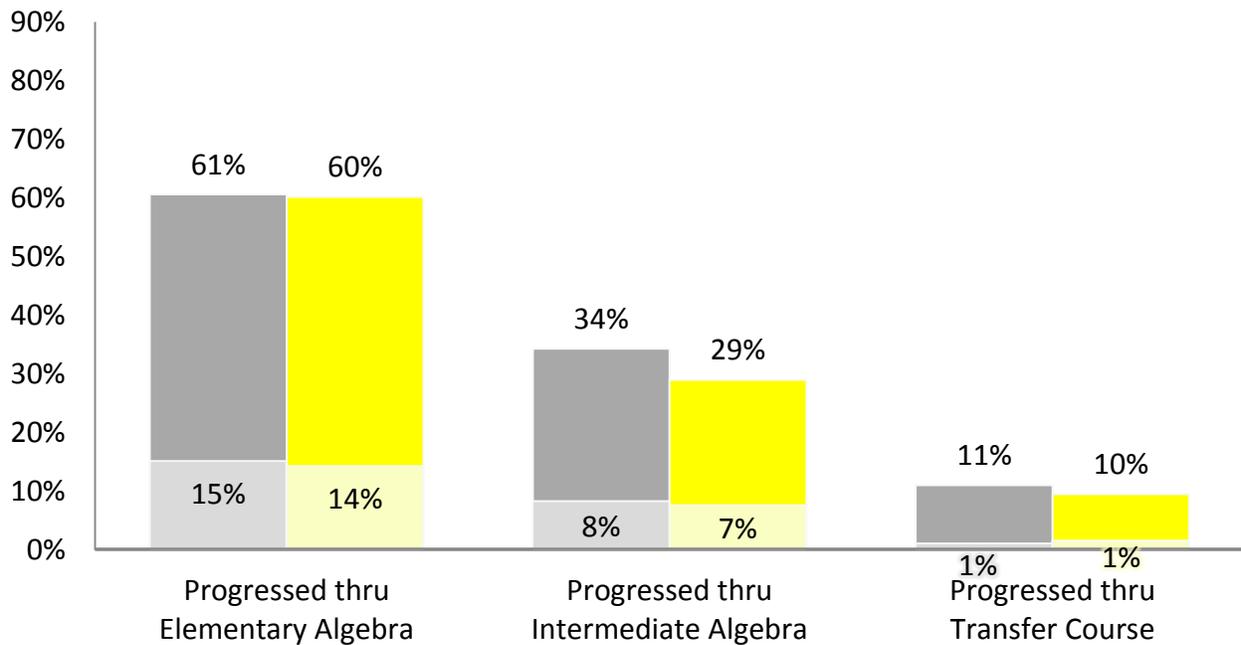


*There are too few Asian students in the BAM cohort to calculate progression rate.

Two-Year Math Progression – BAM by Financial Aid

Spring 2012-Fall 2014 Combined

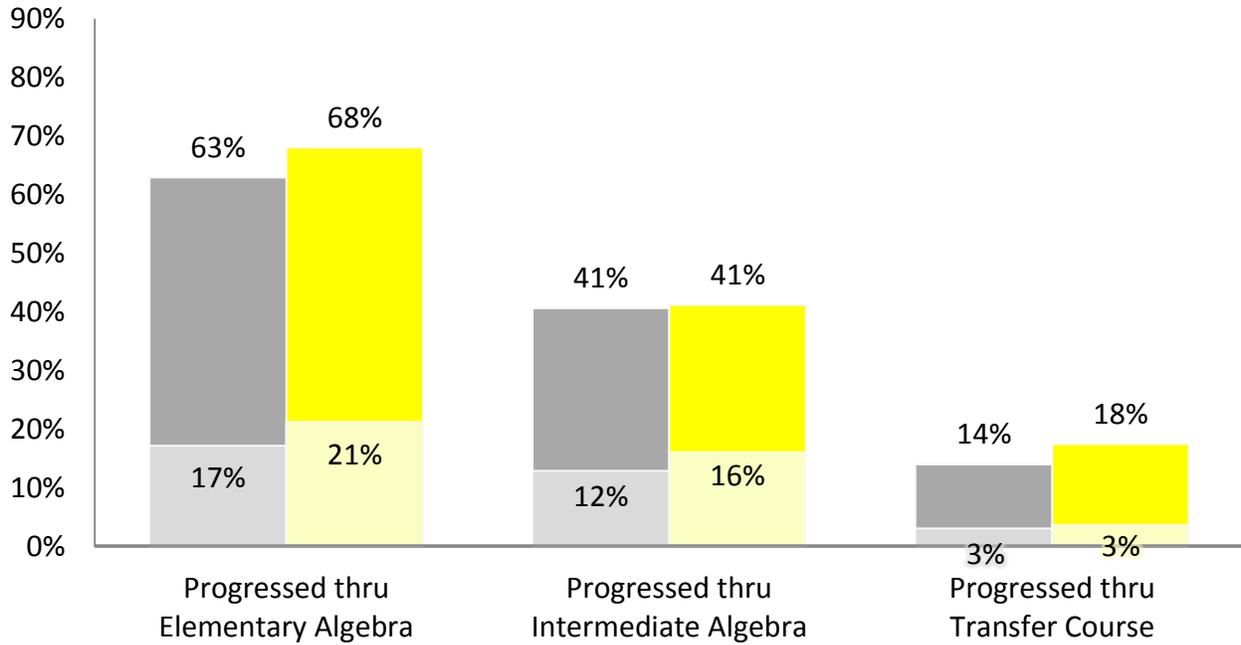
BAM: Financial Aid Recipients No Financial Aid
 Non-BAM: Financial Aid Recipients No Financial Aid



Three-Year Math Progression – BAM by Financial Aid

Spring 2012-Fall 2013 Combined

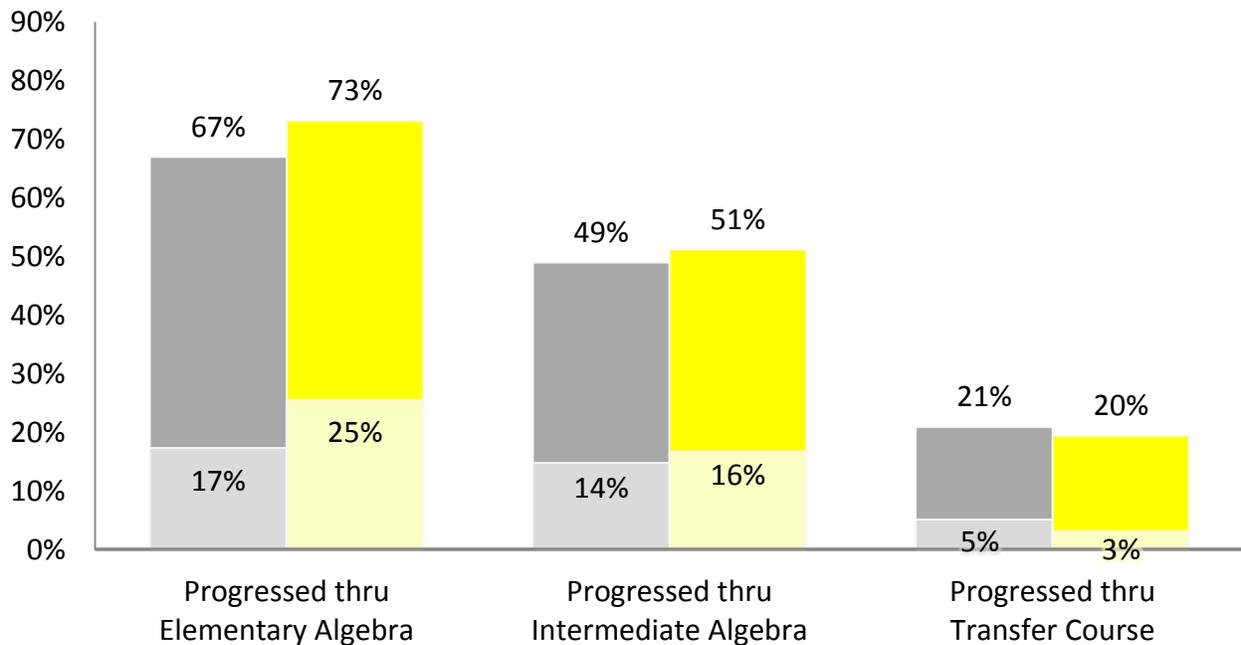
BAM: Financial Aid Recipients (Dark Gray) No Financial Aid (Yellow)
 Non-BAM: Financial Aid Recipients (Light Gray) No Financial Aid (Light Yellow)



Four-Year Math Progression – BAM by Financial Aid

Spring 2012-Fall 2012 Combined

BAM: Financial Aid Recipients (Dark Gray) No Financial Aid (Yellow)
 Non-BAM: Financial Aid Recipients (Light Gray) No Financial Aid (Light Yellow)

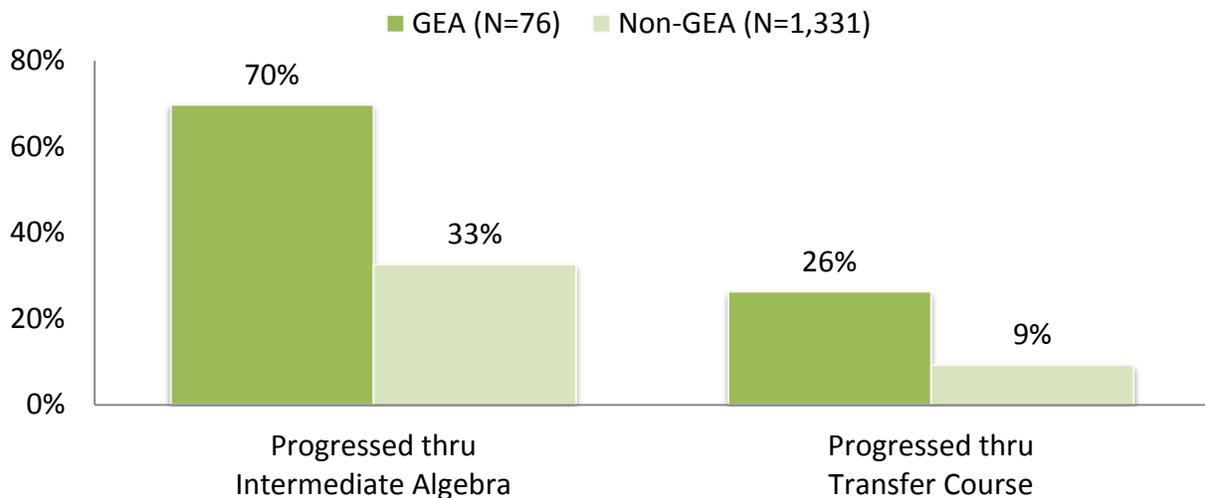


Summary Findings – GEA Progression

Students in the GEA cohort were much more likely to progress through intermediate algebra and transfer-level math compared to students in the non-GEA cohort. Due to the methodology of only including first time math students in the cohorts, the GEA cohort is quite small. Of all 800 students who have enrolled in a GEA course between Spring 2012 and Fall 2014, only 9% have no previous math enrollments at ECC. The small cohort sizes prevent ethnicity disaggregation from being reliable. Progression of the cohorts was disaggregated by financial aid recipients and students who did not receive financial aid. Slightly less than two-thirds (63%) of students in the GEA cohorts received financial aid and 61% of students in the non-GEA cohorts received financial aid. The progression rates of non-GEA financial aid recipients and non-recipients are very similar. However, financial aid recipients in the GEA cohorts had lower progression rates than non-recipients.

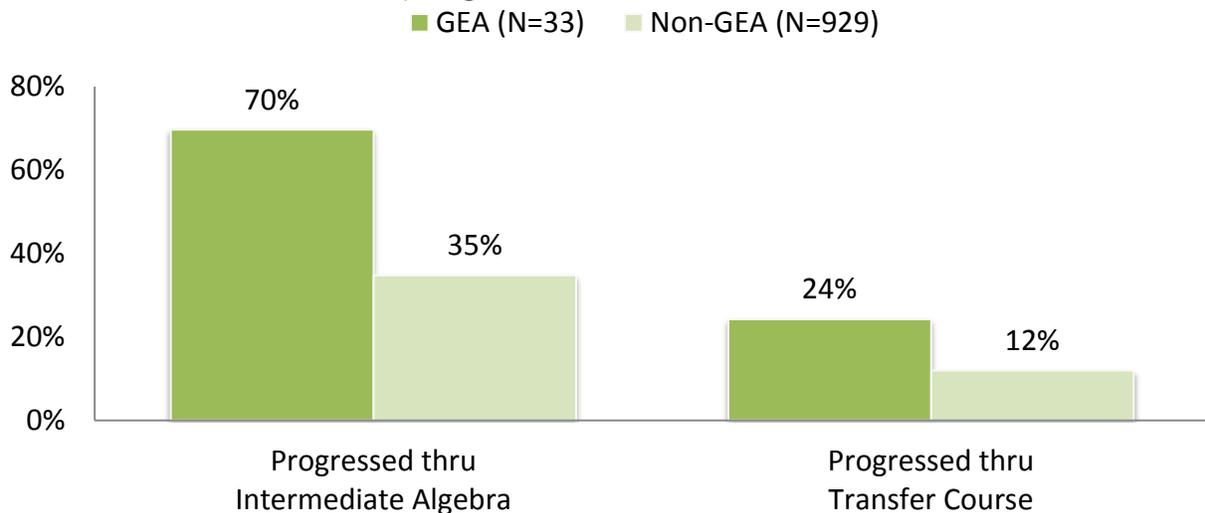
Two-Year Math Progression - GEA

Spring 2012- Fall 2014 Combined



Three-Year Math Progression - GEA

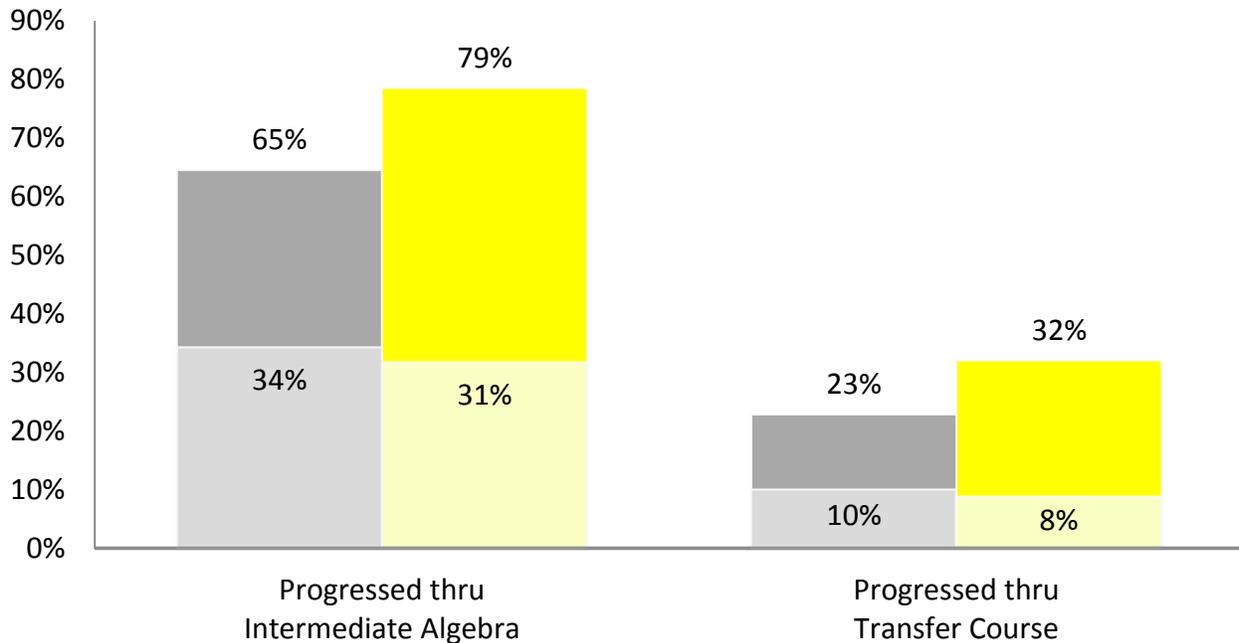
Spring 2012 - Fall 2013 Combined



Two-Year Math Progression – GEA by Financial Aid

Spring 2012-Fall 2014 Combined

GEA: ■ Financial Aid Recipients ■ No Financial Aid
 Non-GEA: ■ Financial Aid Recipients ■ No Financial Aid

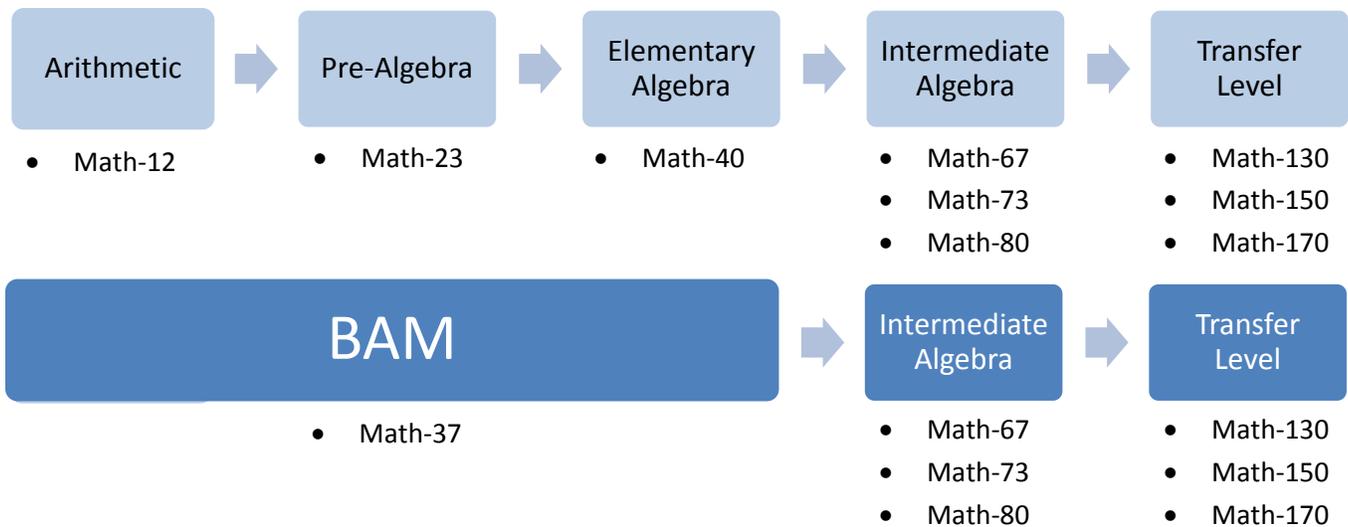


Tracking Charts

The following pages display tracking charts for accelerated and comparison courses for six separate cohorts of BAM and one combined cohort of GEA. *Passed* is defined as the number and percentage of enrolled students who complete a course with a C or better, or the equivalent. *Persisted* indicates the percentage of passing students who enroll in the next level of math. A student is counted if he or she *ever enrolled* or *ever passed* any course at the level indicated during the tracking period.

Appendix

BAM and Comparison Cohort Math Sequence



GEA and Comparison Cohort Math Sequence

