

# Accelerating the Path to Degree Completion and Increasing Retention through STEM Scholars Step-Up Bridge Program

The 2<sup>nd</sup> Annual MACC: Summit on Completion  
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# Overview

- ❑ Program Overview
- ❑ Mathematics Curriculum
- ❑ Tracking of Students
- ❑ Student Feedback & Next Steps
- ❑ Questions

# Program Overview

- ❑ HCC STEM Programs
- ❑ STEM Scholar Step-Up Bridge program and Curriculum Design
- ❑ Selection of population
- ❑ Anticipated Outcomes

# Mathematics Curriculum

- ❑ Mathematics Curriculum Development
  - Pre-Assessment
  - Over-expectation of student's math skill
  - Curriculum Redesign
    - ❖ Algebra Track
    - ❖ Function Track
  - Post-Assessment
- ❑ Math Placement

## Algebra Track

Section 1 Linear Equations, Inequalities, & Sets	Section 2 Polynomials & Exponents	Section 3 Rational & Radical Statements/Equations	Suggested Placement
Pass	Pass	Pass	Math 101/103
Pass	Fail	Pass	Math 101
Pass	Pass	Fail	Math 101
Fail	Pass	Fail	Math 017
Fail	Fail	Pass	Math 017
Fail	Fail	Fail	Math 002

## Function Track

Section 1 Algebra	Section 2 Functions	Section 3 Trigonometry	Suggested Placement
Pass	Pass	Pass	Math 203
Pass	Fail	Pass	Math 109
Pass	Pass	Fail	Math 103/109
Pass	Fail	Fail	Math 101
Fail	Pass	Pass	Math 109
Fail	Pass	Fail	Math 109
Fail	Fail	Pass	Math 101
Fail	Fail	Fail	Math 101

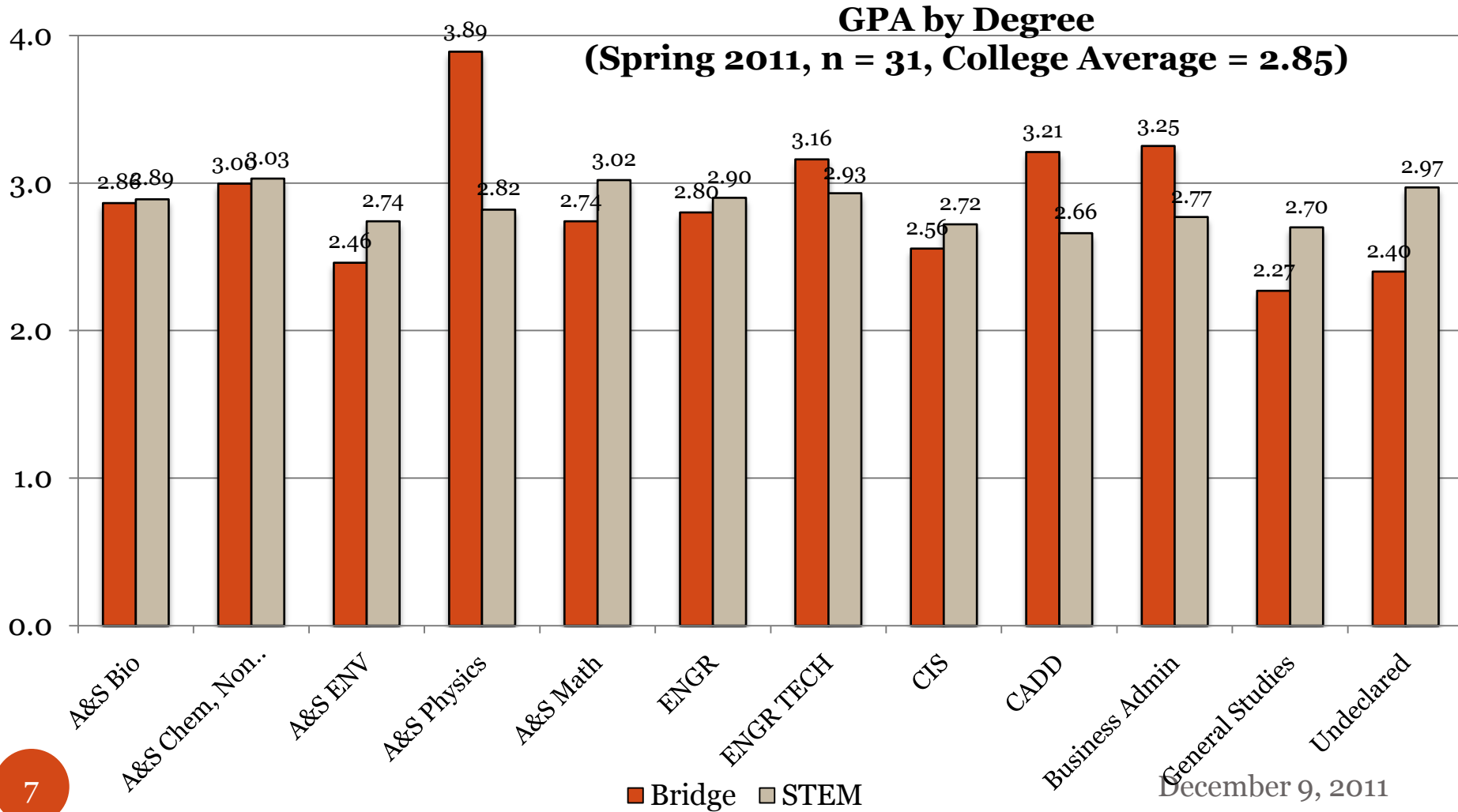
**Note:** Students will be taking section tests at the test center and expected to pass with 70% or higher.

MyMathTest results of 70% or higher are required.

# Tracking of Students

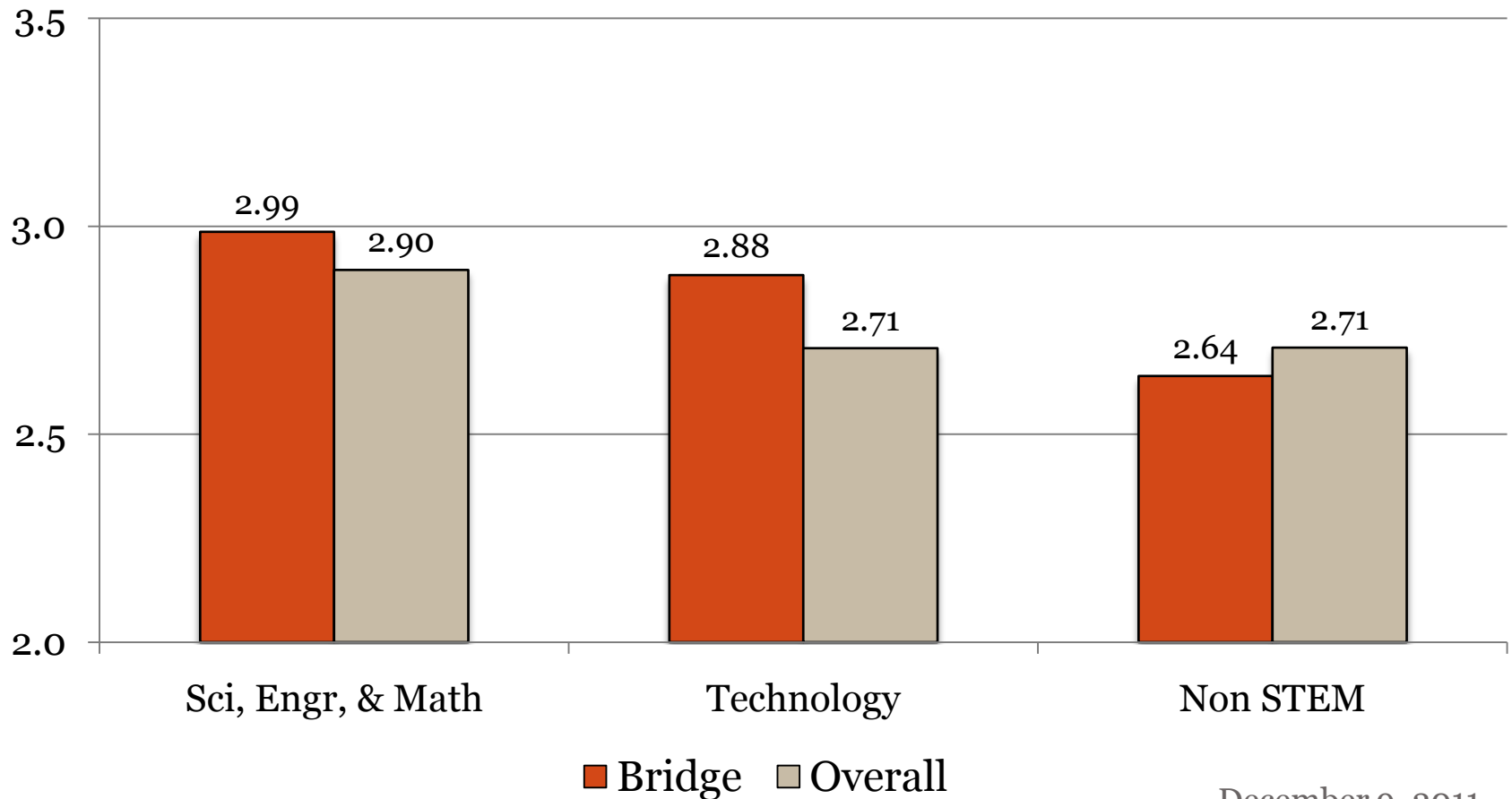
- ❑ Population
  - Bridge students from Summer 2009 – 2010
  
- ❑ Data collected from Fall 2009 to Fall 2011
  - **Student Performance**
  - **Student Success:** Retention, Completion, and Transfer
  - **Reduction in Time** to Completion

# Student Performance



# Student Performance

**GPA**  
(Spring 2011, n = 31, , College Average = 2.85)

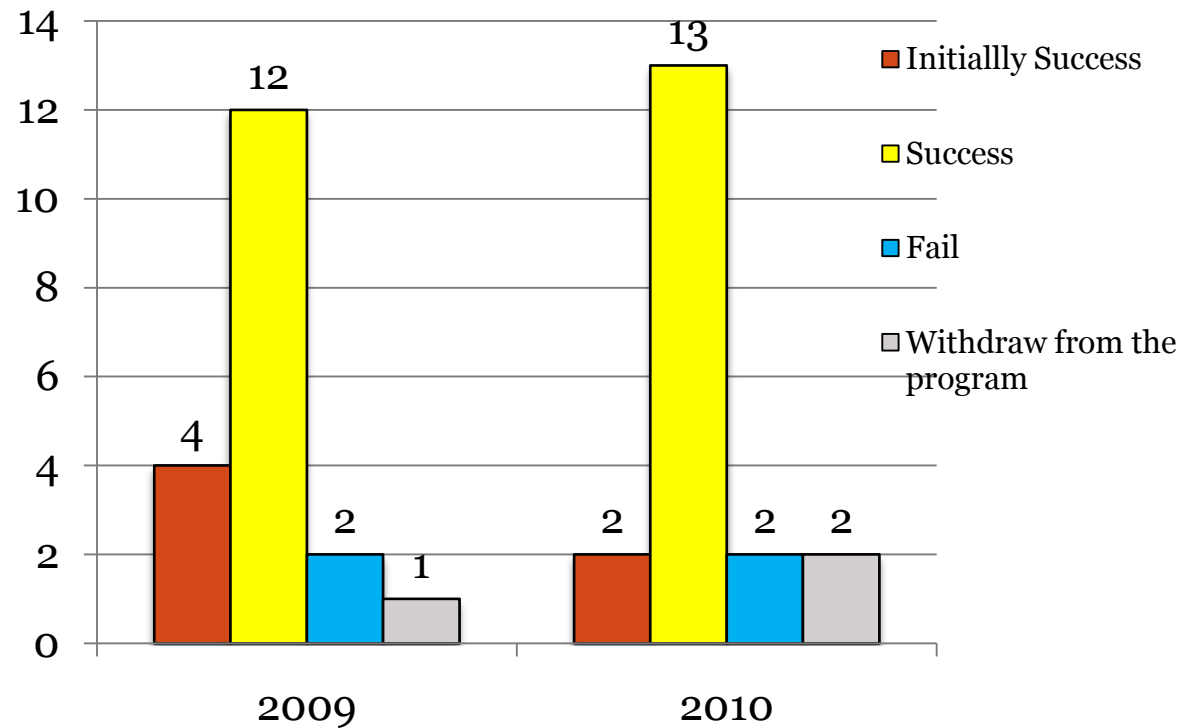


# Student Success - Performance

Of 38 Bridge students

- 15.8% initially success
- **66% success**
- 11% fail, and
- 8% withdraw

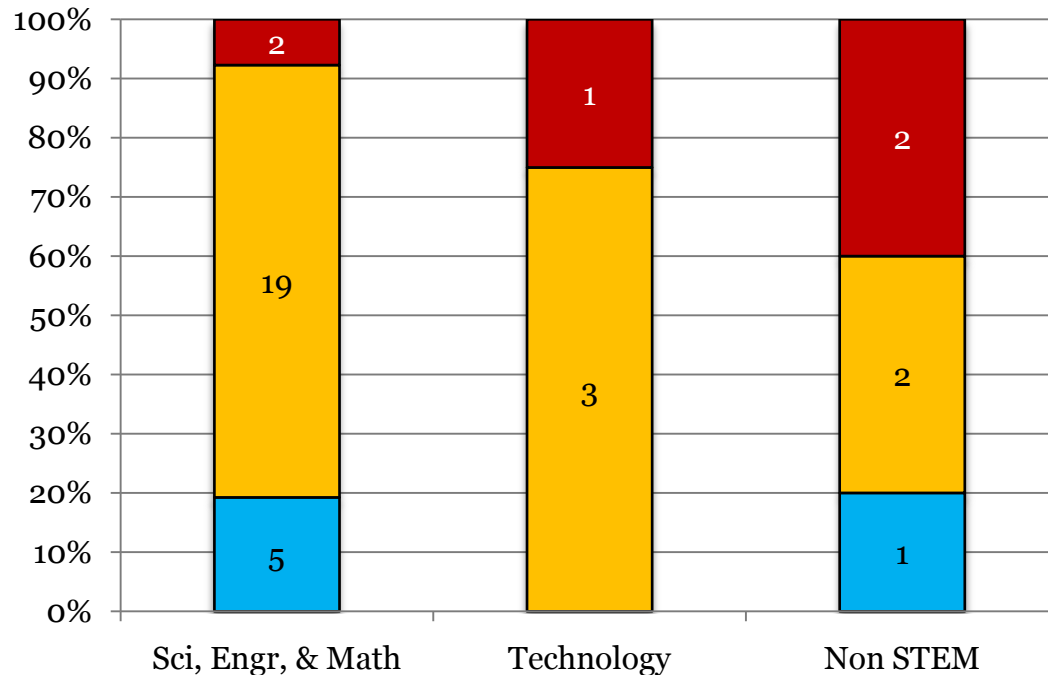
**STEM Bridge Students Overall  
(2009-2019, n = 38)**



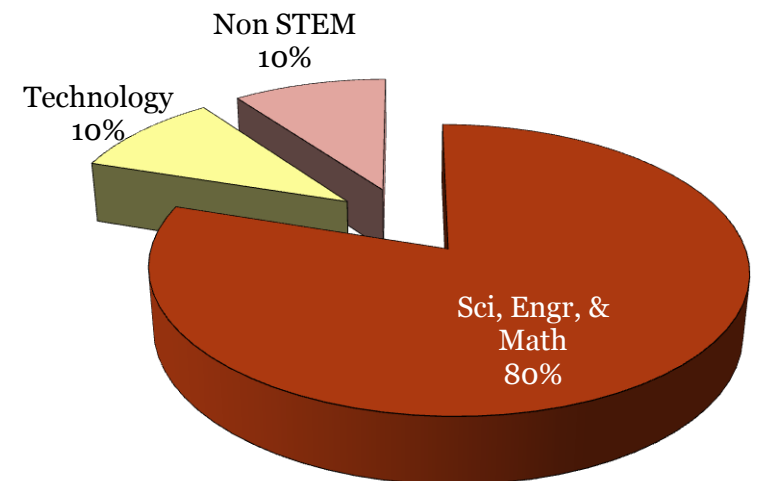
# Student Success in Math - Performance

- 80% of successful Bridge students passed subsequent Math courses

**Student Success (overall) by Degree (2009-2010, n = 35)**

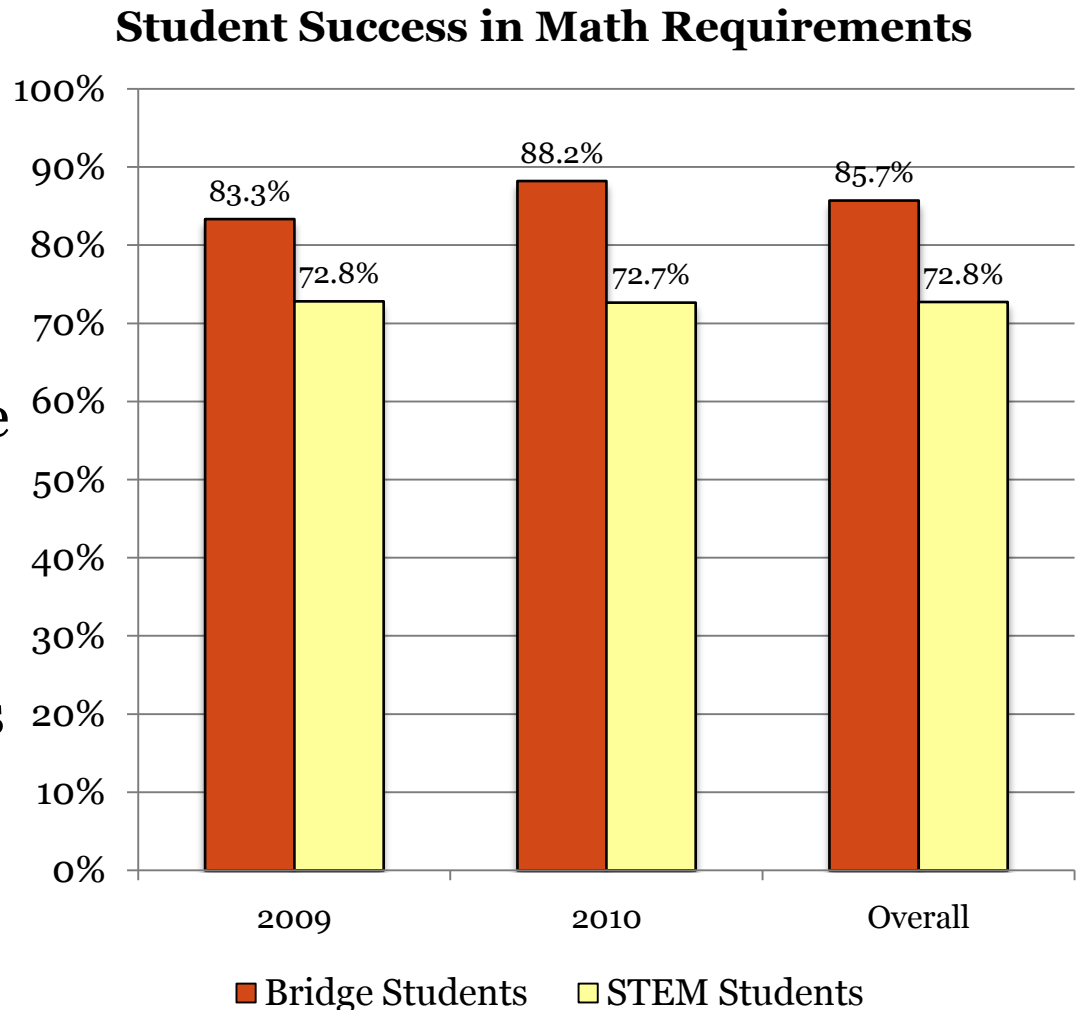


**Student Success in Math Courses by Degree (2009-2010, n = 30)**



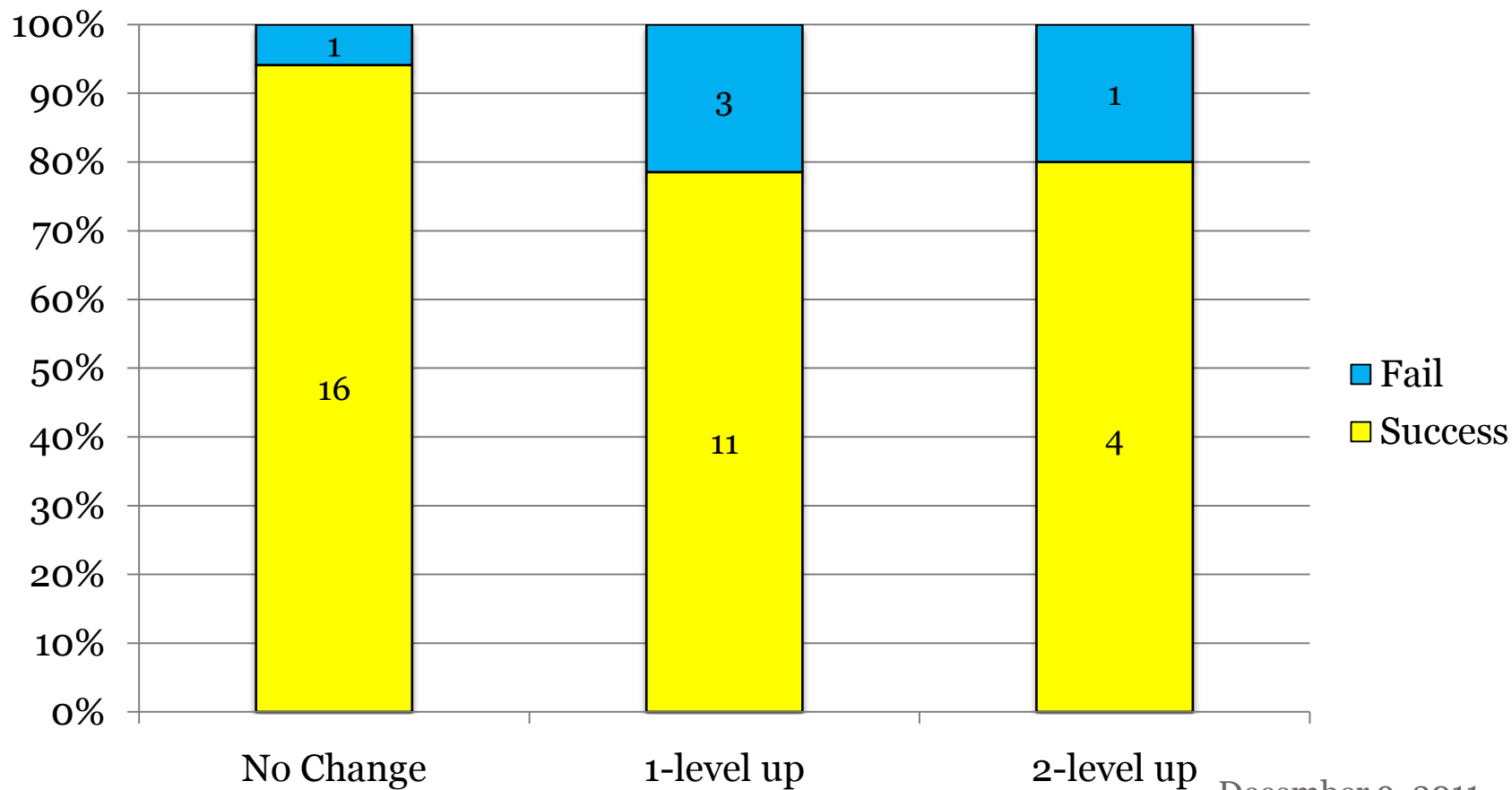
# Success of Math Intervention

- ❑ > 80% of Bridge students are successful in Math courses
- ❑ 94% of Bridge students with **no change** in their initial Math placement are successful
- ❑ 80% of Bridge students placed **one or two levels** up in Math courses are successful



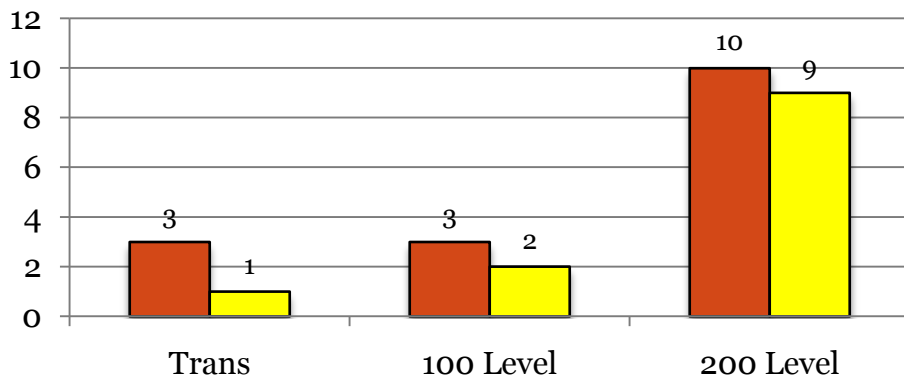
# Student Success after Bridge Placement

Success in Math Courses after Bridge Placement  
(n = 36)

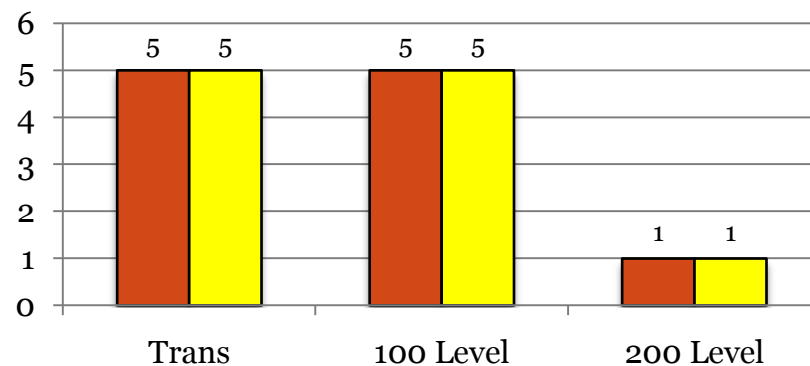


# Student Success after Bridge Placement

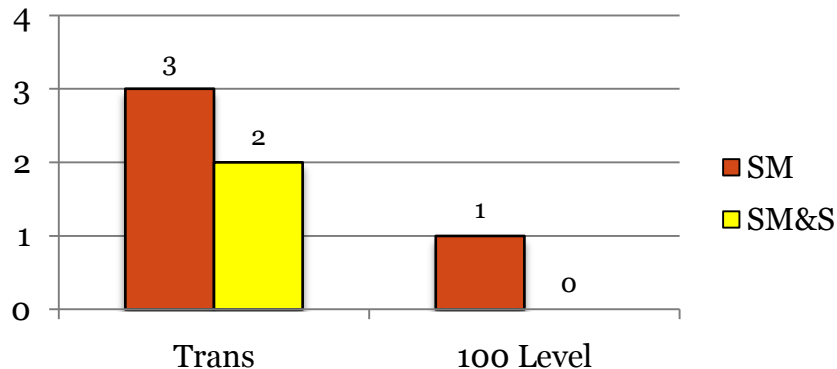
**No Change in Math Placement  
(n = 16)**



**1-Level up of Math Placement  
(n = 11)**

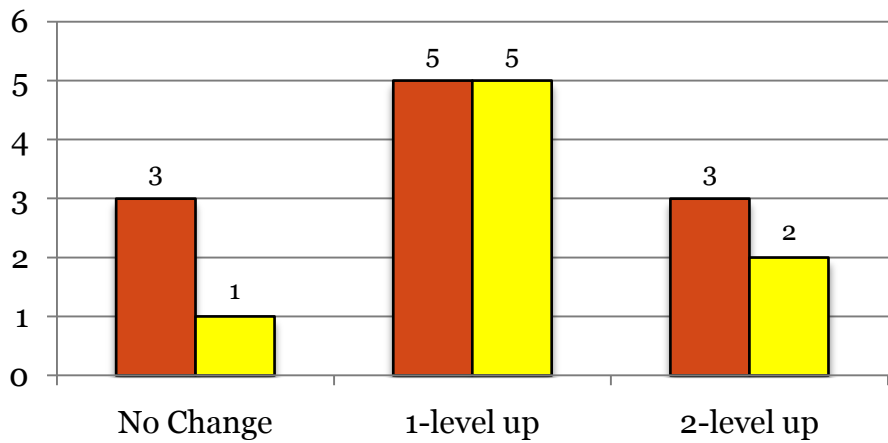


**2-Level up of Math Placement  
(n = 4)**

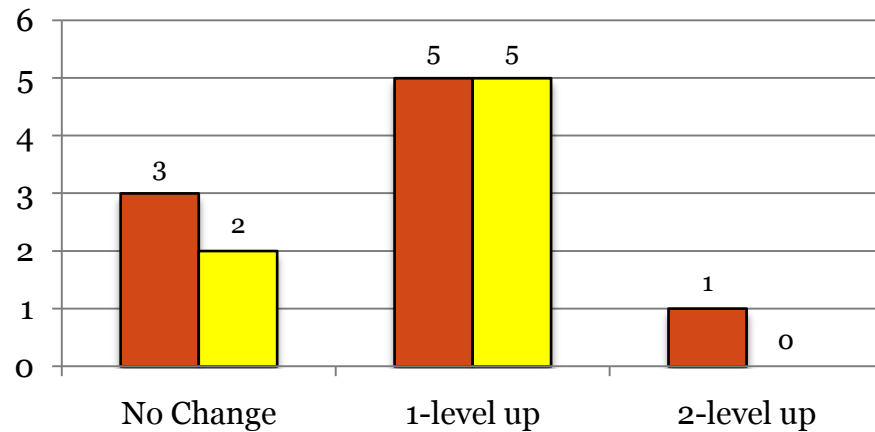


# Student Success after Bridge Placement

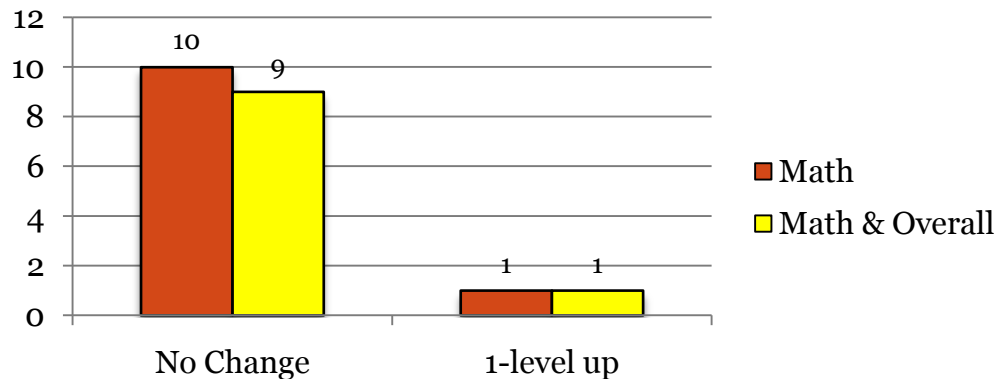
**Transitional Level Initial Math Placement (n = 17)**



**100 Level Initial Math Placement (n = 14)**

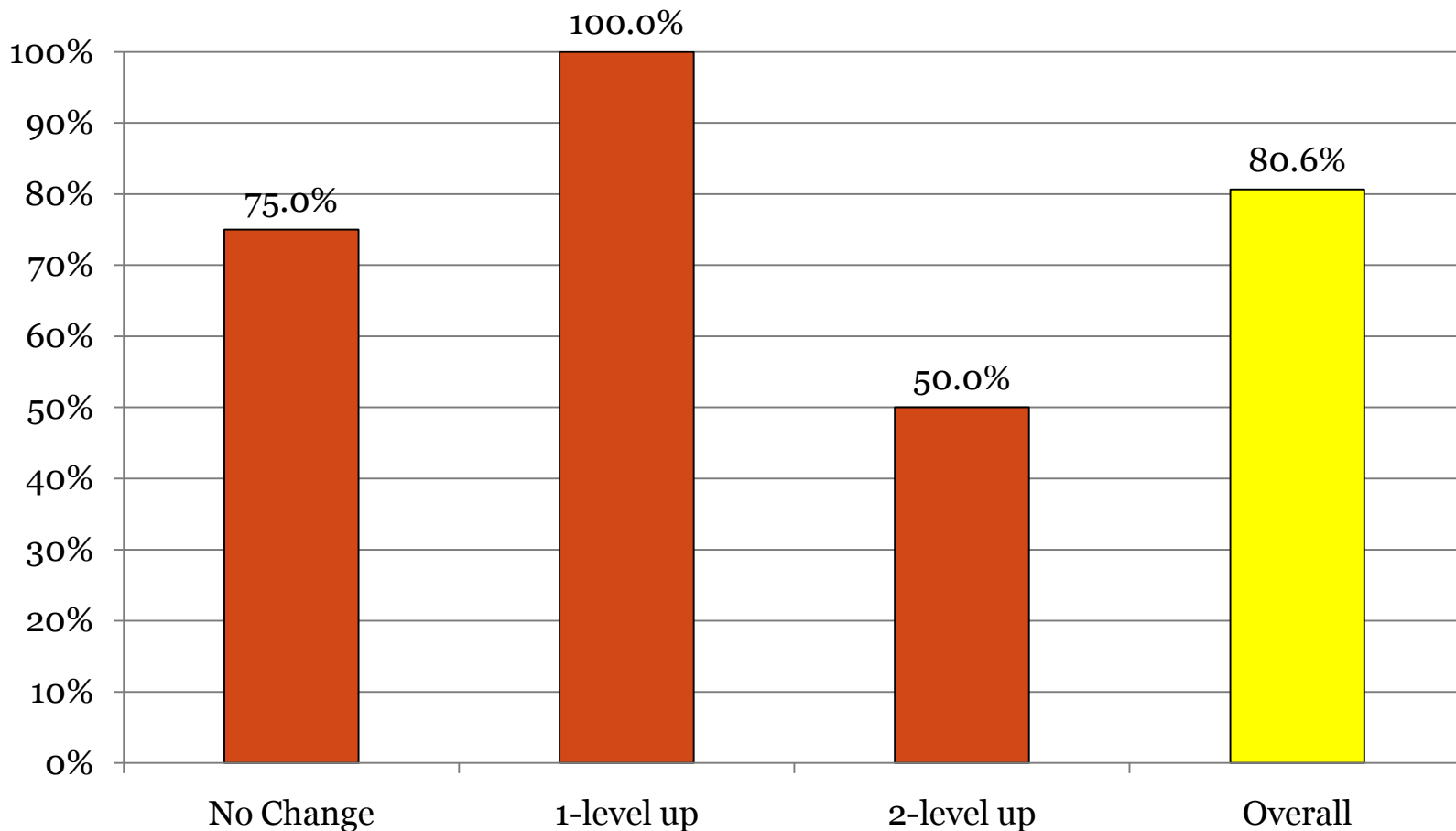


**200 Level Initial Math Placement (n = 5)**



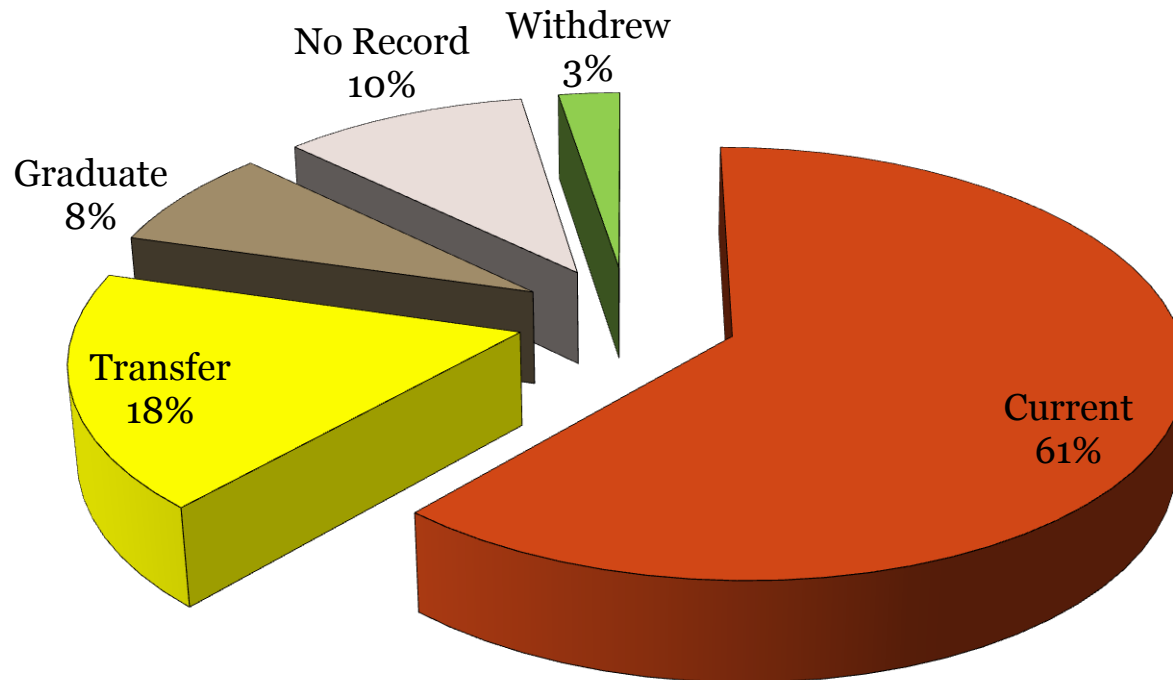
# Student Success after Bridge Placement

## Success in Math & Overall (n = 31 success in Math)



# Bridge Student Status

**Student Status as of Fall 2011  
(n = 39)**



# Summary

The STEM Scholars Bridge program is successful in:

- ❑ Closing gaps in content knowledge
- ❑ Preparing students with college-ready skills
- ❑ Reducing time to completion

# Student Feedback & Next Steps

Questions?

# Contact

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