CoRequisite Academy
Mathematics

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Creating Clear Degree Pathways to Success
WHAT DATA SAYS ABOUT THE PATHWAYS
The Graduate Transcript Graph
The Graduate Transcript Graph

ENGLISH

MATH
10,000 USG Students

2,500 who either completed their first credit bearing math and/or writing class or completed neither during their first academic year
English and Math

- 1st yr - Did not pass English or Math: 6%
- 1st yr - Passed English: 37%
- 1st yr - Passed Math: 41%
- 1st yr - Passed both English and Math: 66%

6 yr Graduation Rates
System-wide Math Completion for students beginning in Developmental Mathematics

ACT Math Subscores

Prepare for Credit Model
System-wide Math Completion for students beginning in Developmental Mathematics

ACT Math Subscores

10 Standard Deviations

Prepare for Credit Model
Direct Credit

ACT Math Subscores
Co-requisite Remediation
Completion of Gateway Math by ACT Sub-score
Community College Pre-requisite Model vs. Co-requisite Model

- Pre-requisite Model AY 2012-13
- Co-requisite Model AY 2015-16

ACT Math Subscore:
- <14: 2.7%
- 14: 3.8%
- 15: 6.8%
- 16: 11.5%
- 17: 19.7%
- 18: 25.6%
- No ACT: 13.1%
- Total: 12.3%

Pre-requisite Model AY 2012-13:
- <14: 33%
- 14: 39%
- 15: 46%
- 16: 55%
- 17: 63%
- 18: 70%
- No ACT: 49%
- Total: 55%

Co-requisite Model AY 2015-16:
- <14: 3.8%
- 14: 14%
- 15: 15%
- 16: 16%
- 17: 17%
- 18: 18%
- No ACT: 55%
- Total: 55%

Completion of Gateway Math by ACT Sub-score
Community College Pre-requisite Model vs. Co-requisite Model
Co-requisite Remediation in Georgia
System Comparison of Success in Gateway Mathematics Classes


- System Comparison: 200-290, 300-390, 400-490, 500-590, Total

- Success Rates: 19%, 20%, 68%, 68%, 76%, 82%, 66%, 63%
System Comparison of Success in Gateway English Classes

ACT Writing Subscore

- 2013 Traditional LS
- 2015 Foundations
- 2016 Foundations
- 2015 Corequisite
- 2016 Corequisite

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<td>40%</td>
<td>43%</td>
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<td>45%</td>
<td>67%</td>
<td>44%</td>
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<td>71%</td>
<td>39%</td>
<td>62%</td>
<td>43%</td>
<td>45%</td>
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<td>73%</td>
<td>51%</td>
<td>60%</td>
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<td>17</td>
<td>73%</td>
<td>62%</td>
<td>67%</td>
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<td>45%</td>
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<td>18</td>
<td>75%</td>
<td>62%</td>
<td>67%</td>
<td>45%</td>
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<tr>
<td>19</td>
<td>74%</td>
<td>67%</td>
<td>67%</td>
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<td>Total</td>
<td></td>
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Distribution of First Mathematics Course Attempted (within first two academic years)

- 41% Math >1111
- 27% No Math Course
- 14% Math 1111
- 10% Math 1101
- 8% Math 1001
Distribution of First Mathematics Course Attempted (within first two academic years)

- **No Math Course**: 27%
- **Math 1001**: 14%
- **Math 1101**: 8%
- **Math 1111**: 10%
- **Math >1111**: 36%
- **(Eventually passed Calculus)**: 4%
Co-requisite Remediation

Disaggregation
System Comparison of Success in Gateway Mathematics Classes

Pell Students

 ACT Math Subscore

- 2013 Traditional LS
- 2015 Foundations
- 2015 Corequisite

<table>
<thead>
<tr>
<th>ACT Math Subscore</th>
<th>2013 Traditional LS</th>
<th>2015 Foundations</th>
<th>2015 Corequisite</th>
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<tr>
<td>&lt;14</td>
<td>11%</td>
<td>14%</td>
<td>15%</td>
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<tr>
<td>14</td>
<td>9%</td>
<td>25%</td>
<td>14%</td>
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<tr>
<td>15</td>
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<td>15%</td>
</tr>
<tr>
<td>16</td>
<td>15%</td>
<td>32%</td>
<td>21%</td>
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<td>17</td>
<td>21%</td>
<td>35%</td>
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<td>18</td>
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<td>45%</td>
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<td>38%</td>
<td>33%</td>
<td>33%</td>
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<tr>
<td>Total</td>
<td>20%</td>
<td>20%</td>
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Total success rates:
- 2013 Traditional LS: 15%
- 2015 Foundations: 14%
- 2015 Corequisite: 14%
System Comparison of Success in Gateway Mathematics Classes

African American Students
Math Pathways
System Comparison of Success in Gateway Mathematics Classes

<table>
<thead>
<tr>
<th>Course</th>
<th>Foundations</th>
<th>CoRequisite</th>
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<tbody>
<tr>
<td>Math 1001</td>
<td>63%</td>
<td>69%</td>
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<tr>
<td>Math 1101</td>
<td>64%</td>
<td>65%</td>
</tr>
<tr>
<td>Math 1111</td>
<td>56%</td>
<td>59%</td>
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System Comparison of Success in Gateway Mathematics Classes

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<th>CoRequisite</th>
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<tr>
<td>Math 1001</td>
<td>27%</td>
<td>69%</td>
</tr>
<tr>
<td>Math 1101</td>
<td>30%</td>
<td>65%</td>
</tr>
<tr>
<td>Math 1111</td>
<td>26%</td>
<td>59%</td>
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</table>
Continuous Improvement Cycle

Key Metrics & Reporting
Analysis & Understanding
Modeling & Planning
Decisive Action
The 2 sigma Problem

Benjamin Bloom
BESPOKE EDUCATION
Controlled Study at University of Mississippi (2006)

- **Hawkes Learning System**
  - 2 Fall sections of College Algebra
  - 100 students

- **MyMathlab**
  - 2 Fall sections of College Algebra
  - 113 students

- **No software**
  - 4 fall sections of College Algebra
  - 200 students
Final Exams

The graph shows the distribution of final exam scores across different decades. The x-axis represents the decades (90s, 80s, 70s, 60s, 50s, 40s, 30s, 20s, 10s) and the y-axis represents the number of students who scored in that range. The graph indicates that the highest concentration of scores is in the 80s, with a significant drop in scores in the 70s and a steady decline thereafter.
Final Exams

<table>
<thead>
<tr>
<th>90s</th>
<th>80s</th>
<th>70s</th>
<th>60s</th>
<th>50s</th>
<th>40s</th>
<th>30s</th>
<th>20s</th>
<th>10s</th>
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<tr>
<td>Hawkes LS</td>
<td>29%</td>
<td>23%</td>
<td>17%</td>
<td>11%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>MyMathlab</td>
<td>29%</td>
<td>23%</td>
<td>17%</td>
<td>11%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>No Software</td>
<td>29%</td>
<td>23%</td>
<td>17%</td>
<td>11%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
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</table>

Mean

| Hawkes LS | 81% |
| MyMathlab | 68% |
| No Software | 70% |
Productive Academic Mindset

Perceived purpose of coursework

Feel connected to their institution and that they belong...

Believe they are capable of learning the material...

Confidence interacting with Faculty and Staff

GRIT and Perseverance

+15% GPA

+12pp Minority Retention

+19pp Earned SCHr %

+6pp Earned SCHr %

+9pp Math CoReq Success
## Perceived Purpose of Coursework

<table>
<thead>
<tr>
<th></th>
<th>Low Perception</th>
<th>High Perception</th>
<th>Difference</th>
<th>Effect size</th>
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<tbody>
<tr>
<td><strong>Math Co- Requisite Success Rate</strong></td>
<td>60.2%</td>
<td>66.5%</td>
<td>6.3pp</td>
<td>2.08</td>
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<tr>
<td><strong>Writing Co- requisite Success Rate</strong></td>
<td>61.3%</td>
<td>70.8%</td>
<td>9.5pp</td>
<td>3.73</td>
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<tr>
<td><strong>Earned Hour%</strong></td>
<td>65.1%</td>
<td>72.5%</td>
<td>7.4pp</td>
<td>4.85</td>
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<td><strong>Fall to Spring Retention Rate</strong></td>
<td>72.4%</td>
<td>77%</td>
<td>4.6pp</td>
<td>2.62</td>
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</table>
USG Momentum Year

Making a *purposeful* program choice

Creating a *productive* Academic Mindset

Attempting the first 30 *hours* of a *Clear Pathway*

Attempting 9 *hours* in Academic Focus

Complete initial *English* and *Math*