Welcome to today’s webinar. We will start in a few minutes. Please join us by phone: 1-510-338-9438  Access code: 623 056 580

June 14, 2018
Today’s Speakers

Naomi Sleap
Executive Director,
Student Success Center

Eric Godin
Associate Vice Chancellor,
Research and Analytics

Carrie Henderson
Executive Vice Chancellor
Our Role and Vision

• The role of the Florida Student Success Center is to support institutional initiatives that improve college completion rates and promote student success.

• The vision of the Florida Student Success Center is to serve as a resource of evidence-based, innovative practices and timely information for colleges.
What Are Student Success Centers

• A statewide organization that supports community colleges’ efforts to develop **student-centered pathways** and increase student **completion rates**

• Help colleges **align priorities**, integrate **student success efforts**, **maximize resources** and present a **collective voice** of practitioners in policy discussions

• Part of a national network and learning community promoting **best practices, peer collaboration and professional development**
The Role of Statewide Student Success Centers

Centers support community colleges’ efforts to develop student-centered pathways and increase student completion rates.

- Provide Coherence
- Connect Policy and Practice
- Convene
- Improve Data Capacity
- Promote Research and Knowledge Development
What We Know about Mathematics Pathways and Student Success in the Florida College System
FCS Course Pass Rates and Enrollment

### Developmental Education Pass Rates
- 2014-15: 52%
- 2015-16: 59%
- 2016-17: 59%

### Prerequisite Pass Rates

#### Gateway Pass Rates
- 2014-15: 74%
- 2015-16: 69%
- 2016-17: 72%

### Gateway Enrollment
- 2014-15: 90,986
- 2015-16: 104,135
- 2016-17: 100,041

### Developmental Education Enrollment
- 2014-15: 69,324
- 2015-16: 65,337
- 2016-17: 55,005

### Prerequisite Enrollment

#### Course Enrollment
- MAT1033: 112,513, 102,992, 95,112
- MAT1100: 1,501, 2,901, 4,291
- STA1001: 711, 4,101, 4,333
First Mathematics Course: Developmental Education

- Passed Dev. Ed.: 72%
- Passed Prerequisite: 40%
- Passed Gateway: 33%
- Graduated in 150%: 14%

* Cohort includes First-Time, Full-Time (FTIC) students in Fall 2014, enrolled in an Associates in Arts Program, and enrolled in developmental education. Bars indicate the progression of the student in mathematics within 3-years.

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Center for Postsecondary Success

- Collaboration between the Florida College System and Center for Postsecondary Success at Florida State University

- Studied a series of related topics concerning student pathways through:
  - Intermediate Algebra (MAT1033)
  - College Algebra (MAC1105)
  - Degree completion


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Sample

- Data for analysis consisted of Fall 2014 FTIC, Associate in Arts (AA) degree-seeking students with complete high school records who enrolled in MAC1105 at one of the FCS campuses, a total of 13,151 students.
Main Findings

• Nearly one-fifth (19.2%) of students did not enroll in a math course during their first three years in college. When they did enroll, it was common for students to enroll in developmental education (DE), MAT1033, or MAC1105 in the fall semester and then never enroll in another math class.

• We found no evidence that taking MAT1033 as a prerequisite increased the likelihood of passing the gateway course.

• For some students, taking MAT1033 as a prerequisite to one of the gateway courses may actually decrease the likelihood of passing the gateway course.

• For some students, enrolling in MAT1033 was associated with a lower likelihood of earning a degree within two years.
## Predicted Probability of Passing MAC1105 – Based on Initial Course Enrollment

<table>
<thead>
<tr>
<th>Table 1: Predicted Probability of Passing MAC1105</th>
<th>No Pre-req.</th>
<th>MAT1033</th>
<th>MAT1033 and DE</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students</td>
<td>62.34%</td>
<td>41.85***</td>
<td>33.64***</td>
</tr>
<tr>
<td>Students below gateway placement</td>
<td>54.52%</td>
<td>39.43***</td>
<td>33.97***</td>
</tr>
<tr>
<td>Students placing into MAT1033</td>
<td>62.50%</td>
<td>43.55***</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Note. Stars indicate whether changes in MAT1033 exposure are statistically significant compared to taking no prerequisites. ***p< .001.*
# Predicted Probability of Passing MAC1105 – Based on MAT1033 Grade

<table>
<thead>
<tr>
<th>Table 2: Predicted Probability of Passing MAC1105</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
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<td>Students placing into MAT1033</td>
</tr>
</tbody>
</table>

*Note. Stars indicate whether changes in MAT1033 exposure are statistically significant compared to taking no prerequisites. *** p< .001.*
## Degree Attainment Within Two Years

### Table 3: Predicted Probability of Earning a Degree within Two Years and Exposure to MAT1033 as a Prerequisite

<table>
<thead>
<tr>
<th>Earned Degree</th>
<th>No Pre-req.</th>
<th>MAT1033</th>
<th>MAT1033 and DE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.3%</td>
<td>4.67%***</td>
<td>2.20%***</td>
</tr>
</tbody>
</table>

*Note. Stars indicate whether changes in MAT1033 exposure are statistically significant compared to taking no prerequisites. ***p < .001.*
Mathematics Workgroups
Explore complex issues surrounding mathematics pathways to prepare: high school students for transition into Florida College System institutions; Florida College System students for success in gateway courses aligned to their programs; and Florida College System students for transition into four-year universities.

Transparency, collaboration, respect, diversity, evidence-based inquiry

1) Cataloging evidence-based best practices designed for scale
2) Developing recommendations for state policy and institutional policy and practice around mathematics re-design
Mathematics Workgroups

**High School to College Alignment**
- Explore how high school curriculum in mathematics aligns with postsecondary expectations
  - Clarify college entrance requirements alignment with high school assessments and courses
  - Examine longitudinal student data on mathematics sequencing and student success rates
  - Engage high school and college mathematics faculty in dialogue about postsecondary expectations
  - Identify strategies that promote greater alignment

**FCS Mathematics Sequences**
- Examine multiple pathways for students to enter based on programs of study as well as the redesign of course structures to maximize support for students
  - Identify course and institutional structures that promote and deter success
  - Encourage the modernization of mathematics content
  - Review data on student success across algebra and non-algebra pathways
  - Identify a sequence of courses in the context of a student’s intended transfer major/meta-major

**FCS to University Alignment**
- Examine how FCS curriculum in mathematics aligns with university expectations, particularly for students in transfer programs
  - Clarify university mathematics requirements
  - Examine the longitudinal student data on mathematics sequencing and student success rates
  - Engage FCS and SUS mathematics faculty in dialogue about postsecondary expectations
  - Identify strategies that promote greater alignment

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Activities & Timeline

**Pre-Work**
- Attend a one-day kick off meeting

**Phase 1**
- Review research and develop original research questions

**Phase 2**
- Conduct scan of policy environment (state & local)

**Phase 3**
- Generate best practices and develop policy recommendations

**Phase 4**
- Share results state and system wide through one-day institute
- Share results broadly

- Sept. 2018
- Sept. 2018 through May 2019
- June/July 2019
Workgroup Participants

• Share *expertise, skills and insight* with a statewide network of experts in mathematics

• Receive opportunities for ongoing *professional development* and *networking* to increase Florida’s understanding of mathematics alignment and informing best practices and state policy
Workgroup Roles & Resources

• Staff Liaison – FLDOE staff members who will connect workgroups with technical assistance, document the work, etc.

• Chairperson(s) – College faculty member who will lead the workgroups

• Members – ~12 faculty and administrators per workgroup representing the FCS, K-12 and universities (where appropriate) who will conduct the work

• Subject Matter Experts – SME’s who will provide research and policy background information to inform the workgroups in phases 1-2
# Workgroup Expectations

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Activity</th>
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<tbody>
<tr>
<td>September 2018</td>
<td>Attend an in-person one-day orientation and kick-off meeting</td>
</tr>
<tr>
<td>September 2018 – May 2019</td>
<td>Participate and engage in monthly virtual meetings</td>
</tr>
<tr>
<td>June 2019</td>
<td>Attend an in-person one day institute in June 2019</td>
</tr>
<tr>
<td>Monthly Activities</td>
<td>Engage in readings, research and other related activities contributing to workgroup roles and responsibilities (Estimated 6-8 hours per month)</td>
</tr>
</tbody>
</table>
Next Steps

• Interest Survey (Deadline: June 19, 2018):
  https://www.surveymonkey.com/r/WF6DN7X

• Workgroup selection (summer 2018)

• Kick-off meeting (September 2018)

• Opportunities for engagement and updates (Ongoing)
Mathematics Resources
Student Success Center Website

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Guided Pathways

The following outlined resources are to help Florida College System institutions explore implementing guided pathways and mathematics pathways redesign. This section includes guided pathways information...
Resources

Mathematics Pathways Resources

- **Center for Postsecondary Success-Mathematics Pathways in the Florida College System**: A recent Center for Postsecondary Success report (February 2018) investigated math pathways by examining Associate In Arts (AA) students' course taking behavior and success in Intermediate Algebra (MAT1033) and College Algebra (MAC1105), as well as their degree completion in the Florida College System. The report did not find evidence that taking MAT1033 as a prerequisite to MAC1105 increased the likelihood of passing the gateway course (MAC1105), and for some students taking MAT1033 as a prerequisite may actually decrease the likelihood of passing the gateway course. Further, the report found that enrolling in MAT1033 was associated with a lower likelihood of earning a degree within two years, a result of additional coursework beyond the minimum AA requirements.

- **Florida College System Mathematics Workgroups**: The role of the Florida Student Success Center is to support institutional initiatives that improve college completion rates and promote student success. Mathematics pathways redesign and content alignment is a primary initiative in 2018-2019. The mathematics workgroups resource provides a framework of the three inter-connected workgroups who will focus on 1) high school to college mathematics alignment, 2) Florida College System mathematics alignment and 3) Florida College System to university mathematics alignment. The workgroups will collaborate to identify current challenges in mathematics pathways and develop policy and practice recommendations to improve student achievement across education systems.

- **Dana Center Mathematics Pathways Implementation Guide**: An interactive resource that applies the guided pathways work to implementing and scaling mathematics pathways based on the Dana Center Mathematics Pathways model. The guide walks faculty and staff through the four stages of implementation from getting started, planning, implementing and continuous improvement.

- **Dana Center Mathematics Pathways - Strategies and Considerations for Co-requisite Supports**: This resource outlines considerations for discussion among mathematics faculty, advisors, administrators, and financial aid staff as institutions design co-requisite model(s) that best serve their institution and its students.