Mathematics Spring Kick-Off Webinar

January 15, 2019

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Webinar Logistics

Participants will be on mute for the duration of the webinar.

Material from today’s webinar:
In the handouts area you will find a copy of today’s presentation.

How to submit questions:
To submit questions during the webinar, please utilize the Questions function. During the Q&A portion of the webinar, questions will be addressed.

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Agenda

Review of Milestone 3
Report out
• High school to postsecondary
• FCS mathematics sequences
• University alignment

Milestone 4
February 13-14 meeting at Polk State College
Milestone 3 Review

Naomi Sleap
Executive Director
Florida Student Success Center
Milestone 3: Gathering Information

**Purpose:** This template guides discussion among huddles to clearly define the challenges associated with addressing the problems previously identified by the workgroups with implementing mathematics pathways. The template helps ensure a thorough discussion and provides a way to organize information that will be gathered by the Huddle Leads and presented to the workgroups.

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**Template for Gathering Information**

<table>
<thead>
<tr>
<th>Huddle 1 Challenge: Factor contributing to the challenge</th>
<th>Evidence that this factor contributes to the challenge</th>
<th>Drivers or root causes of the factor</th>
<th>Additional information needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Click here to enter text.</td>
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<td>Factor 2: Click here to enter text.</td>
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<td>Factor 3: Click here to enter text.</td>
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</table>

*Add additional rows as needed.*

**Process check:** If the factors identified above were resolved, would the overall challenge be eliminated? Why or why not?

**Additional information:**
Click here to enter text.
Milestone 3 Report Out

Professor Cynthia McGinnis  
Northwest Florida State College  
Chair: High School to Postsecondary Alignment

Dr. Julie Phelps  
Valencia College  
Chair: FCS Mathematics Sequences

Dr. Tommy Minton  
Seminole State College of Florida  
Chair: College to University Alignment

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High School & Postsecondary Alignment – Challenges

• Communication channels between K-12 and postsecondary
• Traditional assessments
• Differences between the K-12 and postsecondary environments
• Certification, training and employment of math teachers/counselors in secondary education
Communication between K-12 and postsecondary

• Clearly defined definition of “Mathematics”
• How do we develop students abilities for thinking and reasoning mathematically?
• What are the essential knowledge skills needed in the areas of mathematical structure, instructional practices, curriculum and pathways?
• What essential concepts are necessary for developing an understanding at a deep level?
• What are the key concepts that all high school students need as a foundation, regardless of postsecondary education and career goals?
• How do we align assessment in high school with assessment in college?
Traditional assessments

• How do we equitably determine what students know and can do?
  . Vocabulary
  . procedures
  . mathematical thinking
  . logical reasoning
  . concepts
  . problems the student can formulate and solve

• How do we ensure that our assessments enhance mathematics learning and support good instructional practice?

• How do teachers negotiate the different purposes of classroom and large-scale assessment?

• In what ways are classroom practices influenced by the demands of large-scale assessment?
Differences between the K-12 and postsecondary environments

- Pedagogical differences
- Expectations on standards
- Depth and Breadth
- Assessment
- Calculator use on tests

Sybilla Beckman a Josiah Meigs Distinguished Teaching Professor of Mathematics at the University of Georgia, AMS Notices, called for the creation of a more unified mathematics teaching community, stating that “mathematicians, mathematics educators, and teachers bear collective as well as individual responsibility for improvement of the mathematics education system as a whole”
Certification, training and employment of math teachers/counselors in secondary education

- Are breadth and depth of mathematical concepts in teacher preparation adequate?
- Are the mathematics requirement for some institutions more robust than in others?
- How do we support teachers in the classroom?
- Is there sufficient funding for mathematics training for all grade levels?
- Are there training opportunities for K-12 and college faculty?
- Are parents, counselors, and students working together to develop a plan for success, be it work, trade school, community college or university?
FCS Mathematics Sequences – Challenges

• Requirements at the state level are too broad
• Differentiation at local levels
  • Many development courses offered
  • Statewide course numbering too vague
  • Differences in course prerequisites
• Placement of students into the correct courses
• Advising of Math Pathways
  • Inconsistent course offerings between institutions
  • Students changing programs
College to University Alignment – Challenges

- Differences in learning outcomes based on meta-majors/programs of study
  - Changes to objectives in current courses (i.e., MAC 1105)
  - Creation of new courses specific to majors/meta-majors

- Differences in course content
  - Objectives and student learning outcomes
  - Varying course modalities and instructional methods

- Advising of Math Pathways
  - Inconsistent course offerings between institutions
  - Students changing programs

- Differences in course prerequisites
  - Within mathematics sequences and pathways
  - In other program areas such as science and business courses
Next Steps for Milestone 3

• Review liaison feedback: (also posted in Canvas)
  • High School to Postsecondary https://bit.ly/2TJey7r
  • College to University https://bit.ly/2AG3UHm

• Discuss with Huddle Leads
• Finalize Milestone 3 Templates by the end of January
Milestone 4

Dr. Carrie Henderson
Executive Vice Chancellor
Florida College System
Milestone 4: Linking Challenges and Solutions

- Purpose: This template supports discussion among huddle and workgroup members to brainstorm and evaluate potential solutions to the challenges previously identified in the Template for Gathering Information.

- Suggested Completion Date: February 2019
Brainstorming Solutions - Template

Template for Brainstorming Solutions

Factors that contribute to the overall challenge were identified in the Template for Gathering Information. Consider how the solutions address the factor contributing to the challenge.

<table>
<thead>
<tr>
<th>Huddle 1 Challenge:</th>
<th>Factor contributing to the challenge</th>
<th>Promising solutions (strategies to address this factor)</th>
<th>Advantages/disadvantages of solutions</th>
<th>Examples where solutions have been implemented (if any)</th>
</tr>
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<tbody>
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</table>

Process check: Has at least one solution been identified for each factor listed?

Additional information:
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February 13-14 Meeting at Polk State College

Meeting Goals:

• Report out on the challenges associated with addressing the problems previously identified by the workgroups with implementing mathematics pathways. (Finalized Milestone 3)
• Provide breakout workgroup time to discuss and prioritize linking challenges to solutions as areas of focus for the workgroups. (Milestone 4)
• Provide breakout workgroup time to develop potential solutions to the challenges and prioritize the solutions that will move forward as formal recommendations. (Milestone 5)
February 13-14 Meeting at Polk State College

Registration Website:

Welcome Dinner:
• February 13, 6:30-8:30 p.m. at Harry’s Seafood Bar & Grille

Workgroup Meeting:
• February 14, 8:30 a.m. - 3:00 p.m., Polk State College Lakeland Campus, Technology Building
February 13-14 Meeting at Polk State College

Lodging:

• Cost of the hotel room will be covered upon checkout, though you will need a purchasing or credit card to book the hotel and to cover any incidentals.

Travel Support:

• Following the meeting, each institution will receive a check in the amount of $100 per participant who attended the meeting to offset additional travel expenses.
Q & A
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THANK YOU!