

Ohio Mathematics Initiative

• Re-envisioning Post-secondary Mathematics

From Dialogue to Action

Jim Fowler

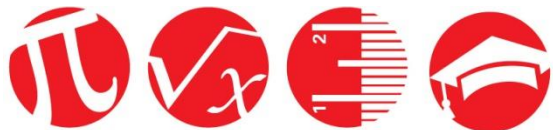
&

Michelle Younker

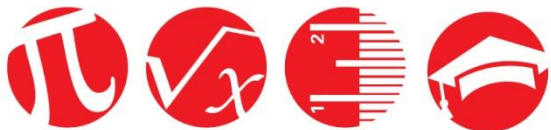
March 19, 2015

Overview of Presentation

- Background of the Ohio Mathematics Initiative (OMI)
- Work to date
- Changes to the Ohio Transfer Module (OTM)
- Next steps
- Questions and discussion



Background & Timeline

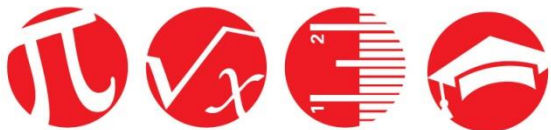


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• *Re-envisioning Post-secondary Mathematics*

Timeline

- May 8, 2013: Math Summit
- Late May–June 2013: Selection of Steering Committee members
- July 26, 2013: Initial Steering Committee meeting
- August–December 2013: Monthly Steering Committee meetings & working group collaborations & discussions



Steering Committee Composition

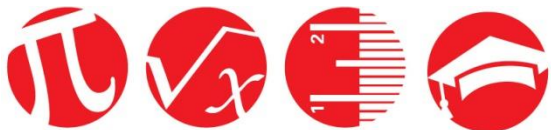
- 7 mathematicians from 4-year state institutions
- 5 mathematicians from 2-year state institutions
- 5 ex-officio members
- 2 consultants from the Charles A. Dana Center, University of Texas at Austin
- Board of Regents staff



Steering Committee Charge

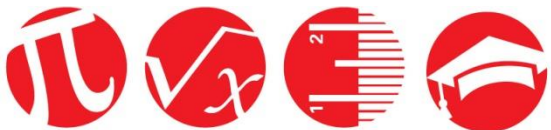
To develop expectations and processes that result in each campus offering pathways that result in mathematics that yield:

- 1) increased success for students in the study of mathematics
- 2) a higher percentage of students completing degree programs
- 3) effective transferability of credits for students moving from one institution to another



Timeline

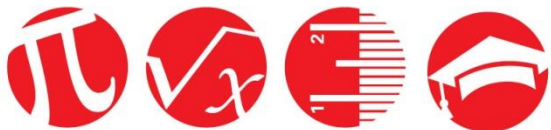
- January 10-11, 2014: Chairs meeting and Steering Committee retreat
- March 2014: Release of [*Rethinking Postsecondary Mathematics: Final Report of the Ohio Mathematics Steering Committee*](#)



Essential Component #1

Develop high-quality entry-level courses and pathways

- Improve student success by aligning mathematics to academic programs
- Develop, implement, and evaluate co-requisite strategies to support underprepared students



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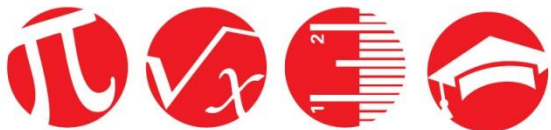
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Essential Component #2

Develop transfer policies and processes that foster effective transfer of course credits while encouraging course innovation

- Redesign OTM course criteria and processes
- Increase flexibility in determining prerequisite courses and credit hours
- Define “college-level”

****Work began almost immediately**



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Essential Component #3

Support constructive engagement of mathematics chairpersons and faculty within and across campuses

- Establish a chairs network
- Improve communication among mathematics faculty and stakeholders
- Encourage and promote participation in professional groups

Essential Component #4

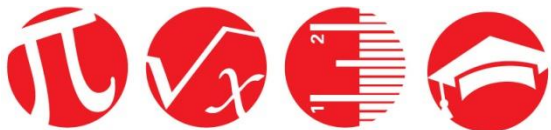
Collect, analyze, and share relevant data

- Develop quality measures for improving student success in mathematics

Essential Component #5

Improve student success in college-level mathematics courses by aligning postsecondary expectations and high school practice

- Strengthen collaboration and communication between K-12 and higher education
- Share best practices and explore new approaches to the placement of entering postsecondary students and implementation of the remediation-free standards

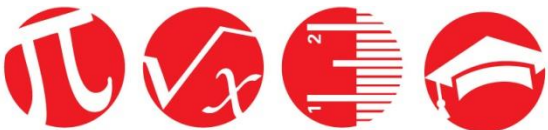


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Timeline

- January 10-11, 2014: Chairs meeting and Steering Committee retreat
- March 2014: Release of *Rethinking Postsecondary Mathematics: Final Report of the Ohio Mathematics Steering Committee*
- June 2, 2014: Inaugural Chairperson's meeting
- Summer 2014: Selection of subgroup members

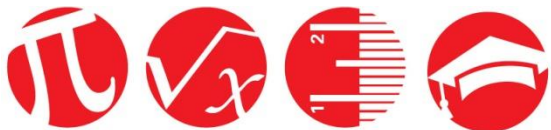


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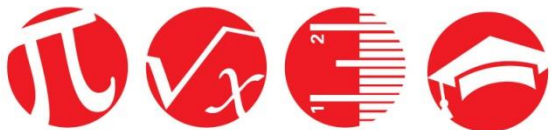
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Timeline

- September 17-18, 2014: Complete College America/Dana Center Grant meeting
- September 25, 2014: Subgroup co-leads meeting
- October–November 2014: Initial meetings of the subgroups
- July 2014–June 2016: (Grant supported) work continues



Work Undertaken



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Chairs/Leads Network Subgroups

Subgroup 1 – New and Alternative Pathways (Strategy #1)

Tasks:

- Exploring new and alternative college-level mathematics courses
- Developing and identifying co-requisite strategies

Work to date:

- Conducting and reviewing surveys about existing pathways in Ohio



Chairs/Leads Network Subgroups

Subgroup 2 – Mathematics, Statistics, & Logic Review Panel (Strategy #2)

Tasks:

- Redesigning OTM course criteria
- Increasing departmental flexibility regarding pre-requisites & credit hours
- Defining what distinguishes a course as “college-level”



Chairs/Leads Network Subgroups

Subgroup 2 – Mathematics, Statistics, & Logic Review Panel (Strategy #2)

Work to date:

- **Proposed four changes to the OTM criteria**
More later in this presentation!
- Updating the remaining OTM guidelines
- Understanding the high school graduation standards



Chairs/Leads Network Subgroups

Subgroup 3 – Communication, Outreach, & Engagement (Strategy #3)

Tasks:

- Improving communication among mathematics faculty and stakeholders
- Promoting participation in programs of professional organizations
- Disseminating information about the work undertaken by OMI

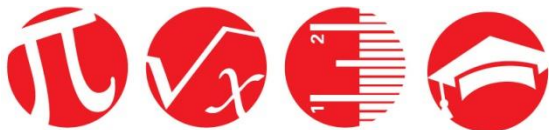


Chairs/Leads Network Subgroups

Subgroup 3 – Communication, Outreach, & Engagement (Strategy #3)

Work to date:

- Building a network of presenters and a [presentation request form](#)
- Creating voiceover presentations
- Preparing print materials

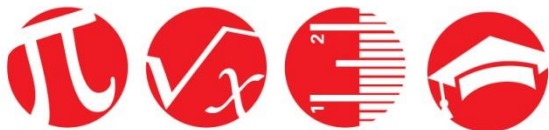


Chairs/Leads Network Subgroups

Subgroup 4 – Data Collection, Analysis, & Sharing

Tasks:

- Developing quality measures for improving student success in mathematics
- Collecting, analyzing, and sharing relevant data

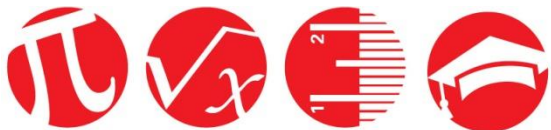


Chairs/Leads Network Subgroups

Subgroup 4 – Data Collection, Analysis, & Sharing

Work to date:

- Reviewing data pertaining to student performance in transfer module courses
- Exploring options for collecting and analyzing data
- Becoming familiar with Ohio Higher Education Information (HEI) queries



Chairs/Leads Network Subgroups

Subgroup 5 – Alignment between Secondary & Postsecondary Content & Instruction (Strategy #5)

Tasks:

- Conducting a national scan of best practices
- Studying Ohio's Remediation Free Standards
- Organizing meetings and workshops that promote collaboration
- **Hosting an Ohio Student Success Summit – Friday, April 24, 2015!**



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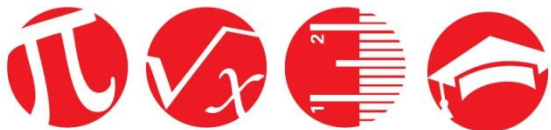
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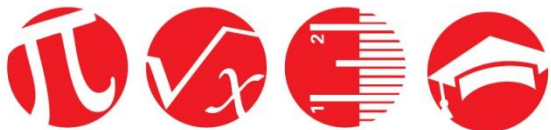
Subgroup 5 – Alignment between Secondary & Postsecondary Content & Instruction (Strategy #5)

Work to date:

- Expanded its membership to include high school mathematics faculty
- Reviewed current high school graduation requirements
- **Planning the Ohio Student Success Summit: Defining Mathematics Pathways**



Changes to the Ohio Transfer Module



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Changes Announced February 2015

1. Removed the prescribed pre-requisite requirement for acceptance into the Ohio Transfer Module Mathematics, Statistics, and Logic
2. Removed the credit-hour requirements for all OTM courses with learning outcomes (TMM001, 002, 003, 005, 006, 010, and 013)



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Changes Announced February 2015

3. Revised Guideline 4:

“Course does not cover variable ***content*** from term to term”

changed to

“Course does not cover variable ***learning outcomes*** from term to term”

Changes Announced February 2015

4. Established a college-level mathematics course definition:

“A credit-bearing, college-level course in Mathematics must use the standards required for high school graduation by the State of Ohio as a basis and must do at least one of the following: 1) broaden, or 2) deepen, or 3) extend the student’s learning.”



Implications

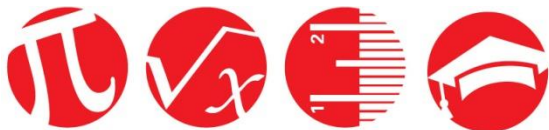
Institutions will NOT be able to use Intermediate Algebra to fulfill minimum degree requirements.

Implementation no later than Fall 2017.

Implications

Institutions will be able to:

1. Determine appropriate pre-requisite and innovative strategies to prepare their students
2. Submit additional courses to the OTM Mathematics, Statistics, and Logic Review Panel that in the past were not eligible for acceptance into the OTM



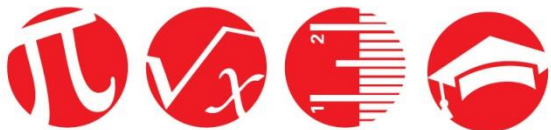
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Implications

Institutions will be able to:

3. Develop pathway courses providing seamless transition from secondary to postsecondary courses
4. Help students graduate not only with the knowledge and skills needed for their future but with the assurance that their courses will transfer and apply toward graduation at the next USO institution



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Implications

Submission on new courses can begin immediately!

-Spring submission deadline was March 13, 2015

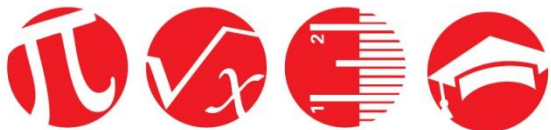
-Fall submission deadline is the first week of October 2015



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Next Steps

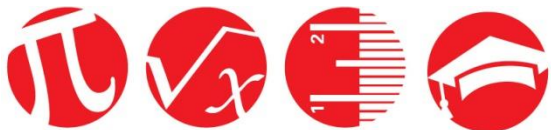


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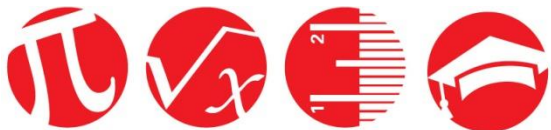
Next Steps Identified by Steering Committee

- ✓ Convene chairs – June 2, 2014
- ✓ Create working groups – Summer 2014
- Begin work on the essential components & SHARE what's happening!
- Plan a statewide mathematics conference



Continuing Work

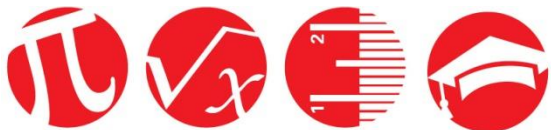
- Identify co-requisite and alternative pathways models for use by USO institutions
- Revise the remaining OTM guidelines where necessary
- Review OTM acceptance criteria for TMM010 Introductory Statistics
- Develop partnerships with secondary institutions and faculty to improve alignment of mathematics curriculum and instruction



Continuing Work

- Collect, analyze and utilize data to drive decisions
- Share the work done by the Ohio Mathematics Initiative
- Share with and learn from other states
- Increase student success!
- ??????

Closing Thoughts

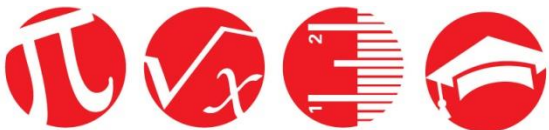


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Key Ideas

- Summit was driven by faculty concerns
- Faculty are leading these changes
- Statewide effort
- Chairs network is key in implementation

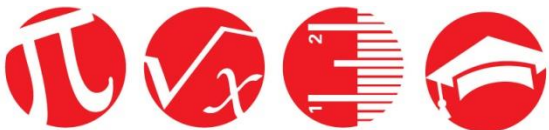


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Key Ideas

- Ohio is unique in engaging K-12
- Faculty and stakeholder participation and education is imperative to the success of the initiative
- Institutional support for the faculty involved in the initiative plays an important role in re-envisioning post-secondary mathematics



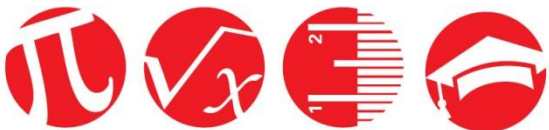
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Questions??

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Questions??

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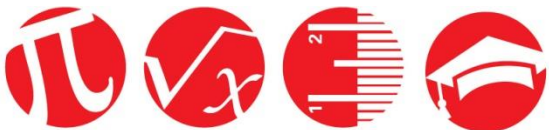
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Resources & References

- *Rethinking Postsecondary Mathematics: Final Report of the Ohio Mathematics Steering Committee*; March 2014
https://ohiohighered.org/sites/ohiohighered.org/files/uploads/math/MATH-REPORT_FINAL_4.22.14.pdf
- Ohio Mathematics Initiative Website
<https://ohiohighered.org/mathematics-initiative-documents>

Resources & References

- Ohio Mathematics Initiative Speaker Request Form
<https://www.ohiohighered.org/mathematics-initiative-resources/presenter-request>
- OTM Guidelines/Learning Outcomes
<https://www.ohiohighered.org/transfer/transferrmodule/learningoutcomes>
- OTM with Learning Outcomes (TMM Courses)
<https://www.ohiohighered.org/mathematics-initiative>

