Steering Committee Composition

7 mathematicians from 4-year state institutions

5 mathematicians from 2-year state institutions

5 ex-officio members

Dr. Uri Treisman and Dr. Jenna Cullinane 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
Recommendations - Essential Components

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

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”
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

4. Collect, analyze, and share relevant data

   Develop quality measures for improving student success in mathematics

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
Task Force
Five groups composed of faculty from both, two an four year colleges, were formed to create and develop strategies to address these 5 essential components identified in the steering committee recommendations.

Subgroup 1 – New and Alternative Pathways
Subgroup 2 – Mathematics, Statistics, & Logic Review Panel
Subgroup 3 – Communication, Outreach, & Engagement
Subgroup 4 – Data Collection, Analysis, & Sharing
Subgroup 5 – Alignment between Secondary & Postsecondary Content & Instruction
Subgroup 1 – New and Alternative Pathways

Work to date:

Conducting and reviewing surveys about existing pathways in Ohio

Introduction of a QR course with defined learning outcomes, this course is now in the Ohio Transfer Module system

Revised College Algebra learning outcomes, emphasizing that this course is a pathway to stem courses and that it should not be used as a default placement for undeclared students.

Revised Introductory Statistics learning outcomes
Subgroup 2 – Mathematics, Statistics, & Logic Review Panel

Work to date:

Ohio Transfer Module (OTM) Mathematics, Statistics, and Logic

Learning Outcomes:
The course directly emphasizes at least one of the learning outcomes for the Transfer Module. Which of these learning outcomes are addressed and how?

a. Communicate effectively: All general education programs include a component for writing; many also include a component for oral communication or presentation.

b. Evaluate arguments in a logical fashion: Competence in analysis and logical argument are explicit learning goals for most general education programs, although these skills go by a variety of names (e.g., critical thinking, analysis, logical thinking, etc.).

c. Employ the methods of inquiry characteristic of natural sciences, social sciences, and the arts and humanities: The tools for solving problems vary across disciplines; general education introduces students to methods of inquiry in several fields of study and thereby prepares students to integrate information from different disciplines.

d. Acquire an understanding of our global and diverse culture and society

e. Engage in our democratic society: One of the overarching goals of general education is to prepare students to be active and informed citizens, the development of a disposition to participate in and contribute to our democracy is full of equal importance to the goal of having the skills to do so intelligently.

Guideline 1: 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.

Guideline 2: Course does not cover variable learning outcomes from term to term.

Guideline 3: Course is not an upper-division course.

Guideline 4: Course is in the areas of mathematics, statistics, and logic.
Subgroup 3 – Communication, Outreach, & Engagement

Work to date:

Building a network of presenters and a presentation request form

Creating voiceover presentations

Preparing print materials
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
Subgroup 5 – Alignment between Secondary & Postsecondary Content & Instruction

Work to date:

Expanded its membership to include high school mathematics faculty

Reviewed current high school graduation requirements

Ohio Student Success Summit: Defining Mathematics Pathways (Columbus, Ohio, April 2015)
• Key Ideas

  • Summit was driven by faculty concerns

  • Faculty are leading these changes

  • Statewide effort

  • Chairs network is key in implementation
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
Resources & References

- Rethinking Postsecondary Mathematics: Final Report of the Ohio Mathematics Steering Committee; March 2014

- 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/transfermodule/learningoutcomes

- OTM with Learning Outcomes (TMM Courses)
  - https://www.ohiohighered.org/mathematics-initiative