



Ohio Mathematics Initiative
Rethinking mathematics courses, curricula and their relationships with other disciplines

Subgroup Meeting Summary

Subgroup #: Subgroup 2- OTM Revision Panel

Meeting Date: 1/26/2018

Meeting Time: 10:00-2:30pm

Meeting Location (WebEx, ODHE, etc.): Ohio Department of Higher Education

Subgroup Decisions/Meeting Outcomes:

1. The Objectives of the meeting were to 1) discuss on Calculus I (TMM005) Re-Design 2) discuss on Progress of Calculus II (TMM006) Re-Design 3) discuss on Mathematics in Early and Middle Childhood Education 4) discuss on Technical Mathematics, and to 5) discuss next steps
2. Dr. Lee Wayand provided updates on the progress of work on the revision of the learning outcomes for TMM005 Calculus I. The structure of the learning outcomes look at verbs not tasks. The proposal was shared with Mathematic Chairs/Leads at the fall 2017 network meeting with consensus to move forward. The group agreed to move forward with sending endorsement of TMM005 Calculus I to chairs/leads for review, once TMM006 Calculus II is finalized by the group.
3. Dr. Lee Wayand, Dr. David Stott, Dr. Pramod Kanwar, Dr. Bill Husen, and Trefor Bazett have worked on the revision of learning outcomes for TMM006 Calculus II. The structure of the learning outcomes focuses on verbs with the current proposal awaiting feedback on vectors. Subgroup 2 members discussed a need for multivariable in Calculus II. The group agreed on a timeline of February 9 for final group review prior to sending Calculus I and Calculus II for endorsement by the end of February 2018. The group also discussed the need to create a re-sequence subgroup charged with looking at teaching and how to approach Calculus I and Calculus II courses. Dr. Karl Hess will conduct preliminary work on an Applied Calculus set of learning objectives for sciences.
4. Dr. Steven Gubkin was nominated by Subgroup 2 to lead a group of mathematics in early and middle childhood education. Subgroup 2 members suggested the need for solid teaching skills and proper ways to teach to be included in developing learning outcomes. Those working in the education subgroup will think mathematics not procedures. The group discussed the possibility of a first course in the sequence to involve a quantitative reasoning course for educational mathematics, however it was agreed an understanding of concepts is needed before moving forward with developing learning outcomes. The subgroup charged with this task will consist of both nominated education and mathematics faculty.

5. Dr. Paula Compton and Dr. Candice Grant explained work in the Ohio Guaranteed Transfer Pathways Initiative and next steps in the process that relate to technical mathematics. A current issue in the initiative is that students with a goal of earning a bachelor's degree cannot move forward without earning a technical degree previously. A number of Subgroup 2 members currently have technical mathematics within their institutions. Work in technical mathematics may exist; the group suggests researching Tech ABET accreditation and IVY Tech. The group suggested learning outcomes could be written from technical quantitative reasoning with a clarification on college level. The group agreed on a three-pronged process: 1) surveying institutions on who currently has technical mathematics courses 2) analyzing responses 3) create a subgroup to write learning outcomes (e.g. technical quantitative reasoning).
6. Next steps were discussed and collectively Subgroup 2 said their thanks and without anything further adjourned.

Subgroup Homework/Follow-Up (if any):

1. Subgroup 2 will finalize learning outcomes for Calculus II and send final Calculus I learning outcomes to Ms. Jessi Spencer for statewide endorsement.
2. Nomination for education and mathematics subgroup members for early and middle childhood education mathematics should be sent to Ms. Jessi Spencer.
3. ODHE will construct a survey to capture technical mathematic courses statewide, please send responses to Ms. Jessi Spencer upon disbursement.

Next Meeting: (To Be Determined)