University System of Ohio (USO) Mathematics Chairs/Leads Network Subgroups and Committees

The USO Mathematics Chairs/Leads Network is seeking nominations from your institution for leads and/or members for the following subgroups and committees:

Subgroups and Strategies

Subgroup 1 - New and Alternative Pathways – Strategy #1

Task Descriptions

1. Improve student success in entry-level courses by aligning mathematics to academic programs of study and by improving instructional delivery mechanisms
    - USO institutions should begin by developing and offering entry-level mathematics courses, or by redesigning existing courses, to serve the needs of students in clusters of academic programs (e.g. the social sciences, business and finance, allied health and other STEM disciplines). In particular, departments should remove college algebra as the default mathematics course for non-STEM majors. In addition, mathematics departments should ensure that modern course instructional materials and delivery technologies -- reflecting best and promising practices that support teaching and learning – are used in their entry-level courses. Ideas and resources should be shared through a mathematics chairpersons network.
2. Develop, implement and evaluate co-requisite strategies to support underprepared students
    - All USO institutions should integrate supplemental support (including supplemental instruction, intrusive advising and a high degree of programmatic coordination) directly with credit-bearing courses. Gaps in knowledge should be addressed in a "just-in-time" manner.
    - Review co-requisite models in Ohio and other states and identify a small number of recommended models for use by USO institutions. Promising examples of strategies that support alternative entry-level courses include Quantway/Statway, New Mathways Project statistics, quantitative reasoning and STEM-prep pathways, and co-requisite models such as Austin Peay University.

Existing OTM Mathematics, Statistics, & Logic Review Panel – Strategy #2

Task Descriptions

1. Redesign OTM course criteria and processes to focus on student learning outcomes
2. Increase departmental flexibility in determining prerequisite courses and credit hour requirements for OTM courses
3. Define what distinguishes a course as "college-level"

Subgroup 3 - Communication and Outreach – Strategy #3

Task Descriptions

1. Improve communication among mathematics faculty and stakeholders across institutions
2. Encourage and promote mathematics faculty participation in meetings of professional groups

Subgroup 4 - Data Collection, Analysis, & Share – Strategy #4

Task Descriptions

1. Develop quality measures for improving student success in mathematics; then collect, analyze and share relevant data
    - The OBR should work collaboratively with USO institutions – and particularly the chairpersons of their mathematics departments – to develop a common protocol for collecting, analyzing and reporting data relating to student success and program effectiveness. Among the measures to be considered in establishing this protocol should be: (1) students' course grades; (2) students' success in subsequent mathematics courses or program course(s) for which the mathematics course is a prerequisite; (3) students' persistence to degree or certificate completion; and (4) comprehensive final exams along with samples of student work at various levels of performance. Other data gathered should focus on factors that likely contribute to student success, such as when a mathematics course is taken, last date of attendance, institutional and student demographics and

location of the course (especially for dual enrollment).

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

Task Descriptions

1. The OBR should be responsible for convening a small group of postsecondary mathematics faculty to conduct a national scan of best and promising practices designed to align secondary and postsecondary content and instruction. In addition, the OBR should provide needed support services and should direct group members to focus on practices at both the statewide and institutional levels. The scan should be followed by a series of regional meetings and workshops for high school and postsecondary mathematics faculty. Co-sponsored by the OBR and ODE, these sessions should be designed to engage both groups in the roll-out of College Credit Plus, educate college faculty about the CCSSM, and deepen secondary and postsecondary faculty members' understanding of the OTM. These regional discussions should not take place until the Ohio General Assembly approves a final version of the College Credit Plus program.
2. The regional meetings and workshops should be used as the launching point for an ongoing conversation among secondary and postsecondary mathematics faculty, as well as state education policy leaders, about ways to (a) align K-12 and higher education curricula (e.g., dual-enrollment courses, developmental courses, bridge courses and entry-level postsecondary courses); (b) align high school-to-college policies, including more targeted college readiness supports to help students make the transition; (c) prepare new and existing mathematics teachers to work in an effectively aligned environment; and (d) create a continuing infrastructure for aligned curriculum planning and action, as well as ways to encourage and provide incentives to mathematics faculty to engage in this work.
3. Share best practices and begin a consultation through which all USO institutions as well as faculty and advisors/counselors from Ohio high schools explore (a) new approaches to the placement of entering postsecondary students in mathematics courses, and (b) implementation of Ohio's remediation-free standards.
4. In cooperation with the ODE, the OBR should organize a comprehensive initiative with the following three components:
    a. A Student Success Summit, with participation from college and high school mathematics faculty and advisors/counselors, to examine exemplary assessment and placement practices already being used in Ohio – and to explore other possible practices
    b. A process for gathering and sharing data from the implementation of the state's new remediation-free standards, and for identifying best practices in this area
    c. An assessment of institutional strategies' impact on the success of students just above and below the college-level cutoff – that is, to determine empirically the success rates of students near the 22 ACT-score cutoff in mathematics course pathways appropriate to the full array of academic majors

<u>Committees</u>

Statewide Ohio Mathematics Conference Planning Committee

Task Descriptions

1. Plan and convene a statewide Ohio Mathematics Conference, probably in the fall, 2015.
2. Design the conference for multiple audiences, including postsecondary faculty, administrators and staff; postsecondary students; faculty and staff from postsecondary disciplines that are mathematics dependent; secondary faculty and students; and representatives mathematics-intensive Ohio business and research organizations. Seek a prominent national mathematician as a keynote speaker – and foundation and corporate funding to support the conference.

Leads/Members Selection Committee

Task Descriptions

1. Review nomination results and select leads and members for all USO Mathematics Chairs/Leads Network subgroups and committees.