

PROJECT EMBER

Course Coordination

What is the Challenge?

- Across institutions, there can be a variety of types of instructors for a particular course which poses challenges relative to the topics emphasized in a course, the course textbook/materials used in the course, and the instructional strategies employed.
- Many college instructors have little to no instruction on how to be an effective instructor.
- Inconsistencies in course learning objectives, structure, materials, and learning opportunities can pose uneven course experiences for students that serve as a barrier to success.
- Instructors often point to not having enough time (both in and outside of class) as the primary barrier to implementing high-quality instructional strategies, such as active learning, in their courses. Offering coordinated courses can help mitigate this barrier by sharing instructional resources, such as classroom activities, assessments, and syllabi, in order to reduce the necessary workload for each instructor. However, it is important to also provide instructors guidance and support so they can effectively implement shared resources in their classes.

Solution

Implement course coordination for high-enrollment mathematics courses which includes at least one (funded) course coordinator to oversee all aspects of coordination and collaboration.

What is the Innovation?

- Course coordination can entail a variety of levels – from light coordination to heavy coordination. The idea for coordinating courses includes the following which are shared with all instructors of the coordinated course:
 - Common course syllabi to ensure common learning outcomes, course and grading structure, policies, and statements involving equity, attendance, and learning experiences.
 - Common course activities to be used during and outside of class, which incorporate high-quality instructional practices. This includes in-class activities, homework sets, projects, and technology applications (Desmos apps, etc.).
 - Common assessments – low, medium, and high stakes – that allow for students to demonstrate knowledge and understanding of the mathematics concepts, applications, and procedures.
 - Common adoption of textbook and ancillary materials to support students' knowledge and skills development.
- Coordination of a course should also include collaboration among the instructors who are teaching the course. This collaboration can be informal through “brown bag lunches”, virtual learning communities, or through more formal professional development engagements where instructors discuss aspects of the coordinated course (e.g., instructional practices, students' engagement, challenges in learning the content,

improvements to the course activities, etc.). Although “nuts and bolts” discussions are often necessary and helpful, having deeper discussions about student thinking and evidence-based instructional practices are a key goal of an instructor community.

- The innovation of coordinating courses can improve student learning and outcomes, build a community of practice among instructors, share the teaching responsibilities, ensure consistency in design, structure, and teaching of the coordinated course. These efforts can ensure an equitable and even learning experience for students.
- As outlined in *Transformational Change Efforts* (Smith, et al., 2020), coordination systems have the goals of “building a supportive network and community among instructors and ensuring that students have a fair and high-quality learning experience” (p. 208).

What are Some Key Terms to Know?

- Coordination
- Common course materials

How Does this Play Out Across the System?

- All levels: commitment by instructors to support student success through consistency of course design, structure, and teaching; use of and sharing of data
- Institution: reward instructors teaching coordinated courses through funding for development of coordinated course activities (assessments, activities, projects, etc.); reward instructors for improved student learning and success
- Department: support a funded coordinator to align course materials, convene meetings and other collaborations with instructors (creating time in the course schedule so that instructors of coordinated courses have common times available to meet), and overall firmly support the use of coordinated course materials by all instructors teaching the coordinated course
- Course-Level: provide a common course shell for instructors to copy in the institution’s learning management system; provide opportunities for instructors to freely collaborate; provide opportunities for students to give feedback on their experiences in the coordinated course
- Classroom-Level: instructors use coordinated course materials and provide feedback to the instructors on how things went in terms of supporting student success

How Can You Learn More?

- Read more about course coordination in the Transformational Change Efforts book: <https://bookstore.ams.org/mbk-138>.
- Read MAA’s Statement #4 Best Practices Curriculum and Teaching: <https://maa.org/resource/best-practices-statements/>
- Ask an expert! The following faculty are a few who have engaged in research and projects around course coordination:
 - Chris Rasmussen, San Diego State University
 - Wendy Smith, University of Nebraska-Lincoln
 - Naneh Apkarian, Arizona State University

Resources

- Smith, W. M., Voigt, M., Ström, A., Webb, D. C., & Martin, W. G. (Eds.). (2021). *Transformational change efforts: Student engagement in mathematics through an institutional network for active learning* (Vol. 138). American Mathematical Society.
- **I want to connect with others engaged in this same innovation**
 - [Zulip Network for Teaching-Focused Faculty](#)
 - [MAA Connect](#)