Active Learning in STEM Classes
Tuesdays, 4-6pm, July 5th – July 26th, 2016

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Description: When implemented effectively, active learning techniques have been shown to improve learning outcomes. This four week mini-course is designed to help participants explore active learning and consider how to effectively implement these techniques in various classroom settings. This course is intended for graduate students and postdoctoral fellows interested in utilizing these techniques in recitations or their own courses, now or in the future.

Expectations: Each week we expect that you will bring the assigned work with you to class and participate actively in discussion and group activities. If you cannot make one week of class, please tell us. If you think you will miss more than that, we ask that you please give up your spot to someone else.

SCHEDULE

July 5th Week 1: Using Active Learning to Achieve Your Goals
This opening session will define what active learning is and explore the value of it in terms of our goals. After discussing various strategies for implementing active learning in our classes, we will consider how these strategies can be effectively matched with our goals to promote student learning. The goals and strategies that we discuss this day will help to frame our subsequent discussions.
Preparation: reading assignment and writing assignment (your course goals)

July 12th Week 2: Facilitating Productive Student Interactions In Class
Student participation in whole class or group discussions can be effectively leveraged to support course goals, but it can be challenging to implement. In this session, we will discuss ways to structure and incentivize student participation, taking into consideration the benefits and pitfalls associated with various interactive class structures.
Preparation: reading assignment and writing assignment (reflections on group work)

July 19th Week 3: Aligning Student Assessment with Active Learning Goals
In this session, we will consider the various purposes and formats of assessments and how they communicate our values and expectations to students, focusing on the unique challenges inherent to active classes.
Preparation: bring in an exam question

July 26th Week 4: Designing an Active Learning Experience
This final session will bring together the various elements of an active learning class. Participants will come prepared to discuss an in-class activity and will be asked to consider issues of student accountability, class structure and dynamics, feedback, and assessment. We will also consider the structure of the semester and how this activity could fit into a whole course.
Preparation: bring in an in-class activity