

Seminar & Events Bulletin: Teaching Mathematics
01-01-2013 to 06-30-2013

Tuesday, January 22, 2013

5:15pm-6:30pm **Teaching Mathematics** -- Nina White (Univ Michigan, Math Dept and School of Education) *The math content sequence for pre-service elementary teachers: students, goals, and methods* -- 3096 East Hall

Monday, January 28, 2013

5:15pm-6:30pm **Teaching Mathematics** -- Grace Kennedy (UCSB) *Teaching Math for Elementary School Teachers Through Observation and Inquiry* -- 3096 East Hall

Monday, February 25, 2013

5:15pm-6:30pm **Teaching Mathematics** -- Michael Von Korff (Reasoning Mind) *Mathematical Knowledge for Online Instruction* -- 3096 East Hall

Monday, March 11, 2013

5:15pm-6:30pm **Teaching Mathematics** -- Michael Weiss (Michigan State Univ) *More than Problem-Solving: Mathematical Practices Beyond the Common Core* -- 3096 East Hall

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Abstracts

Teaching Mathematics

Tuesday, January 22, 2013, 5:15pm-6:30pm

3096 East Hall

Nina White (Univ Michigan, Math Dept and School of Education)

The math content sequence for pre-service elementary teachers: students, goals, and methods

This is an overview of the math content sequence at UM for pre-service elementary teachers. I will talk about the students in the course, the goals for the course (both in content and practices), why those are the goals of the course, and how using inquiry-based learning (IBL) teaching methods supports achievement of those goals. There will be three parts: (I) a general introduction to some of the issues and topics when educating future teachers, (II) a description of the course over the last three years and, in particular, some aspects of the course as I've taught it, and (III) a short description of some research I conducted on the Fall 2012 semester of this course, including some encouraging results.

Teaching Mathematics

Monday, January 28, 2013, 5:15pm-6:30pm

3096 East Hall

Grace Kennedy (UCSB)

Teaching Math for Elementary School Teachers Through Observation and Inquiry

Enjoyment of mathematics cannot be taught, but it can be learned if it is not already a part of someone's world view. Encouraging it was an important learning outcome in my course on mathematics for elementary school teachers. We used "Math in the City" videos of children learning mathematics to introduce mathematical concepts that pre-service teachers go on to investigate in our course. I will discuss how to integrate the activities to support my learning outcomes of increased confidence and enjoyment of mathematics.

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Monday, February 25, 2013, 5:15pm-6:30pm

3096 East Hall

Michael Von Korff (Reasoning Mind)

Mathematical Knowledge for Online Instruction

Reasoning Mind is a Houston-based nonprofit that develops K-12 math learning software. In this talk, I will discuss the means by which we simulate expert teaching in a virtual classroom. To develop our online curriculum, we work with a team of expert math teachers who have offered us access to their knowledge of curriculum and mathematical pedagogy. I will outline our methods for modeling these teachers and discuss what we've learned about their knowledge and practices. Finally, I will describe some of the expertise we have gained that we could not have learned from classroom teachers--pedagogical knowledge that is unique to e-learning.

Teaching Mathematics

Monday, March 11, 2013, 5:15pm-6:30pm

3096 East Hall

Michael Weiss (Michigan State Univ)

More than Problem-Solving: Mathematical Practices Beyond the Common Core

The Common Core Standards, with its articulation of eight Mathematical Practices, has placed a welcome emphasis on the kind of thinking mathematicians engage in when problem-solving. But problem-solving is only one facet of mathematical work. More than anything, what distinguishes authentic mathematics from classroom math is problem-posing -- wondering about and seeking to discover what is (or might be) true. In this talk I will provide a taxonomy of problem-posing "moves", and discuss what makes some problems worth asking, and some results worth knowing. I also present examples of how these mathematical practices and values can be embedded in classroom work and in assessment.