

## Ohio NExT Abstracts

Fall 2013

### **Engaging Mathematics Majors Outside the Classroom**

**Christopher Swanson, Ashland University**

Although many math professors may select their profession based on the short hours, high pay, joy of talking to helicopter parents and love of grading homework, I partially became a professor due to the enjoyment I get in interacting with college students inside and outside the classroom, both in helping them develop their understanding of mathematics and socially. In this presentation, I will provide various ways and resources for engaging mathematics majors outside of the classroom as well as give my personal assessment in how effective these activities have been.

### **Flipping the classroom (without turning your life upside down)**

**Lola Thompson, Oberlin College**

Imagine an English course in which the professor spends a typical class period reading a chapter from one of the great literary works aloud, leaving the students to deconstruct the text on their own time. This sounds absurd, yet it is a model that is often used in college-level mathematics courses. Fed up with the tedium of presenting the textbook content during class, I recently decided to experiment with a flipped classroom approach; that is, I create video "take-home" lectures for the students to view on their own, which frees up time for me to work on problems with the students during class. In this talk, I will discuss the nuts-and-bolts of running a flipped class, addressing questions like "What technology is available for recording 'take-home' lectures?" and "What do day-to-day class preparations look like? How much extra time does it take to prepare for a flipped class?" I will conclude by presenting some feedback from my students and sharing my own thoughts on the advantages and disadvantages of this pedagogical approach.

### **On a Collaboration between Mathematics and Political Science**

**David J. Gerberry, Xavier University**

Each fall, students in the Philosophy, Politics and the Public (PPP) honors program at Xavier are inserted into local political campaigns as part of their "Elections" course. I will discuss some efforts to make their work and resulting campaign strategies more quantitative and data-driven in nature. The talk will focus on the mechanics of this interdisciplinary collaboration and questions that arise in labeling this type of work.

### **Teaching Tips**

**Laurie Dunlap, The University of Akron**

While preparing to teach a course, there are a number of decisions to make when setting it up. For example:

- Should you use quizzes or homework?
- Should you take attendance?
- Should you give make-up tests or use test replacements?

During the course, there are a variety of common issues that will arise. These include:

- How do you grade consistently?
- How do you deter cheating?
- How do you handle rude emails?

In this talk, I will discuss a variety of options along with some of their pros and cons. My goal is to provide you with advice that helps you to set up your courses and then smoothly work through some of the issues that arise.