

INSTRUCTOR: Janice Sklensky

OFFICE: SC 101A

OFFICE PHONE: x3973

E-MAIL: jsklensk@wheatonma.edu

OFFICE HOURS: Posted on my webpage

HOME PAGE: <http://acunix.wheatonma.edu/jsklensk/home.html>

OVERVIEW:

Senior Seminar is the “capstone” to your undergraduate mathematics career – a course that gives a completed feel to the major. Because each of you has constructed your major differently and has different hopes and dreams for what to do with it, my aim is not to cover particular *material*, but instead is to create culminating mathematical *experiences*. You will pursue an idea from a first glimmer of interest to a deep understanding, read technical non-textbook material, communicate mathematically, and (I hope) tackle problems without having any initial clues as to where to begin.

Much of this will be done through an independent semester-long project on a topic you will choose. To begin, you will pick a journal article that interests you and which explores a topic that is related to, but is not covered in, one or more of your math course(s). The paper will serve as a starting point for your explorations; you will then move beyond this paper using additional references.

COURSE STRUCTURE, GOALS AND EXPECTATIONS:

As you can tell, this course is structured differently than most. We begin the course by reading and discussing a paper – “Truck Drivers, a Straw, and Two Glasses of Water” (*College Mathematics Journal*, Volume 37, No. 2, March 2006, by Kevin Iga and Kendra Killpatrick). This gives you experience reading non-textbook material while you are searching for your own topic. The remainder of the semester, you will present your work to the class, and ask questions of the other students about their work. Thus class-time will reinforce your own understanding and allow you to learn about the other students’ projects. Class participation is absolutely essential. The semester will culminate with a final paper on your topic and a half-hour presentation at the end of the semester that will be open to the public.

As part of preparing for the final paper and presentation, toward the end of the semester, you will formally be reviewed by other students and formally review other students’ papers and presentations.

In addition, if and when there is time, I will share with you what I hope will be challenging and fun problems, which you will work on individually or jointly, turning in whatever you find. The actual solution will be less important than just diving in and trying.

EVALUATION

I am not sure how many (if any) challenge problems I’ll be able to fit into class. I have two evaluation schemes worked out – one with problems, one without. If we end up doing some challenge problems but not enough to count for 10% of your grade, then the final evaluation scheme will lie somewhere in between these two proposals, with the changes occurring only to the weight of the class participation and the presentations during class.

With challenge problems

Challenge Problems	10%
Class Participation (Including Peer Reviews)	15%
Presentations during Class	15%
Final Paper	30%
Final Presentation	30%

Without challenge problems

Class Participation (Including Peer Reviews)	20%
Presentations during Class	20%
Final Paper	30%
Final Presentation	30%