Math 213   Summer Term 2009

U 12-1:50 PM Knight Library Proctor 42
MWHF 12-1:50 PM 102 Deady   CRN 41770
Instructor: Ruth Vanderpool   Phone: 6-4703
Office Hours: Deady 1a   10-11AM (M) 2-3 (UH)

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Office Hours: Fenton, 3rd floor   10-12 (U) & 2-3 (W)

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Course Description:

    This course will cover the same material at the same depth as when it is offered during the year. The prerequisite for the course is the successful completion (C- or better) in Math 212. Most topics are well understood from previous math courses, thus the emphasis will fall on the reasoning and proof behind the familiar topics. This course covers most of the material from Chapter 9 through Chapter 12 of Billstein's book and Chapters 4,6, and 7 of Ma's book.

Useful Items:

- Text: *A Problem Solving Approach to Mathematics for Elementary School Teachers, Ninth Edition* by Billstein, Libeskind, & Lott.

- Text: *Knowing and Teaching Elementary Mathematics: Teachers' Understanding of Fundamental Mathematics in China and the United States (Studies in Mathematical Thinking and Learning)* by Liping Ma.

- Software: *Geometer's Sketchpad*

Important Dates:

8/24	Midterm 1	8/19	Last day to drop without a W
8/31	Midterm 2	8/20	Last day to add this class
9/11	Final	9/5	Last day to withdraw

Notes:

- This is an accelorated course that covers the same material as a normal ten week course and thus will make high demands on your time. Many students will need three hours of study for every hour in class. Take note that this is six hours of individual study *every day* outside of class.

- All exams and quizzes are to be done individually unless otherwise specified.

- If you need any special accommodations, please let me know as soon as possible.

- While I have attempted to make this syllabus as complete as possible, adjustments will be made throughout the course. Announcements will be made during class and it is the responsibility of the student to keep updated if class is missed.

- Attendance will not be taken, but I highly encourage everyone to attend. The best way for you to do well is to come and ask questions during class.

Homework Policy:

Homework will be assigned daily at the beginning of class and a period of time will be set aside for homework questions before you are expected to turn it in. I am available to help answer more specific questions during office hours, but after this session no additional class time will be dedicated to the assignment again.

Illegible work will receive no credit so be aware that you may need to rewrite your homework before turning it in. Each homework set is scored out of ten points and your lowest score will be dropped when computing grades.

Homework will be due in my mailbox by 4:30pm the class day following its assignment. If done early you may hand it to me during that class, but I do not accept late homework. If you miss class it is your responsibility to find out what material and homework is expected of you.

Projects:

- Questions from the Classroom (QFC): These are located at the end of each chapter in the textbook and will be collected following completion of the chapter. Thorough answers in complete sentences and in paragraph form are expected. For each question you must not only show understanding of the question and concepts, but must be able to communicate these effectively.

- Liping Ma's book: These papers are to be typed reports on the chapters of the supplemental book. Presentation and grammer in addition to content are considered when assigning a grade. Due dates will be announced and more specifics provided by Scott Fallstrom are detailed below.

- GSP Labs: The projects from Geometers Sketchpad (GSP) will be assigned in class on Tuesday and turned in on Friday at the beginning of class. For some of the projects, you may not finish in class, so having a copy of the GSP software at home (or the ability to use one of the labs on campus) is essential. There will be a new GSP project assigned every week.

Quizzes:

A quiz is given every two days at the instructor's discretion. Generally you will be given 10 minutes for the quizzes at the end of class. No make up quizzes will be given, but I will drop the lowest scoring quiz so that you have some flexibility.

Outside Resources:

- Both the TA's and my office hours are posted above. It is possible that I can meet outside of the posted office hours if you ask me after or before class.

- Peers are often the best resource. I encourage you to form study groups and to work together on homework, worksheets, and studying for exams.

- The Academic Learning Services (als.uoregon.edu) has a "Math Lab" and a number of different tutoring services available.

Grades:

In order to qualify for a passing grade in this course, your exam average must be above 65%. Given that the above is satisfied, the following weights will be used as a guideline when calculate your grade:

			%	Grade
Homework, Worksheets & Quizzes	14%		100-90	A
Projects	20%		89-80	B
Exams	36%		79-70	C
Final	30%		69-60	D
			59-0	F

Writing Assignment for Liping Ma:

Try to use the "Insert-Object-Equation Editor" where appropriate to make the mathematics in the paper look more professional.

1. Chapter 4: Read Chapter 4, when done, respond to each of the following:

   - In no less than one page (double spaced) summarize the chapter in your own words. You may cite examples if you would like to make a point about something.

   - In no less than 2 paragraphs, what did you learn from reading this chapter that could help you in your teaching career?

   - In a paragraph or two, what differences were there in the way the two groups of teachers approached (or explored) the ideas?

   - Create a polygon in GPS and show (on screen) the perimeter and area of the shape. Then, make two copies of the shape. By moving one point *only* on each of the copies, show on one shape that increasing the perimeter can increase area, and on the other that increasing perimeter can decrease area. Copy those shapes (with perimeter and area included) into your paper before you print it out. Describe any patterns or connections between the new shapes formed and the original shape.

2. Chapter 6 & 7: Read Chapter 6 and 7, when done, respond to each of the following:

- In no less than one page (double spaced) summarize the chapter in your own words. You may cite examples if you would like to make a point about something.
- In no less than 1 paragraph, do you agree with the author about when PUFM is attained?
- In no less than a paragraph each, answer the following: Do you agree or disagree with the author about (1) Teaching Preparation, (2) the role of the textbook, and (3) enhancing the interaction between future teachers' study of mathematics and how to teach it?
- Summarize your overall feelings about the entire book for 211-12-13. Where the readings and papers worthwhile? Could you think of ways to improve the papers? What did you like/dislike about the book (overall)?