Mathematics for Elementary School Teachers
Math 320, Spring 2008
MWF 1:30-2:20, Durland 1061

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Course Website: http://www.math.ksu.edu/math205/math205.s08

Textbook: Mathematics for Elementary School Teachers, A Contemporary Approach, 7th Edition by Gary L. Musser, William F. Burger and Blake E. Peterson (K-State Union may have Paperback version which might be cheaper.)

Office Hour: MWF 11:30-12:20. (But always available by appointments.)

The Course Objective: The goal is for you to become proficient in elementary school mathematics. In particular, you should finish the semester with a good understanding of the concepts covered as well as why certain procedures work.

Since it is important for further teachers to be able to not only understand the materials, but also explain it, we will emphasize reasoning and mathematical discovery as opposed to merely understanding the materials, or even worse, just to know the conclusions and memorizing them. Also trying different ways to approach a problem can better equip future teachers to explain math.

Instead of being pedagogical, this course serves to learn mathematics, and it will prepare you for taking the teaching methods course in the education department where you will focus on how to teach it.

Lecture and Homework: Be sure to bring textbook when attending lectures. Homework is due on Tuesday at 5pm (see the schedule sheet).

Notecards and Quizzes: Attendance is required. However, as alternative ways to take attendance, we will have pop-up quizzes and notecards. Quiz problems are from or similar to homework. Moreover, each Monday in class you need to turn in a 4 × 6 notecard—not a 3 × 5 card or any others.

To do this you need to preview the sections to be covered in the week, and write down

- the definition, description, or statement of what you think to be the key concepts and methods in each section to be covered in the week.
- what appears to be difficult and confusing.
- any feedbacks you may have for your instructor.

However, only the first item is required for each notecard.
**Gateway Quiz:** They are graded **pass/fail** online by computer. A score of 100% is passing, but you can try as many times as you want before you submit your work. A password will be given in class so you can sign in. Seven quizzes in total, with 10 points each.

**Grading:** Total 800 points. Final grades A-F by curve.

- Homework: 14 in total, with the lowest two dropped and the rest scaled to 130 points.
- Gateway quizzes: 70 points
- Three mid-term exams, with 100 points each.
- Final exam (cumulative): 200 points.
- Another 100 points come from your classroom attendance, note cards, and quizzes. A notecard weighs the same as a quiz, with grading 0-1-2. Three lowest grades will be dropped.

**Tips for Surviving and Excelling:**

- Take the homework very serious! Do it the same day of the lecture.
  - The homework itself is worth more than a mid-term exam.
  - All in-class quiz problems are from or similar to homework problems.
  - For each exam (including the final), at least 60% of the problems are either directly from homework or simple numerical modification of homework problems.

Exams are Closed-Book.

- A misleading idea about math is that “I listen to the lectures and am able to understand the ideas, so I am fine.” In fact, for a math course, it is important for you to work out the details of a problem by yourself. It also means that when doing your homework, a mere answer or a sketch of the solution is not enough.

- Please always write legibly and present your solutions in an organized way.
  - Please put your solutions to the problems in the exact order in which they were assigned. The homework graders have too little time to search through your homework, or to try to decipher what you’ve written.
  - Your work will be graded not only on the correctness, but also on your exposition. *If your work is illegible or confusing to read, it may be counted as incorrect.*
  - Homework must be stapled and not folded. Please do not try to attach pages together by folding at the corner and do not use paper torn from spiral notebooks. If you fail to follow any of these rules, your homework will be rejected and you will receive no credit.
  - Finally, all homework, quizzes, and notecards must be clearly numbered and dated besides your name at the very beginning. **Example:** Tom Smith, Homework 7, Due: Oct 9th.

- Group study is encouraged.
• You can get help from your instructor’s office hours and math department’s help sessions, whose schedule will be posted at http://www.math.ksu.edu/main/course info/help/helpsched. Tutor lists will be available from the Mathematics Department or other organizations.

**Late work and make-up:** No late work will be accepted, and in general no make-up exams.

If you have a good excuse, such as a medical condition, and you are able to present a written document to prove your case, then you will be allowed to drop that quiz/notecard/exam/homework, and the rest of the grades from the same category will be scaled. You must take the final exam in order to get a grade A-D. If at all possible inform your instructor of your absence ahead of time. In case of emergency, try to inform your instructor or the Department of Mathematics by phone.

**Academic dishonesty:** Strictly prohibited. See University Handbook for more information.

**Other information:** If you have any condition, please inform your instructor in the first two weeks of the semester, and accommodation will be provided.