Math 212: Foundations of Elementary Mathematics II
Winter 2010

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Office Hours
I will be available after class Monday and Wednesday, or you may make an appointment. My office is in Neuberger Hall, room 326 (go in the door to the main math office, and my office is around the corner to the left).

Texts
- Bennet and Nelson, Mathematics for Elementary Teachers: An Activity Approach, 8th ed

It is expected that you have purchased the newest edition of the text; however, you may use an older edition provided you have access to the newest versions of the problem sets.

Course Description
This course is designed to help you understand the foundations of elementary mathematics. You will be encouraged to become actively involved in visualizing mathematical concepts, solving problems, and reflecting on your thinking and the thinking of others. Explorations are meant to stretch and develop your thinking and understanding of the concepts while giving you the opportunity to develop your skills as a problem solver.

Topics
We will explore fraction and decimal models, operations and number properties, data analysis, probability and statistics. These topics correspond to chapters 5-8 in our text.

Goals
- Think visually with the aid of concrete models and diagrams
- Understand and connect ideas and concepts
- Problem solve and reason mathematically
- Invent procedures and make generalizations
- Communicate mathematically
- Respect and understand the mathematical thinking of others
- Enjoy learning and doing math
**Attendance/Participation**
Daily attendance is required for your success in this course. If you miss class, it is your responsibility to ask a classmate for notes on the material you have missed. That said, if you are sick, please stay home! Contact me by email as soon as possible, and we will attempt to work something out. Quizzes and tests can be made up, however you must contact me before your return (and ideally on the day missed).

**Reading the Text**
You will be expected to carefully and completely read each assigned section in your textbook. It is a good idea to briefly read the assigned section before coming to class AND before you start your homework. If you carefully write out the examples in the text and work out the steps, you will find that you have a deeper understanding of the material. Writing out examples is also a successful technique for pinpointing exactly where you become confused on a problem that you don’t understand. I encourage you to ask questions about the examples presented in the book both in class and during office hours.

**Homework**
There will be a variety of homework assignments given in this course. Assignments will include, but are not limited to, the following:

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<th>Assignment Source</th>
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<td>Textbook Questions</td>
<td>Weekly Homework Quizzes</td>
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<tr>
<td>Activity Book/In-Class Activity Questions</td>
<td>Weekly Homework Quizzes</td>
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<td>Problem Solving Problems</td>
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<td>Reading Reflections</td>
<td>Direct Grading</td>
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**Textbook Questions**
Textbook questions fall into two categories: **Recommended** and **Required**.

- **Recommended homework questions** will usually be odd-numbered with short answers available in the back of the book and some activity book questions. You are expected to work these problems in an informal fashion and check that you are obtaining the correct answers.

- **Required homework questions** will generally be even-numbered, Writing-Discussion, and Making Connections questions, and activity book Connections questions. You are expected to carefully write up solutions to these problems. Some questions will be turned in for direct grading. These will be listed as (TI) on the course schedule.
Required Homework Quiz
Short homework quizzes will be given periodically during the first ten minutes of class. Each quiz will list 2-5 questions from your recently assigned required homework. Using your course notebook, you will be asked to write down what you have written in your homework for those questions. Work must be shown for credit. If you don’t have something written out in your notebook, you will not have something to write on the quiz. You may not use your textbook, activity book, calculator, cell phone, or manipulatives during your homework quizzes.

Problem Solving Problems
As we begin our paths as teachers we will begin to focus on problem solving skills. Four times this term, you will be assigned special problems to help you focus on your problem solving skills. Detailed instructions will be provided.

Reading Reflections
You will be given readings selected from professional journals, books and other sources related to elementary mathematics education. Reflections will be typed (double spaced, 12 font, with reasonable margins), and include a one half page summary of the reading and a one-two page reflection regarding how your experiences relate to the reading, and any connections you see between the reading material and other information you have encountered, including the ideas discussed in this class. All written responses should be complete and organized effectively, highlighting and elaborating on main ideas and providing a structure that allows the reader to move easily through the text.

Exams and Final Exam
There will be three “midterm” exams and final exam in this course. The midterm exams will be cumulative, but will emphasize the recently covered material. The cumulative final exam will be offered on Monday, March 15, 5:30-7:20. Makeup exams will be taken at the PSU testing center, and will only be available with prior notification and my agreement.

Late Policy
20% deduction per calendar day. All work is due by 5:00 pm. Work turned in after 5:00 pm will be considered received the next calendar day. No notification is required to turn your work in late. Turning in one or two late items should not have a large impact on your overall course grade. Excessively turning in late work will have a strong impact on your overall course grade.
Course Grading

<table>
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<tr>
<th>Class Item</th>
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<tr>
<td>Homework Quizzes</td>
<td>15%</td>
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<tr>
<td>Graded HW, Problem Solving</td>
<td>35%</td>
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<tr>
<td>Problems, Reading Reflections</td>
<td>35%</td>
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<tr>
<td>Three 10% Midterm Exams</td>
<td>30%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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You must receive a passing grade on the final exam to receive a passing grade in the course. Within the mathematics department, a grade of C- or higher is considered passing.

Appropriate Classroom Behavior
You are ultimately responsible for your own attendance and performance. Disruptive classroom behavior of any kind is inappropriate. Proscribed Conduct for all students is described in the University Catalog. In particular, for this course any student found cheating on an exam or copying from another students’ exam paper will receive a zero on that exam.

Cell Phone Policy
PUT THEM AWAY!! Phones must be silenced during class. Texting or talking during class will not be tolerated.

Disability Services:
If you have a learning or physical disability and are in need of academic accommodations, please contact PSU’s Disability Services at 503-725-4150. They will determine any adjustments that need to be made for your individual needs.