

Mathematics for Early Childhood Teachers II
Number and Operations
Math 3241 – Fall 2009 – E362 Allgood Hall
Syllabus

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Office Hours (Tentative): 3-3:45 Monday and Wednesday, 1-1:45 Tuesday and Thursday, and other times by appointment

Course Description: A study of the real number system with emphasis on whole numbers, common fractions, decimals, and percents. Includes multiple representations of numbers, relationships between numbers, properties, operations, estimation, elementary number theory concepts, and problem solving. **Prerequisite:** Admission to Teacher Education

Supplies:

- Textbook: Bassarear, T. (2008). Mathematics for Elementary School Teachers (4th ed.). Boston, MA: Houghton Mifflin.
- Colored pencils and highlighters
- 3-ring binder for course notebook
- 3-hole punch folder for journal
- Scientific or graphing calculator (to be used only when instructor permits) – It is easy to become too dependent on a calculator; thus, you may not use a calculator in class unless I believe the situation warrants its use.

Technology and Communication:

- You are expected to check your campus email regularly - at least daily is best.
- Some materials and assignments will be posted on either on “My Courses” on Pipeline. Accessing Pipeline is essential.
- Your grades and some materials also will be posted on GeorgiaVIEW (ASU’s WebCT Vista site) during the semester. This site may also be used later in the semester for other types of assignments. You can access GeorgiaVIEW via the alphabetical index on the ASU homepage, by going to “My Courses” on Pipeline. If you need help with WebCT Vista, visit the online support center at <http://help8.view.usg.edu>. Accessing VISTA is essential.
- Some of the assignments will be in PDF form so you will need Adobe Reader software—this can be downloaded free from <http://www.adobe.com/products/acrobat/readstep2.html>.
- If you need help with technology, check with the Information Technology Student Help Desk in person (University Hall 130) or by phone (706-737-1676) or at <http://www.aug.edu/its/Welcome.html>.

Assignments to be turned in are due at the beginning of the class period. Put the assignments on my desk when you arrive for class. Even if you are absent, your assignment is still due at the beginning of class. A late assignment will be assessed a 10% penalty for each day (not class period) it is late.

If You Have to Miss a Class...

MATH 3241 class sessions are interactive, providing many opportunities for you to express your own ideas and to listen to the ideas of your fellow classmates. Much of what you learn in the course takes place by participating, sharing, and interacting with others through small-group and whole-group discussions. This kind of learning cannot take place if you are absent so regular attendance and punctuality are required.

Frequently, ideas that we introduce in one session are expanded upon and developed more fully in later sessions. Thus, every class session is important. However, if you find that you are unable to attend a particular class session or might miss a part of a session (by coming late or leaving early), please contact me as soon as possible. **Moreover, you are responsible for anything that occurs during the time you are out of class, including any announcements.** Make arrangements to turn in assignments if you are going to be absent. **Even if you are absent you are expected to turn the work in when it is due.** You should ask a classmate to obtain any handouts given out during the class you miss, rather than waiting until you return to class or relying on me to supply you with copies. Often material and information will be posted on Pipeline and/or VISTA so checking those sites is important.

Prior to returning after a missed class you are responsible for meeting with a classmate or classmates to discuss the class session you missed. After this meeting you must write a paper which includes the names of your classmates with whom you met, a description of the activities of the class you missed and how you engaged in these activities, an explanation of your understanding of the mathematical ideas developed through these activities, and any questions you have about these mathematical ideas. This paper as well as any accompanying work from the missed class is due on the day that you return to class. As with other late assignments, you will be assessed a 10% penalty (in your participation) grade for each day (not class period) it is late. In keeping with the policy stated in the ASU catalog, **any student who is absent more than 10% of the class time (3 class periods) may be dropped with a WF.**

The percentages to determine your course grade:

Tests	30%
Other written or presented assignments	20%
Journal	5%
Participation	10%
Final Project Presentation	5%
Comprehensive Final exam	30%

Tests and Final Exam

We will have 3 tests during the semester. No make-up tests will be given. If you know you will have to miss a test, please see me to make other arrangements. The final exam is comprehensive.

Other Written or Presented Assignments

The written or presented assignments may include in-class laboratories and presentations, out of class projects, reflective writings, reactions to readings, analyses of student work, analyses of mathematics lessons, solutions of problems, etc.

Course Notebook

You should organize all materials (handouts, class notes, homework, readings, writings and tests) in a 3-ring binder. This notebook will be a record of your work in the course and will also serve as a tool for reflection in your journal. It will also be a valuable resource to you when you begin teaching.

Homework

You will be assigned reading, writing, questions, and problems to be completed for homework. All in-class activities will be based on the assumption that the required homework assignments and readings have been completed. This does not mean that all of your answers have to be perfectly correct. It does mean that you should have thought hard about each problem, made several attempts at solving it, and developed questions and conclusions about your solution

strategies. Not every homework assignment will be collected and graded. Most homework assignments are listed on the assignment page; however, *you are responsible for any assignment* announced in class and not listed on that page.

Class Participation and In-Class Activities

Much of the success of this course depends on your level of interaction and participation throughout the semester. As you will soon discover, we will spend much of our class time sharing ideas, solution strategies, insights, and questions. During class sessions, I will assess both your preparation for class (e.g. whether you completed readings and assignments) and the quality of your participation in course activities by observing and interacting with you. I will be paying particular attention to your willingness to listen, to discuss, and to contribute to whole-class and group activities. Clearly, successful participation in this sort of class depends upon both regular attendance and effective preparation.

Participation will take a variety of forms: Sometimes, you will be asked to present a problem to the class. Other times, you may be asked to share your work in a small group. Other times, you and a small group of your classmates may work on a new problem related to your homework. While I promise to support you in finding answers to your questions, please be warned that my support will NOT consist of simply explaining activity or homework solutions to you. My job is to help you develop meaningful understandings for yourself, with the help of your classmates. Because this is a student-centered class, it is of utmost importance that you attempt all of the homework problems before class so that you can participate in the discussion. Satisfactory participation in this part of class means that you are willing to share your thought processes, questions, and solutions with the class (even when you don't think you have "the right answer") and that you also support your classmates as they participate.

Your participation grade is determined using the Rubric for Participation.

Journal of Open-Ended Reflections

A component of effective teaching is reflection on practice. The National Council of Teachers of Mathematics states in its Principles and Standards for School Mathematics that teachers must have “opportunities to reflect on and refine instructional practice—during class and outside class, alone and with others” (p. 19). Your assignment of a journal of open-ended reflections will provide you with the opportunity to become a more reflective thinker. Through these reflections, I will also have a better sense of what you are learning in this class and how you are developing as a mathematics teacher; however, your journal of open-ended reflections is primarily for you. You should write in your journal at least once each week. Please highlight comments or questions that you want me to be sure to read.

Use the following as prompts; however, do not limit yourself to these prompts:

- What do the readings you have done mean to you?
- What successes or difficulties have you had with the problems you have worked?
- How have the class activities impacted your understanding of mathematics?
- What math concepts are clearer to you and why are they clearer? What concepts are you still confused about and why?
- What are you learning about yourself and how you learn mathematics?
- What are you learning about how others learn mathematics?
- What questions or comments do you have about teaching mathematics?

Do not use your journal simply as a way to record the day's events. Instead you should reflect on your activities and experiences and describe how they have impacted your understanding of mathematics concepts, mathematics teaching, and mathematics learning. Although each person's journal is unique, good journals share the following characteristics:

- personal observations
- connections between personal experience and the mathematical ideas investigated

- questions, speculations, and predictions
- evidence of developing self-awareness

A journal is like a good friend who is never too busy to listen.

Each entry should be dated. Typing is preferred, although you may write in long hand, but it must be neat and legible. Do not write on the back. Keep your journal in a folder with a 3-hole punch. No length is imposed as the quality is more important than the quantity. It should be evident that you have really thought about what you are writing. Your journal will be collected several times during the semester with only one class period of notice. I will read your entries, make comments, and use the Journal Rubric to communicate to you my assessment of your journal writing. This feedback should be used to help you improve. At the end of the semester, you will receive a grade representing your overall effort and progress at becoming a more reflective learner/teacher. A lack of professionalism will result in a lower grade.

Professional Organizations

You are encouraged to join the following professional organizations:

- Georgia Council of Teachers of Mathematics (GCTM). This membership is free for students who have never taught. If you are not a member, go to <http://www.gctm.org>, fill out the application, and turn in a copy to me to confirm you have joined.
- National Council of Teachers of Mathematics (NCTM). The student membership is \$38 and includes your choice of an electronic journal—Teaching Children Mathematics is recommended for K-5 teachers. The application can be found at <http://www.nctm.org>

Classroom Policies

- Appropriate behavior is required at all times.
- It is a policy of Allgood Hall that food and drink are not allowed in the classrooms so cups, bottles, etc. should be capped and stored in your bag. Furthermore, food and drink interferes with group activities and the use of manipulatives.
- It is distracting to me and disruptive to the class activities if you leave the classroom during the class period. Thus, I ask you to refrain from "taking a break" except for an emergency.
- Visitors, including children, are not permitted without my prior permission.
- You are expected to check your campus (Pipeline) e-mail regularly; at least daily is best.

Academic honesty: Cheating will not be tolerated. This pertains not only to in-class work but to outside assignments as well. Any assignment that you submit as your own should be a report of YOUR thinking. Any student who is caught cheating will face serious consequences. You should read ASU's statement on academic honesty in the catalog.

Dates to Remember

Mon, Sept 21 st	TEST 1
<i>October 12th</i>	<i>Midterm date – NO Midterm Exam</i>
Mon, Oct 19 th	TEST 2
Mon, Nov 23 rd	TEST 3
November 16-20	Registration for Spring 2010
November 25-27	Thanksgiving Holiday
Wednesday, December 2 nd	Last day of our classes
<i>Thursday, December 3rd</i>	<i>All classes end for Fall 2009</i>
Math3241C: (Mon/Wed 4:00) Mon Dec 7 th , 6-8 pm	FINAL EXAM
Math3241B: (Mon/Wed 5:30) Wed Dec 9 th , 6-8 pm	