

**FOUNDATIONS OF ELEMENTARY SCHOOL MATHEMATICS**  
**MATH 201, Spring 2012**

*Instructor:*

*Office Hours:*

*Office:*

*Department of Mathematical Sciences  
Northern Illinois University  
DeKalb, IL 60115-2888  
E-Mail:  
Telephone:*

*Course Web Page:*

*<http://www.math.niu.edu/courses/math201>*

**Course Objectives:**

To develop an appreciation of and an interest in mathematics and applications of mathematics;  
To develop an understanding of the concepts, processes, algorithms, and applications found in elementary school mathematics;  
To develop quantitative and spatial reasoning through mathematical and real-world contexts;  
To become confident in abilities to use mathematical knowledge;  
To reflect on mathematical experiences and present mathematical ideas using representations and symbols;  
To further develop positive dispositions toward mathematics.

**Note:** This is a mathematics course for teachers. It is not intended to be a course in methods for teaching mathematics.

**Note:** This course is open for credit *only* to majors in elementary education, special education, and early childhood education. It does *not* count for credit toward a major or minor in mathematical sciences.

PRQ: One year of high school algebra and one year of high school geometry.

**Required Course Text and Materials:**

MATH 201 Course Materials: Sowder, J., Sowder, L., & Nickerson, S. (2010). *Reconceptualizing Mathematics for Elementary and Middle School Teachers*. New York: W. H. Freeman and Company.

MATH 201 Course Schedule: The course schedule is a listing of the lessons and assignments for each day.

**Note:** *The Final Exam is Thursday, May 10, 2012 from 8:00-9:50 AM. Mark it on your calendar today.*

**Course Requirements:**

*Attendance, Participation, and Mathematical Disposition.* Attendance is an important part of your grade. Your active participation in each class session is vital to your learning as well as to the learning of other students in the class. Your instructor expects you to attend all class meetings and come prepared. You are expected to arrive on time, stay to the end of class, and be in the classroom for the entire session. You are to complete the assignments, study lessons outside of class alone and with others, and bring up questions or insights regarding your assignments. Your instructor expects you to be engaged as an active, collaborative participant during each class session, whether whole-class discussion, collaborative-group activity, or individual reflection is involved. You are expected to adhere to the classroom and testing procedures described by your instructor. If you are unable to attend a particular class session, contact your instructor before class. Excused absences are only those delineated in the NIU Student Handbook. NO makeup quizzes will be given. Makeup exams may be scheduled only for excused absences. It is your responsibility to contact the instructor *before* the scheduled date of the exam to arrange permission for a make-up exam. A maximum of one makeup exam can be scheduled for each student. Make up exams will be given on the last day of the semester *only* if you have made prior arrangements with your instructor to take a makeup exam.

Learning mathematics extends beyond learning concepts, procedures, and their applications. It also includes developing a disposition toward mathematics and seeing mathematics as a powerful way for looking at situations.

Your instructor will assess your mathematical disposition following the recommendations of Standard 10 in the National Council of Teachers of Mathematics *Curriculum and Evaluation Standards for School Mathematics* (1989, p. 233):

The assessment of students' mathematical disposition should seek information about their—

- confidence in using mathematics to solve problems, to communicate ideas, and to reason;
- flexibility in exploring mathematical ideas and trying alternative methods in solving problems;
- willingness to persevere in mathematical tasks;
- interest, curiosity, and inventiveness in doing mathematics;
- inclination to monitor and reflect on their own thinking and performance;
- valuing the application of mathematics to situations arising in other disciplines and everyday experiences;
- appreciation of the role of mathematics in our culture and its value as a tool and as a language.

*Computational Assessment.* You will take a basic skills test during the third week of the course. The test assesses your knowledge of operations with whole numbers, fractions, decimals, and percent. **A minimum score of 70% is required for a passing grade in this course.** A sample quiz (with answers) is on the course web page. An excellent resource for review is in your textbook Appendix A: A Review of Some Rules.

*Quizzes.* There are 11 weekly quizzes given during the semester. Your best 10 quiz scores will count toward your grade. A quiz is not scheduled for weeks in which an exam is scheduled. See the course schedule for the dates of the quizzes.

*Exams.* There are three 50-minute exams during the semester. They are scheduled in Weeks 4, 8, and 12.

*Final Exam.* The final exam is comprehensive. You must take the final exam with your fellow classmates at the scheduled time. All sections of this course will take the final exam at the same time. Only the Assistant Chair or Chair of the Department of Mathematical Sciences can waive the date and time of the Departmental Final Exam. The Departmental Final Exam for this course is Thursday, May 10, 2012 from 8:00-9:50 AM.

<b>Course Evaluation:</b>	Points
Computational Assessment*	0
Attendance, Participation, and Mathematical Disposition	50
Quizzes (10 points each)	100
Exams (100 points each)	300
Final Exam	<u>150</u>
Total Points	600

**\*A minimum score of 70% is required for a passing grade in this course.**

#### **Grading Scale:**

A: 540-600 points      B: 480-539 points      C: 420-479 points      D: 360-419 points      F: 0-359 points

**Note: The last day to withdraw from this course without penalty is Friday, March 9, 2012.**

**Note: Changes and adjustments may be made to this syllabus when judged appropriate by the instructor. Such changes, should they occur, will be announced in class.**

#### **General Classroom Etiquette:**

- Turn off, or put on vibrate, pagers, phones, hands-free phones, PDA's, iPods, headsets, and other electronic devices before entering the classroom.
- Pagers, phones, hands-free phones, PDA's, iPods, headsets and other electronic devices cannot be used for any in-class work including quizzes, exams, and reflections.
- Plan to arrive on time, stay to the end of class, and be in the classroom for the entire session.
- Only students who are registered for this course should attend class sessions.
- Come prepared for class.
- Give your attention to the presenters during class, whoever they may be.

