Course Syllabus, Fall 2010

Course: Mathematics 3520, Structure of Mathematical Systems III, 3 credit hours
Prerequisite: Math 2510
Meeting Time: TR 11:00 a.m. – 12:15 p.m.
Room: Clark Hall 308
Instructor: Dr. Richard Friedlander
Office: CCB 308
Phone: (314) 516-6350
E-mail: friedlanderr@umsl.edu
Office Hours: TR 12:30 p.m. – 2:00 p.m. or by appointment

Textbook: There will be no text for this course. Handouts and notes will be provided as needed. Homework assignments will be copied and handed out in class. Classroom attendance is vital, as is taking complete and accurate notes on the material covered in each class session.

Course Objectives: The aim of this course is to deepen your understanding of the mathematical content taught at the elementary school level, as well as introduce you to mathematical topics that you will need to effectively teach mathematics at the middle school level. Specifically, as a prospective middle school teacher, you will complete this course with a better ability to recognize and explore patterns and relationships; an increased sense of both number and geometry, including a deeper understanding of the system of real numbers; a firmer grasp of how probability and statistics enable us to better understand our world; a knowledge of various discrete mathematical topics; and an enhanced notion of the role of proof in mathematics, including the ability to carry out both inductive and deductive arguments.

Grading: Your grade will be based on hour exams, problems sets, and a final exam. There will be two hour exams, each worth 100 points. Several problem sets will be assigned throughout the semester. The scores on the problem sets will be averaged, and your final problem set score will be based on 150 points. There will also be opportunities for extra credit points to increase your final problem set score. The final exam will be worth 150 points.

Grading Formula:  
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<td>Exam 2</td>
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<td>Problem Sets</td>
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<td>Final Exam</td>
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500 pts

I will use plus/minus grading, and I will grade on a curve that cannot hurt your final grade in the course. That is, if you receive 90% or more of the total points, you will receive a grade of no lower than A; if you receive 80% or more of the total points, you will receive a grade of no lower than B; if you receive 70% or more of the total points, you will receive a grade of no lower than C; and if you receive 60% or more of the total points, you will receive a grade of no lower than D.
Instructional Methods: While much of the material will be presented in a standard lecture format, you will be expected in class to make and investigate mathematical conjectures, communicate your mathematical thinking coherently and clearly, and build new mathematical knowledge through problem solving. Depending on time, there may be some opportunities for cooperative work in groups. Additionally, you are encouraged to work with other classmates on the problem sets (but be sure to write up complete, clear, and detailed solutions on your own).

Important Dates

Monday, September 20                  Last day to drop the course without receiving a grade
Monday, November 15                   Last day to drop the course with an excused grade
Thursday, December 9                  Last day of Math 3520
Tuesday, December 14 (10:00 a.m.– Noon) Final Exam