

# MAT 1011: Excursions in Mathematics

Service Learning Section 102

**Faculty:** Dr. Sandra Fillebrown, [sfillebr@sju.edu](mailto:sfillebr@sju.edu)

**Subject/Discipline:** [Mathematics](#)

**School:** [St. Joseph's University](#)

**Project Area:**

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Office Hours: MTWR 2:30-3:30 and by appointment

(I am also the Director of the Honors Program and can frequently be reached in Claver House at x1798. My office hours there are MW 9:00-12:00.)

**Textbook & Syllabus:** *Mathematical Ideas*, 8th edition, Miller, Charles D., Vern E. Heeren and John Hornsby, Addison-Wesley. This course is the first half of a two-semester sequence. The book will be used both semesters. During the fall semester, we will cover material in Chapters 1-6 and 9. The topics are estimation, number systems, bases and modular arithmetic, number theory, logic and set theory and geometry and topology.

**Goals of the Course:** My goal for this course is to help you learn some new mathematics, to increase your application of mathematics, to make you more aware of the mathematics being used all around you and to help you improve your ability to talk and write about mathematics. The work we do and the assignments you'll be given will reflect these goals. Another more general goal of mine is to help foster a positive attitude towards mathematics - yours, the students you will be teaching as part of the service component, and the teachers with whom you'll be working.

**Service Component:** This section of the course is a Service-Learning course and as such you are required to do approximately three hours per week of service. The service for this course is to work in nearby elementary schools teaching math. The details of the implementation may vary from student to student but you will most likely be asked to do a combination of teaching lessons to classes, enrichment or remedial work with small groups of students and one-on-one tutoring. There are many people in the Service Learning community who will help with the logistics of this a I'll help with the math content of your lessons. My goals is for you to be able to design you own lessons and projects for your

elementary age students that will reinforce the math concepts they are learning in a fun and unique way. I'm willing to give as much or as little help as you need.

**Grading, Exams, etc:** Your grade for the course will be based on two in-class exams (15% each), a comprehensive final exam (20%), homework assignments given throughout the semester (total of 30%) and your service journal (20%).

**Homework:** Assignments will be given during many class periods. These will be collected, usually during the next class period, and graded. In general, class time will not be spent going over homework. You are expected to come see me during office hours or make an appointment to see me another time if you are having difficulty. Some assignments will be worth more than others. You will be notified of this when the assignment is given. If you miss a class for some reason, contact me to find out if there was an assignment given. The best way to reach me is via email.

**Service Journal:** You are required to keep a journal for this course. Your journal should be some type of bound notebook - a spiral notebook or composition book would be fine. Your journal will serve several purposes. First, it will be used to keep a record of each of your service visits. For each visit you will write a brief summary of what happened during the visit. You should describe any math lessons you do and how the students reacted to it. These descriptions should be fairly specific. In addition, other comments or observations about your experience are also appropriate. These entries are the primary way that I keep in touch with what is going on at the service sites. If for some reason, you do not go to your service during a week (vacation, illness, activity at the school, etc.) include an entry in your journal explaining the reasons. Thus, you should have some entry for each week of the semester.

A second purpose of the journal is to encourage you to reflect on your service experience. During the course of the semester, I will ask you to write a few short essays on various topics related to the service and to read and respond to a few articles.

I will collect the journals once a week. If your service is on Monday or Tuesday you should turn in your journal on Thursday and if your service is on Wednesday, Thursday, or Friday you should turn in your journal on Monday. I will return the journals the next class period.

Your grade for the journal will be determined by several factors:

- completeness - is there an entry for each week and for each essay and reading assigned
- thoroughness - are the activities at the service site explained in sufficient detail

- thoughtfulness - did you put some time and thought into your essays and other comment