

MANHATTAN COLLEGE
Syllabus

<u>Course Title</u>	Mathematics for the Elementary School Teachers II
<u>Course Number</u>	MATH 222
<u>Section Number(s)</u>	01
<u>Semester</u>	Spring
<u>Year</u>	2013

Course Description

Courses for prospective teachers in elementary school who are not majoring in mathematics. The content and method will follow the current standards of the National Council of Teachers of Mathematics for the elementary level. Topics include tools for problem solving, geometry, measurement, statistics, and probability.

Class Meeting Times

Section 01: | Lecture | 9:05 AM – 10:00 AM | MTR | LEO 242

<u>Instructor's Name</u>	Dr. Tyler Markkanen
<u>Office Location</u>	RLC 200A
<u>Office Hours</u>	TBA (See HW 0.)
<u>Contact Information</u>	tyler.markkanen@manhattan.edu (718) 862-7831

Required Textbook for the Course

Beckmann, S. *Mathematics for Elementary Teachers with Activity Manual, Third Edition*.

ISBN: 9780321646941

ISBN: 9780321646965 (Activity Manual)

Subject Material Covered in the Course

We will cover some or all of the sections in each of the following chapters:

Chapter 10: Geometry

Chapter 11: Measurement

Chapter 12: Area of Shapes

Chapter 13: Solid Shapes and Their Volume and Surface Area

Chapter 14: Geometry of Motion and Change

Chapter 15: Statistics

Chapter 16: Probability

Additional Topic: Basic Set Theory (See Moodle for Reading)

Outcome Expectations

Students completing MATH 222 will be able to:

- Demonstrate conceptual understanding of important mathematics in the content areas of problem solving, geometry, measurement, statistics, and probability.
- Produce comprehensive lesson plans that focus on standards-based objectives,

- engage diverse learners, and assess student learning of important concepts.
- Develop confidence in one's own abilities for doing mathematics.
- Use multiple representations (e.g., concrete, pictorial, verbal, and symbolic representations) for teaching mathematical concepts.
- Solve problems using multiple approaches and strategies, including technology.
- Develop communication skills in mathematics with the goal of using mathematical discourse to raise levels of mathematical thinking among students.
- Recognize the importance of reflective teaching and continued professional development, including communication with colleagues, workshop participation, and membership in the National Council of Teachers of Mathematics (NCTM).

Homework Assignments

- You will hand in one mathematical or math teaching-related exercise for each section of the textbook that we cover. The homework due dates will be announced in class. They will usually be due on Thursdays (as a combined assignment). Your score will be based on the **correctness** of one or two randomly chosen problems from the set and on the **completeness** of the assignment as a whole. ALL WORK and steps should be clearly shown, and no credit will be given for just the answers. I will put all assignments and due dates on the board as the semester progresses. Remember, office hours are a good place to get homework help.
- **HW 0:** Logon to our course website on **Moodle** at <https://lms.manhattan.edu>. Click on the **My Schedule** link. Fill out and submit the schedule form that comes up.
HW 0 IS DUE BY MONDAY 1/28 AT 11:55 PM.

Dates and Times of Exams

- **EXAMS:** There will be **two in-class exams** and a **final exam**. The dates of the exams are shown below.

Exam 1	Thurs Feb 28
Exam 2	Thurs April 18
Final Exam	TBA (Finals Week: R-S 5/9-5/11 & M-W 5/13-5/15)

Grading Method, Extra Credit Assignments, and Make-Up Policy

- **GRADE:**

	Percentage of Final Grade
Class Participation	20%
Homework	20%
Exams (2)	20% (each)
Final Exam	20%

- **CLASS PARTICIPATION:** You are required to involve yourself in class discussions and activities. The grade you receive for class participation (CP) will depend on three criteria: (1) your expressed knowledge and understanding of assigned readings, (2) the amount you involve yourself in the classroom, and (3) the quality of your presentations for assigned projects.
- **EXTRA CREDIT:** There will be occasional extra credit opportunities. Stay tuned for the details of each extra credit assignment as the semester progresses.

- **MAKE-UPS:** Make-up exams are generally not allowed unless you tell me **in advance** that you are going to be absent on an exam day for an appropriate reason. After solutions to a HW have been posted, make-ups for that HW will not be allowed.

Attendance Policy

You are expected to attend each class. Please come to class prepared and ready to learn. Ask questions and make helpful comments. Be ready to participate in class discussions and activities. If you miss class, you are responsible to get the notes and assignment(s) from someone in the class, as well as any handouts. **You must notify me IN ADVANCE if you will be absent on an exam day.**

Expected Academic/Professional Conduct

- All written work must conform to standard English usage. Failure to meet such standards will affect your grade.
- When placed on your assignments, your name verifies that the work is your own.
- All Manhattan College students are expected to maintain the highest standards of academic and personal integrity. Any violations of academic integrity like exam cheating, facilitation of dishonesty, plagiarism, i.e. copying from any source (classmates, published sources, internet) for an assignment without proper quotation and citation, will be dealt with in accordance with the student handbook of Manhattan College and will result in disciplinary penalties.

Schedule – Reading Due Dates for Textbook Sections (Unless Otherwise Stated in Class)

T	1/22	1 st Day – No Sections to Read	R	3/21	<i>SPRING BREAK—NO CLASSES</i>
R	1/24		M	3/25	12.9, 13.1
M	1/28	Basic Set Theory*	T	3/26	13.2, 13.3
T	1/29	Basic Set Theory*	R	3/28	
R	1/31	(Thurs Are Reading Catch-Up)	M	4/1	<i>EASTER—NO CLASSES</i>
M	2/4	10.1, 10.2	T**	4/2	13.4, 14.1
T	2/5	10.3, 10.4	R	4/4	
R	2/7		M	4/8	14.2, 14.3
M	2/11	10.5, 10.6	T	4/9	14.4, 14.5
T	2/12	11.1, 11.2	R	4/11	
R	2/14		M	4/15	REVIEW
M	2/18	11.3	T	4/16	REVIEW
T	2/19	11.4	R	4/18	<u>EXAM 2</u>
R	2/21		M	4/22	15.1, 15.2
M	2/25	REVIEW	T	4/23	15.3, 15.4
T	2/26	REVIEW	R	4/25	
R	2/28	<u>EXAM 1</u>	M	4/29	16.1
M	3/4	12.1, 12.2	T	4/30	16.2
T	3/5	12.3, 12.4	R	5/2	
R	3/7		M	5/6	16.3
M	3/11	12.5, 12.6	T	5/7	16.4
T	3/12	12.7, 12.8			
R	3/14				
M	3/18	<i>SPRING BREAK—NO CLASSES</i>			
T	3/19	<i>SPRING BREAK—NO CLASSES</i>			

*See Moodle for “Basic Set Theory” Reading

**Tues April 2 is a Monday schedule.