

Geometry for Middle School Teachers
MA 241-001
TR 2:00-3:15pm
CB 343
Fall 2006

INSTRUCTOR:

Jennifer A. Eli
Office: 918 Patterson Office Tower
Office Phone: 514-3121
Email: mathhist@ms.uky.edu
Webpage: www.ms.uky.edu/~jrjce
Office Hours: TBA

REQUIRED TEXTS:

1. Lappan, G., Fey, J., Fitzgerald, W., Friel, S. & Phillips, E. (2004). *Connected Mathematics-Student Edition*. New Jersey: Pearson Education.

- *Shapes and Designs*
- *Covering and Surrounding*
- *Ruins of Montarek*
- *Stretching and Shrinking*
- *Filling and Wrapping*
- *Looking for Pythagoras*
- *Kaleidoscopes, Hubcaps, and Mirrors*

2. Lee, C. & Robbins, J. (2004). *Geometry for Middle School Teachers: Companion Problems for the Connected Mathematics Curriculum*.
<http://www.ms.uky.edu/~lee/ma241/ma241notesb.pdf>

OPTIONAL TEXTS:

1. Beem, J.K. (2006). *Geometry Connections: Mathematics for Middle School Teachers*. New Jersey: Pearson Education. ISBN: 0-13-144926-5
2. Kohn, E. (2001). *Cliffs Quick Review Geometry*. New York: Hungary Minds. ISBN: 0-7645-6380-7

ADDITIONAL RESOURCES:

Kentucky Core Content Standards
(<http://www.ms.uky.edu/~jrjce/teaching.html>)

COURSE MANAGEMENT:

All course materials, homework assignments, announcements and additional resources will be available on **Mathemoodle** (<http://moodle.ms.uky.edu:8080/moodle/>). You will be provided a login, password and enrollment key in order to access Mathemoodle.

MATHEMOODLE	
LOGIN	
PASSWORD	
ENROLLMENT KEY	MA241FA06

GRADING:

Participation	10 %	A	90-100 %
Notebook	10 %	B	80-89 %
Homework	30 %	C	70-79 %
Exams	30 %	D	60-69 %
Final Exam	20 %	E	0-59 %

PARTICIPATION:

Students will be expected to participate in both group and class discussions. In addition, each student will be required to pair with another student to present a complete solution to one ACE problem sometime during the semester. A presentation schedule will be decided upon at the beginning of the semester. Presentations should be 10 minutes in length. Students will be evaluated on correctness of solution, connections to other mathematical ideas, connections to KY Core Content Standards, correct use of mathematical language as well as the overall organization of the presentation.

ABSENCES:

Participation is a major component of this course and thus attendance is mandatory. You will only be allowed one unexcused absence. For each additional unexcused absence, 2% points from your final course grade will be deducted. University accepted excuses are the only excused absences. Refer to the *Student Rights and Responsibilities* for a list of excused absences.

NOTEBOOK:

Each student will keep a 3-ring binder notebook for this course. The notebook is to be divided into 9 sections: *Shapes & Designs, Covering & Surrounding, Ruins of Montereck, Streching & Shrinking, Filling & Wrapping, Looking for Pythagoras, Kaleidoscopes, Hubcaps & Mirrors, Exams and Additional Resources*. The first seven sections of the notebook are to be subdivided into the following sections: *Class Notes, Group Work, Homework and Journal*. Notebooks will be collected and graded for content, organization, neatness, and completeness. Sections should be clearly labeled. In addition, all class notes, group notes, homework problems and journal entries should be clearly labeled referencing the date, investigation, and book title.

HOMEWORK:

Homework will be assigned regularly throughout the semester. Homework assignments will be posted on Mathemoodle. Homework may not be collected everyday but students should be aware that homework can be collected at any time. No late homework will be accepted. All homework, collected or uncollected, is expected to appear in the student notebook. Students are encouraged to work together on homework. However, when it comes time for you to write up the solutions, I expect you to do this independently. If you receive assistance from another class member, include a written acknowledgment. Such an acknowledgment is a professional courtesy and will not affect your grade.

Journals. Throughout the semester, students will be given homework problems focused on tying together the mathematics content explored, mathematics teaching and student learning. Journal assignments may include questions from *Mathematical Reflections*. Mathematical Reflections are questions at the end of each Investigation. Students are expected to give well thought out responses to these journal questions. Responses to journal questions should also contain a list of KY CORE Content Standards covered in the investigation (if applicable). **Journal assignments are to be uploaded/submitted through Mathemoodle. A hard copy of your submission should be kept in your notebook.**

EXAMS:

Students are expected to work independently on all exams. Students are expected to complete exams without the use of any outside material including notes and textbooks. In the event of a take-home exam, students will be allowed to use their textbook and notes but are still expected to work independently.

Tentative Dates: September 14, October 24, and November 21.

Final Exam: December 12

CHEATING & PLAGIARISM:

The *minimum* penalty imposed by the university for cheating and/or plagiarism is a zero on assignment for first offense; additional penalty of extra work, reduced letter grade, or E/F may be imposed. Minimum penalty of E/F for offense subsequent to “minor” offense. Minimum penalty of suspension for offense subsequent to “major” offense. See *Student Rights and Responsibilities* handbook.

IMPORTANT DATES:

First day of classes	August 23 (Wednesday)
Last day to add a class	August 29 (Tuesday)
Labor Day holiday-no class	September 4 (Monday)
Last day to drop a class without grade	September 13 (Wednesday)
Fall Break-no class	October 6 (Friday)
Last day to withdraw from a class	October 20 (Friday)
Thanksgiving holiday-no class	November 23-24
Last day of classes	December 8 (Friday)
Final exam	December 12 (Tuesday)

SCHEDULE (Tentative)		
August	24	Review Syllabus; Shapes & Designs: Investigations 1-2
	29	Shapes & Designs: Investigations 2-3
	31	Geometry Pretest Shapes & Designs: Investigation 3
September	5	Shapes & Designs: Investigations: 3-4
	7	Shapes & Designs: Investigation 4-5
	12	Shapes & Designs: Investigation 5
	14	EXAM # 1: SHAPES & DESIGNS
	19	Covering & Surrounding: Investigation 1
	21	Covering & Surrounding: Investigation 2
	26	Covering & Surrounding: Investigations 3-4
28	Discussion on Liping Ma Presentation	
October	3	Developing Area Formulas
	5	Covering & Surrounding: Investigations 5-6
	10	Covering & Surrounding: Investigation 7
	12	Ruins of Montarek: Investigation 1
	17	Ruins of Montarek: Investigation 2-3
	19	Ruins of Montarek: Lab Day
	24	Ruins of Montarek: Investigations 4,6 DISTRIBUTION OF EXAM # 2 (TAKE-HOME)
	26	Stretching & Shrinking: Investigations 1-2
	31	Stretching & Shrinking: Investigations 3-4 EXAM # 2 DUE
November	2	Stretching & Shrinking: Investigations 5-6
	7	Filling & Wrapping: Investigations 1-3
	9	Filling & Wrapping: Investigations 4-5
	14	Filling & Wrapping: Investigations 5-7
	16	Looking for Pythagoras: Investigations 1-2
	21	EXAM # 3: Stretching & Shrinking; Filling & Wrapping
	23	Thanksgiving Holiday-No Class
	28	Looking for Pythagoras: Investigations 3-4
	30	Looking for Pythagoras: Investigations 5-6
December	5	Kaleidoscopes, Hubcaps & Mirrors: Investigation 1-2
	7	Kaleidoscopes, Hubcaps & Mirrors: Investigation 3-4
	12	FINAL EXAM