Math 125 A   Math for Elementary Teaching   Spring 2008

Class Meeting: MWF 8:50 - 10:00 PPHAC Room 116

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Office Location: PPHAC 219

Office Hours: M,W,F 10:00 - 11:00 and F 2:00 - 3:00 (other times by appointment)

Text: *Mathematics for Elementary Teachers,* Musser, Burger and Peterson, 2008, Eighth Edition, Wiley Publishing.

Course Goals: The primary goals of this course are to provide a deeper understanding of mathematical concepts, methods of reasoning, and techniques of calculation that are taught in the elementary grades. Specifically, a successful student will be able to

- use the mathematical content of this course to model and solve realistic problems;

- use mathematical reasoning to find patterns, make and test conjectures, and create simple proofs of find counterexamples to prove or disprove these conjectures;

- communicate results and conjectures using words, tables, symbols, and graphs;

- make connections between mathematical topics and other areas of mathematics, other disciplines, or situations in daily life;

- use technology as a tool to help solve problems;

- use visual and tactile aids (manipulatives) to make mathematical concepts more concrete;

- work well as part of a team to define, solve, and report on projects.

Course Topics: This course is designed specifically for students who intend to teach in elementary school. Its purpose is to provide the mathematical background necessary for teaching with confidence and imagination the basic concepts of mathematics as well as techniques of problem-solving. Throughout, the emphasis will be on basic ideas, problem-solving, and the larger historical and cultural contexts of mathematics.

Assignments/Assessment:

- Homework: As you know math is not a spectator sport. You need to practice what you learn. Practice problems and reading will be assigned for each section. You are expected to complete these for the next class meeting. Homework assignments will prepare you for the in class tests. Homework may or may not be collected.

- Group assignments: Some assignments will be group work done both in and out of class. Each group member will turn in an individual report based on the work of the entire group. When grading these assignments, I may choose one report from each group and every member of the group receives the same grade. Group assignments may or may not be collected.

- Presentation: Each group will be required to present a topic not necessarily covered in the text. The presentations are not to be original work, but to allow the students to explore the goals more deeply. Topics will be discussed early in the year. The presentations should be approximately 25 minutes in length.

- Quizzes: You may have announced or unannounced quizzes at any time of the day throughout the semester. Quizzes are often where attendance can be a large factor in the students grade. No quizzes can be made up. The lowest quiz grade will be dropped in calculating your final grade.

- Culture Points: Mathematics is everywhere. Culture points are designed for you to experience the breath of math. Please see the handout on Culture Points for more details.

- Tests: You will have 3 tests and a cumulative final exam. These tests can not be made up except under extreme circumstances with appropriate documentation, for example a doctors note or an accident report. If a student is going to miss an exam for an extenuating circumstance, they must notify the instructor at least a week before the exam date. If an make up exam is approved, an individual exam will be made, differently from the class exam, and administered on the next available day. The three tests are tentatively scheduled for Monday, February 4, Friday, February 29, and Friday April 4. The final exam will be set by the registrar. College policy states that no make up final exams may be given. Please do not plan to leave campus till after the end of finals week (May 3).

Grading: You are responsible to keep track of your own grade. Grades will be computed as follows:

Homework, Quiz, Group Projects	25%
Culture Points	5%
Presentation	10%
Tests	12% each
Final Exam	24%

Class Structure: Class will consist of lecture, group work, individual work, and problem sessions. Please come to class prepared with you text, notes, and calculator everyday. Please be prepared to participate in class. Class will start promptly at the start time, and class will not end early. Please turn off your cell phones prior to the start of class.

Attendance: Attendance will be taken everyday. There is a very strong correlation between attendance and grades. In order to understand the material, you need to be present in class. Group work also requires every ones participation. I understand that there are circumstances that you must miss class. Any student missing more than two class will lose two percentage points off their final grade for each additional absence. Remember that no late homework or quizzes are accepted and you must be present on all days of a group assignment to receive credit.

Academic Honesty: For graded homework assignments and projects, you may use your class notes and any books or library sources except a solutions manual. Any resources you use must be documented at the top of the homework assignment. As an example if you get help from the Tutor Center for problem 4 only, please write "Help with problem 4 from Tutor Center". No points will be deducted for honestly acknowledging help. However if you do not document any appropriate resource this is considered cheating.

The College academic honesty policy appears in your Student Handbook; you are expected to be familiar with it. The Academic Honesty Policy Guidelines specific to mathematics classes are reiterated at the end of the syllabus. They apply to work done outside of class as well as to in-class quizzes and tests. Please read them carefully. If you are unsure about the propriety of a particular procedure or approach, please consult with your instructor before continuing with the assignment.

Special Accommodations: Students with disabilities who believe that they may need accommodations in their class are encouraged to contact the Learning Services Office as soon as possible to enhance the likelihood that such accommodations are implemented in a timely fashion.

Academic Honesty Policy Guidelines
Mathematics Courses

The Department of Mathematics and Computer Science supports and is governed by the Academic Honesty Policy of Moravian College as stated in the Moravian College Students Handbook. The following statements will help clarify the policies of members of the Mathematics faculty.

In all homework assignments which are to be graded, you may use your class notes and any books or library sources. When you use the ideas or thought of others, however, you must acknowledge the source. For graded homework assignments, you may not use a solution manual or the help, orally or in written form, of an individual other than your instructor. If you receive help from anyone other than your instructor or if you fail to reference your sources you will be violating the Academic Honesty Policy of Moravian College. For homework which is not to be graded, if you choose, you may work with your fellow students. You are responsible for understanding and being able to explain the solution of all assigned problems, both graded and ungraded.

All in-class or take home tests and quizzes are to be completed by you alone without the aid of books, study sheets or formula sheets unless specifically allowed by your instructor for a particular test.