

Moravian College  
Math 125 – Mathematics for Elementary Teaching  
Spring 2016

**Class Meetings** – Monday, Wednesday and Friday 2:35-3:45 PM, PPHAC 102

**Instructor** – K. Moser

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Office hours: Monday and Friday 1-2:30pm, Wednesday Noon-1pm, Other times by appointment.

**Required Materials** – We will use *Mathematics for Elementary Teachers, A Contemporary Approach* by Musser, Burger, and Peterson, Tenth Edition. You may find it useful to have a basic calculator in this course. Note that for exams, you will NOT be allowed to use your cell phone or similar device.

**Course Topics** – Topics included in this course: problem solving, sets, whole numbers, properties of numbers, fractions, decimals, numerical operations, decimals, ratios, proportions, percents, integers, statistics, geometry and measurement. The precise coverage of topics will depend on the progress of the semester.

**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 mathematics content to model and solve realistic problems.
- use mathematical reasoning to find patterns, make and test conjectures, create simple proofs, or find counterexamples to show a conjecture is not true.
- communicate mathematically using the appropriate notation, words, graphs, or tables.
- make connections between the mathematics learned and other disciplines and areas of his/her life and apply the mathematics learned to other areas.
- use technology as a tool to solve problems.
- use manipulatives to make mathematical concepts more concrete.
- work well as part of a team to define and complete projects.

**Class Work** – Mathematics cannot be learned passively you must actively engage the readings, the class discussions, and the homework sets. Most days I will collect some writing or worksheet reflecting your work for the day, which will count toward your class work grade. This may be a quiz based on the reading, a worksheet completed in small groups, or an end-of-class summary of the days work. If you miss class, you cannot get credit for this assignment, regardless of the reason for your absence.

**Project** – This project will involve selection of Children's book that can be related to a math topic. There will be an in-class presentation of the book with a short activity, and a turn-in written portion. More information will be given as the semester progresses.

**Writing Assignments** – There will be approximately one writing assignment every other week. These will be on a variety of topics: reflections from mathematics education research, how to respond to a student misconception, etc. Writing must be done on an individual basis; students may NOT work together.

**Attendance** – You are expected to arrive on-time and prepared to every class meeting. As a general rule, I do not distinguish excused and unexcused absences.

- If you miss a class for any reason, you will get a zero for the class work score for the day.
- You are responsible for any class information provided in class. If you know that you will be missing a class (due to sports or other activities), let me know ahead of time. If there are special activities/handouts/etc. for that class, we can arrange to get you the information to help prepare for the next class.
- Get to know your classmates! If you will miss a class on a day that homework is due, have a classmate bring your homework in for you. As a rule, late work will not be accepted. Note that you can submit work via e-mail from home.
- If you miss more than 3 classes during the semester for any reason you will get an automatic 5% penalty on your final course grade. Each additional absence, regardless the reason, will accrue an additional 5% penalty to the final course grade.

**Homework** – There will be a short selection of problems from each section that you will be asked to complete and turn in. Each question will be graded on a 3-point scale (3= excellent work, 2 = satisfactory work, 1 = inadequate response, 0 = no meaningful response). Work must be shown for computational problems in order to receive full credit. A full, complete response must be given to conceptual questions in order to receive full credit.

- Homework Presentation: As you complete your homework, please keep in mind the following points. Failure to do so will result in a penalty to your homework grade of 5%.
  - Your work must be neat do not give me your scratch work. After solving the problem, rewrite the problem on a fresh sheet of paper.
  - You must write the answers in order and use a single column format in your writing.
  - Homework with multiple pages must be stapled (not folded together).
  - Paper must be neat and appropriate for a college-level course. Do not submit paper with torn edges or ratty ends.

When in doubt, remember that this is a college-level class that is preparing you for a profession. You need to practice presenting yourself and your work in the best possible light.

- Working together: When faced with difficulty in mathematics, it helps to work through problem with a colleague. I welcome and encourage you to work with friends, tutors and myself in working through the reading and completing homework assignments. When you work through the problems connected with each reading, you are welcome and encouraged to work with your friends and classmates. Feel free to exchange ideas as you work through the reading problems. HOWEVER: when writing your homework response, you must work on your own. The final response you write on your homework should be yours and yours alone. I recommend

that while you may complete the scratch work for all of your homework with a classmate, you should write the final copy of your homework when you are alone.

**Exams** – There will be three in-class exams, and a cumulative final exam. The three exams will be given on **Friday, February 12; Friday, March 4; and Friday, April 13**. You will have the whole class period to work on the exams. Please mark the dates of all exams on your calendar. Make-up exams will be given only under extreme circumstances and with appropriate documentation.

The final exam for this class is scheduled for **Tuesday, May 3 at 11:30AM**

Calculators may be used on the exams. **HOWEVER:** calculators cannot have internet or cellular access (no cell phones, smart phones, iPods, etc.). For exams, you may **NOT** share a calculator with a classmate.

**Grading** – Grades will be computed based on the weights below.

- Class work/Quizzes (10%)
- Book Project (10%)
- Writing Assignments/Homework (15%)
- Three in-class exams (45% total)
- Cumulative final exam (20%)

**Disclaimers** – This syllabus is subject to change through the semester. Any updates to the syllabus will be announced in class. The instructor reserves the right to apply qualitative judgment in determining final grades for the course.

**Tutoring** – Beginning the second week of class, the Mathematics and Computer Science Department offers tutoring Monday through Thursday 5:30-8:30pm in PPHAC 238. This is free drop-in tutoring and does not require an appointment. The Academic Support Center houses Disability Support and Greyhound Tutoring on the first floor of Monocacy Hall and can be reached at 610-861-1401. Greyhound Tutoring provides course-specific tutors to Moravian students, free of charge. If you would like to work with a Greyhound Tutor to boost your academic success, please request a tutor through <http://bit.ly/NeedTutorMC> (case-sensitive). Plan ahead! It takes 2-3 business days to connect you with a tutor.

**Learning Disability Accommodations** – Students who wish to request accommodations in this class for a disability should contact the Academic Support Center, located in the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center.

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

In all at-home assignments which are to be graded, you may use your class notes and any books or library sources. **When you use the ideas or thoughts of others, however, you must acknowledge the source. You also may not use a solution manual** or the help (orally or in written form) of any 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. **You may work with your fellow students on homework which is not to be graded. You are responsible for understanding and being able to explain the solution of all assigned problems, both graded and un-graded.**

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