

Course Syllabus and Information
MTH 553: History of Elementary Mathematics for K-8 Teachers
Summer 2012

Instructor: Tibor Marcinek
Office: Pearce 117
Contact: E-mail: marci1t@cmich.edu.
Website: <http://cmich.marcinek.sk/>

Office Hours: Mon-Thu: 12:00pm – 1:00pm
or by appointment
Virtual office hours (Wimba)
by appointment

TextBook & materials to be furnished by the student:

- (1) Bunt, Jones and Bedient, The Historical Roots of Elementary Mathematics, Dover Publications, Inc., 1988.
- (2) A calculator.
- (3) Crayons or markers or colored pencils. Scissors, abacus and other materials (when announced).

Course Content:

1. Numeral Systems: Important ideas introduced in Egyptian, Babylonian and Mesoamerican systems.
2. Computational Devices. Soroban and its influence on mental algorithms.
3. History of Geometry
4. History of Probability and Statistics
5. Miscellaneous topics

Course Methodology:

The course is designed to meet the mathematical needs of those students who plan to teach grades K-8. It is based on the philosophy that mathematical ideas are learned only through active involvement. Therefore, in this course a lecturing is reduced to a minimum and teaching methodology includes small group activities and presentations and whole class discussions – the methodology you will be using to present mathematical topics to your students.

Course Requirements and Assignments:

Attendance. It is an activity-based class. Therefore it is important to attend every day for entire class period with you homework completed so that you can take active part in group work activities. Attendance will be taken every day. If for some reason you must be absent, it is your responsibility to contact me before (in emergency situations on) the day you miss the class. If you contact me by e-mail, I will send you back copies of handouts and a homework assignment. You are allowed *three* excused absences. Each *unexcused* absence will lower your grade by one letter grade.

Daily assignments. You are expected to complete all in and out of class assignments. I will not collect all your homework but I expect you do it and understand it. I encourage you to work together with other MTH 553 students. There will not be time in class to go over every homework problem so plan on coming to my office if you have any questions regarding the assignment. Short (1-2 questions) unannounced quizzes may be given to monitor your home preparation.

Group Work. You will be working in groups of 2-4 students. As a group, try to answer all the questions on worksheets or asked by the instructor and discuss how to present your answers to the rest of the class.

Make sure that all group members understand it completely and that any group member is able to lead the presentation as the instructor will randomly select the presentation leader. If any group member has a question, try to resolve it within your group first. If nobody is able to answer and/or explain it to other group members, then ask the instructor. Please keep in mind that the instructor will be answering group questions, not questions of individual students.

It is the responsibility of each group to get all members on task and participate. Activity of all members counts towards your group grade, which will be explained in the class.

Presentations. Each group must have at least 15 satisfactory presentations during the semester. These presentations are typically explanations of the work done by the group and can take various forms. They usually take 3-10 minutes, depending on the task and discussion in the class. The rest of the class will evaluate presentations. Please observe these simple rules when presenting:

1. Do not start your presentation until you have the attention of the whole class.
2. Act as if the instructor were not in the class. Maintain the eye contact with the class not the instructor for important signs and immediate assessment of your presentation.
3. If using the visualizer, do not stand at the visualizer. Instead, go to the screen and point to your notes as displayed on the screen.

Planned Presentations. Each group will have one planned presentation (20 min).

Exams. You will complete three 50 min tests and one final examination.

Article reviews. You will submit one current article review. It is an individual task.

Other rules. Late coming, cell phone and other class disruptions will result in decreasing your group grade. To prevent it, make sure you turn OFF your cell phone before entering the classroom. Make sure that you notify me of any unavoidable late arrivals in advance.

What you will be graded on

| | | |
|---|----------------|------------------|
| 3 chapter tests | 15 points each | 45 points |
| Final Exam | | 20 points |
| Article review | | 10 points |
| Group Work | | 5 points |
| Presentations - small | | 10 points |
| Presentations – planned | | 10 points |
| Attendance: You are allowed <u>three</u> excused absences. Each <u>unexcused</u> absence will lower your grade by one letter grade. | | |
| Total possible points | | <hr/> 100 points |

Point value of each item is set so that they add up to 100 points. This way it is easy to keep track of your grade:

| | | | | |
|--------------|-----------|-----------|----------|-------------------|
| A: 94 and up | A-: 92-93 | B+: 90-91 | B: 83-89 | B-: 80-82 |
| C+: 77-79 | C: 72-76 | C-: 69-71 | D: 60-68 | Failing: below 60 |

NOTICE: CMU provides students with disabilities reasonable accommodation to participate in educational programs, activities, or services. Students with disabilities requiring accommodations to participate in class activities or meet course requirements should first register with the Office of Student Disabilities Services (250 Foust Hall, telephone #517-774-3018, TDD #2568), and then contact me as soon as possible.