

Course Syllabus and Information
MTH 551: Mathematical Structures for K-8 Mathematics Teachers
Spring 2019

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

Office Hours: Tue Thu: 12:30 – 1:30
MWF by appointment

Materials to be furnished by the student:

- (1) Course Packet from my website
- (2) A calculator
- (3) Supplementary material as they appear on my website or are announced in the class.

Tentative Course Content:

In this course, you will review many of the areas of mathematics that you explored in your previous classes.

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 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.

General Course Objectives:

Upon the completion of this course the students will be able to:

Use a variety of strategies to complete explorations, investigate concepts and to solve problems from set theory, logic, number theory, number systems, geometry, algebra, consumer mathematics, mathematical systems; Model multiple approaches to mathematics problems and effectively communicate the results of their mathematics problem solving; Use a variety of manipulatives and technology to pose and solve mathematics problems; Make connections of the concepts and skills to school mathematics.

Course Requirements and Assignments:

Attendance. It is an activity-based class. Therefore it is important to attend every day for entire class period with your 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 five percent points.

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 551 students. There will not be time in class to go over every homework problem so plan on coming to my office or contact me through e-mail 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 3-4 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 2-10 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.

Exams. You will complete 2-3 exams and one cumulative final examination.

Projects. Guidelines will be provided on my website <http://cmich.marcinek.sk> and discussed in class. They may include article review and take home assignments.

Other rules.

- Academic dishonesty (cheating) is a serious offence with serious consequences. If I see evidence that you are cheating, you will receive a grade of zero on that quiz or exam, and I will contact the Dean of Students and the Director of Teacher Education.
- 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.

- **Electronic Devices:** In order to protect the intellectual property interests of the instructor, the privacy interests of student members of the class, and to encourage an open and fair exposition of all student views in the classroom without fear that student views expressed will be recorded and possibly posted in another forum, recording of classroom lectures and conversations is not permissible without the express, prior written consent of the instructor. Unauthorized recording of classroom activity shall be considered a violation of the CMU Student Code of Rights, Responsibilities, and Disciplinary Procedures as disruptive of a student's right to learn under 3.2.3 Disruption of Learning.

What you will be graded on

Exams	3x 14pts	42 points
Final Exam		26 points
Projects		15 points
Group Work		7 points
Group Presentations	2/3pts each	10 points
Attendance: You are allowed <u>three</u> excused absences. Each <u>unexcused</u> absence will lower your grade by five percent points.		
Total possible points		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.