M 323 - Spring 2014
Methods of Proof II

General Information

Instructor: Dr. Hilary Risser
Location: Office: Museum 112
Phone: 496-4581 (no voicemail)
Email: hrisser@mtech.edu

Office hours: MWF 2-3

Other times by appointment only please. Appointments must be made at least one class day in advance.

Course Materials and Objectives

Text:
Theorems, Corollaries, Lemmas, and Methods of Proof – Rick Rossi
A copy of LaTeX

Materials:

Objectives:
The objective of this course is to use the techniques of proof that you learned in the first half of the course and to apply them to the following mathematical areas

1. Functions
2. Sequences
3. Continuity
4. Differentiation
5. Sets
6. Groups
7. Geometric Objects

Evaluation and Measurement:

Definition/Theorem Sheets: Definitions and standard theorems are an important part of this course. However, we will cover a lot of these. Thus, I will allow you to work together as a class to put together a definition/theorem sheet for both exams. The class will submit the Definition/Theorem sheet to me by the date specified. I will then copy the sheet for everyone in the class to use on the exam.

Homework participation grade: I will typically lecture on Tuesday each week. After lecture, I will assign proofs from the exercises for homework. You may work with others in the class on these assignments if you wish. On Thursday each week, everyone in class will be asked to present the solution to homework problems (chosen during class by the instructor) to the rest of the class. Your participation grade is based on effort not accuracy. I will consider you unprepared to present if you cannot even present an attempt at the problem. If you are not prepared to present on a given day, you will be docked 1/2 to a full percentage point from your participation grade.

Submitted proofs: On Friday of each week, you will be required to write up and submit one proof that you attempted during class that week. You will write it up in
LaTeX and email me the PDF of your writeup. This will allow me to give you feedback on your written work before the exams. You can earn between 0 and 3 points on each assignment. Assignments will be graded for accuracy and completeness.

**Absences:** Much of the work and learning for the course will be accomplished during class time. Therefore, you are expected to be present in class every day and you will be docked a percentage point in your participation grade for every day that you are absent.

**Exams:** There will be a midterm and a final exam for the course. The exam questions will be similar to the homework problems. Definition/Theorem sheets will be allowed on exams.

The assignments will be weighted as follows:

- Homework participation grade
  - (10 presentations @ 1 pt each) = 10 points
- Submitted weekly proofs
  - (10 @ 5 points each) = 30 points
- Midterm = 30 points
- Final = 30 points

**Academic Dishonesty:** Academic Dishonesty as defined on p138 of the student handbook will not be tolerated.