MAT 531 Fall 2010   Real Analysis
Instructor: Nándor Sieben
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http://jan.ucc.nau.edu/ns46/531/531.html
Office: AMB 123, Please check the
course web page for hours

Description: Metric spaces, limits, sequences and series, continuity, differentiation, Riemann-Stielties integration, uniform convergence of sequences of functions. Prerequisites: MAT 238 and 431C.

Textbook: Standard textbooks for a course like this are Rudin: Principles of mathematical analysis and Bartle: The Elements of Real Analysis. I am not going to assign homework from these books. There are notes available on my web site as well. I am not going to follow these texts closely. The lecture notes are very important. As in any graduate course, you should look into many different textbooks in the library and see which ones you find useful.

Grading:

- Weights: 40% homework, quizzes; 40% 2 midterms; 20% final.

- Tests: The exact dates will be announced at least a week before the tests in class and on the course web page. Use of calculators will not be allowed on the tests. You are responsible for assigned material whether or not it was covered in class. You are responsible for material covered in class whether or not it is in the text. It is important to take notes, and review them after class.

- Quiz: A quiz may be given at any time without announcement. I frequently give a very short quiz that asks for a few definitions and statements of theorems. I do this to make sure you do not get behind with following the lectures.

- Homework: Homework will be assigned and collected regularly. Check the course web page for due dates. Assignments are due at the beginning of the class. No late homework is accepted but you can turn in homework early. Class attendance is very important. Write out your solutions neatly. Figures help me to understand your arguments I encourage you to write your solutions in TeX (LyX). In this case just add an extra hand drawn figure. Include detailed explanations in your solutions but be concise. Do not turn in scratch work. The presentation is an important part of your solution. Every statement in your solutions need a proof even if the question asks you to find or calculate something. Judging the validity of an argument is an important skill. Just as important as coming up with the argument. If there is a gap in your proof, do not try to hide it. I will likely notice it anyway. If you tell me where the gap is then I know that you are at least aware of the problem. You are allowed to talk about the homework problems but you have to write your solutions on your own completely from scratch. Check your scores regularly on the grade-sheet posted on the web.

I am going to ask two students per class period to prepare typed class notes based on the lectures. The collected notes are going to be available for everybody.

Make up tests will be given only in case of verified medical or other emergency which must be documented. You must make a reasonable effort to notify me as soon as you can, preferably before the missed test is given. The best way to contact me is by email.

All the information on this syllabus are subject to change and any class announcements regarding the syllabus are considered official amendments to it. This syllabus and other information is available on the course web page.