

Math 481 - Principles of Mathematical Analysis
Section 6M

Fall 2000

Instructor: Dr. Brian Heck

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Office Hrs: MWF 9:30-10:30

11:30-12:30

TTH 10:20-11:35

1:10-2:25

Prerequisites: Math 360

Text: Advanced Calculus: A Friendly Approach (1st ed.) by Kosmala (Prentice Hall)

Course Description (catalog): Vectors and matrices; differential calculus of functions of several variables; vector differential calculus; integral calculus of functions of several variables; vector integral calculus

Course Objectives: To fully explore and understand the topics of Calculus I. We also want to further develop and improve theorem-proving abilities and apply them to many theorems from Calculus I. Additionally we hope to expose the students to a wide range of topics encouraging further study.

Grading Policy: Your final semester grade will be computed from the following components.

Board Work: Almost every day, students will put homework problems on the board. On occasion I will lecture to help with a major misunderstanding, or to jumpstart some discussion. The majority of class time however will be spent presenting problems and discussing them. You will be graded on how successfully you present each problem, on how many you present, and on the difficulty of each problem.

This will account for 25% of your final semester grade.

Turn In: Every Friday you will be required to turn in one homework problem. It must be one you did not present at the board, but it may be one that was presented by someone else. If you wish, you may turn in more than one problem, as again, this grade will be affected by how well you do each problem and how many you turn in. Also, if you receive a grade of 'D' or 'F' on a turned in assignment, you may turn in a "Re-Do" the next week to improve the grade. The maximum grade on a "Re-Do" is a 'B'. Please write "Re-Do" on the top of a resubmitted problem and turn in the original problem as well. You may only "Re-Do" a problem once.

This will account for 25% of your final semester grade.

Exams: We will have 2 exams (a take home mid-term exam and a final exam) this semester. They will both be comprehensive in that they will cover all material covered prior to the exam and they are both required. The tentative dates of the exams are included in this syllabus. They most likely will not change, but if they do I will let you know in class. You are responsible for knowing when each exam will be held. If you miss an exam without letting me know, you will only be able to make it up if you have a valid excuse.

This will account for 50% of your final semester grade.

Attendance: I will not include attendance as part of your course grade. I am not your mother or your parole officer, and this is not high school. I do, however, expect you to attend everyday. You are responsible for any and all material covered in class. If you miss any class, it is up to you to meet with me (if necessary) and catch up on the material you missed.

Approximate Class Schedule:

Mid Term Exam

Will be passed out Wednesday, October 4, 2000 and it will be due Monday, October 16, 2000.

Final Exam

Scheduled for Wednesday, December 6, 2000 from 10:00 am-12:00 pm.

Closing Remarks:

You are at a university, not a trade school. The goal is intellectual development and knowledge for knowledge sake. If you want to only learn what you need to get a job, go somewhere else.

Do not ask me why you need to learn the material we are currently learning. The answers are (1) because it will be on the final (2) because this is what analysis is, and any course called Real Analysis should cover this, and (3) because I say so. If during the semester you get the urge to ask me why we are learning something, re-read this paragraph. If you are still unsure, see (3) above.

It is assumed that you are attending this university because you have a desire for higher learning. It is therefore expected that you will pay attention, be respectful of your instructor and fellow students, and follow the Code of Student Conduct. Instances of academic dishonesty will be dealt with severely. If you are caught cheating, you will fail this course. Similarly, if you are a disruptive presence in the classroom, you will be dropped from the class.

Important Dates:

Final Date to Add Courses or Drop Without a "W" - **Wed, August 23**

Final Date to Drop Courses With a "W" - **Mon, October 30**