MAT 526 — Advanced Calculus 2 — Spring 2010

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Course webpage: (A link to this has also been placed on Blackboard.)
http://campus.murraystate.edu/academic/faculty/dubravko.ivansic/10spring/526home.html

Office Hours: Ask me or check the webpage.

Prerequisites: MAT 525.

Textbook: Robert Bartle & Donald Sherbert, Introduction to Real Analysis, third edition.

Homework: Homework (posted on the webpage) is a substantial portion of your grade. It will consist of a selection of problems of varying degrees of difficulty: type A (5-point), type B (8-point) and type C (12-point) problems. You are strongly encouraged to do all of the problems. For the ones you turn in, you can choose any of the assigned problems subject to the following conditions on the point-worth of the homework:

If you are taking this course as:	then turn in this many points per section:
undergraduate student	≥ 30 points, at least 20% of total are type B problems or harder
graduate student	≥ 30 points, at least 40% of total are type B problems or harder
graduate student for 600-level credit	≥ 36 points, at least 20% type C, at least 50% type B or harder, not including the 20% requirement

Course Objectives: Advanced Calculus 2 covers some fundamental properties of functions defined on real numbers. Some familiar theorems and concepts from Calculus 1 will be revisited, this time with proofs.

The primary purpose of the course is to learn these properties, along with related definitions and theorems. An equally important goal is to get a lot of exposure in proving things in a rigorous way, so most homework problems will require you to justify your reasoning in a sound logical way.

Attendance: is strongly encouraged every day, and roll will be taken. If you missed four or fewer classes during the semester, you get 3% bonus points. Note that you are not penalized for missing a class (the points are in excess to your total grade), so an absence is counted as such regardless of the reason ("excused" or not).

Some Success Tips: As you read the texbook or your notes, make sure you have a a pencil and paper with you. Work things out on paper as you read them. Whenever a definition is introduced, as you try to understand what the definition is supposed to capture, try to think of several objects that fit the definition and several that do not. Before you read a proof , see if you can figure it out yourself, based on the previous material. (If you have no idea, that's OK, too, then just try to understand the presented proof.) If you have trouble with the material, make sure you stop by for office hours. Many things can be made much clearer in conversation with me.

Exams: There will be three full period exams whose dates will be announced well in advance. There will also be a comprehensive final exam.

Final exam: will be held on Wednesday, May 5th at 8:00AM in our usual classroom.

Make-ups: Make-ups for exams will be given only in cases of illness, field trips or other unavoidable circumstances. You will need to provide written verification of the reason for your absence in advance and as soon as possible. If you are unexpectedly absent from an exam, contact me by phone or e-mail **that same day** and arrange to take a make-up. The make-up should occur *soon*, which typically means "before I return the exam". Asking for a make-up more than once makes it less likely that I will grant it.

Grade: Your homework score is computed as (points earned)/(points attempted), assuming you have satisfied the minimum point requirements. Your final grade is computed roughly as follows: homework will count for 40% of the grade and each exam counts for 20%. Your final exam grade replaces your poorest exam grade if it is better, so if you are happy with your exam scores during the semester, you don't have to take it.

Whether you have satisfied the minimal requirement for homework point-worth and how much you have done extra also affects your grade, but I don't have a formula for this. Guidance for the final grade scale is

$$90\%\text{--}100\%\text{=A, } 80\%\text{--}89\%\text{=B, } 70\%\text{--}79\%\text{=C, } 60\%\text{--}59\%\text{=D, } 0\%\text{--}59\%\text{=E.}$$

Academic honesty policy: In compliance with the Board of Regents policy on academic integrity, instances of academic dishonesty, as determined by the instructor, will result in zero points for the assignment and possibly a grade of "E" for the course.

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