Math 235, Fall 2015:
Policies & Procedures

Instructor: Paul T. Allen

4.0 scale

All coursework, exams, etc. are graded on the 4.0 scale. The mapping between numerical and letter grades, together with definitions of letter grades, can be found in Table 1 on page 5. That table also displays the official definitions from "Policies and Procedures" section of the Undergraduate Catalog, together with an interpretation for the purposes of a mathematics course (in italics).

Coursework

In general, it is important to remember that there are two purposes for coursework: to solidify your knowledge by working through examples, and to communicate to me (or the homework grader) that you have done so. Homework is primarily for your benefit!

Students are encouraged to collaborate on assignments, but must submit their own work for evaluation.

In general, credit is not given for late or incomplete work. I may, at my discretion, accept late work and file it away; such work will only be considered if your course grade is at the boundary between two different grades.

Note also that I consider the presentation of your work to be one indication of the level of understanding: Write neatly, use complete sentences where appropriate, etc.

Daily homework

There are homework problems associated to each lecture. Most of these problems are for you to use as practice; each day I designate one or more problems to be submitted. When submitting work, please make sure that

- your name is clearly written at the top of the first page,

- the day number is clearly written on the first page,

- all pages are stapled together.

Papers which do not meet these standards are at risk of being placed in to one my "miscellaneous" folders, from which few documents ever return.

Reports

In addition to the daily homework, there are several reports to be written during the course of the semester. The purpose of the reports is threefold:

- Writing the reports allows you to synthesize what you are learning in to a larger, more coherent framework.

- Writing the reports helps you develop skills is presenting, in written form, technical material.

- Writing the reports helps you develop your LaTeX skills, and gives you practice using *Mathematica.*

The reports are to be written using the LaTeX typesetting framework. I expect that the graphics in your reports will be generated by *Mathematica* or another appropriate piece of software.

Being able to effectively communicate technical content is an important skill. One of the main purposes of the reports is to help you develop skills in this area.

As a result, the reports are expected to have meaningful (and correct!) mathematical content, and to be written well. Write in complete sentences, using proper grammar, spelling, etc.

Reports will be graded based on the following.

1. Mathematical content

    Problem statement Is the problem/question being addressed in the report clearly stated? Does the introduction make clear what the report is about?

    Analysis Is the stated problem subsequently addressed? Are proper methods used for addressing the problem or question?

    Conclusions Are the conclusions of the report articulated clearly and succinctly? Upon reading only the introduction and conclusion, can one get a reasonable sense of what the report accomplished?

    Mathematical correctness Are the mathematical statements made in the report correct and precisely stated? Is technical vocabulary being used properly?

2. Proper use of technology

    Mathematica Has Mathematica (or other such technology) been used appropriately when addressing the topic of the report? Are plots generated using Mathematica (or other technology) appropriately scaled, etc.?

    LaTeX Is LaTeXbeing properly used to create the report?

3. Writing quality

   Clarity Is the meaning of each sentence clear? Does the report make clear what are the main ideas?

   Structure Is the report well-organized? Are the required pieces and sections (title, introduction, analysis, conclusions, etc.) present? Do the various pieces fit together in a way which is easy for the reader to follow?

   Mechanics Is the report written using proper grammar, spelling, punctuation, etc.?

Exams

There are three exams, tentatively scheduled for:

- September 28, during class.

- October 22, 7pm 9pm.

- November 25, during class

In addition, there will be a final exam during the official final exam period: December 16, 8:30am 11:30am.

If a student is enrolled in a course which meets during the evening exam time, or has another academic schedule conflict, I will make an arrangement for that student to take the exam at an alternate time. *It is the responsibility of the student to make me aware of any conflicts which do exist. Even if we discuss a conflict in person, please also send me an email to document our discussion. Arrangements must be made by the end of the add/drop period.*

Each exam problem is individually graded on the 4.0 scale. If you want to get a rough indication of your "total" exam score you can simply compute the mean. Note however, that I enter each score independently in my records, and may weight certain problems more than others, depending on systematic factors, etc. For example: If the entire class does really poorly on a particular problem due to a systematic mis-understanding of that problem, then this problem will be weighted less than the others. Likewise, longer problems may be weighted more heavily than shorter problems.

Course grades

Course grades are to be a reflection of students' success in engaging with the course material, analyzing that material, and synthesizing the content in to a coherent framework which can be applied to subjects beyond the course.

Course grades are computed as follows:

1. A preliminary grade is computed by calculating a weighted average of all scores, according to the following weighting:

   - 50% Exams
   - 30% Reports
   - 20% Daily homework

2. After computing the preliminary grade, I make adjustments based on inconsistent coursework (such as disregarding an outlier), trends throughout the semester (such as improvement), and other factors I deem relevant.

3. Finally, I revisit the individual grades in view of the grade definitions provided by the College Catalog, seeking indicators of the synthesis of course material.

I emphasize that ultimately grades are assigned according to the definitions in the college catalog, based on my assessment of the student's knowledge and synthesis of the course material. Thus while a weighted average of individual scores is a critical tool for making this assessment, in no way is such an average definitive.

Finally, I note that students will fail the course if either of the following occurs:

Insufficient participation Missing the equivalent of two weeks of class sessions, or missing one of the three scheduled exams, will lead to a failing grade. Exceptions to this policy require documented extenuating circumstances.

Gross negligence Demonstration of gross ignorance or complete lack of understanding of key concepts on exams will lead to a failing grade. In particular, a student who has accumulated what might be construed as 'technically enough points to pass' but demonstrates a "clearly inadequate" lack of understanding which is "unworthy of credit" will be awarded a failing grade.

Grade A (4.0) Outstanding work that goes beyond analysis of course material to synthesize concepts in a valid and/or novel or creative way.

Computational problems are completely and correctly executed in a manner which displays a complete grasp of the theory behind the computation. Theoretical responses display a thorough understanding of the both precise details and the larger framework at hand.

Grade B (3.0) Very good to excellent work that analyzes material explored in class and is a reasonable attempt to synthesize material.

Computational problems are executed with minimal, insignificant errors (such as dropping a sign) and contain some indication that the relevant theory being used is understood. Theoretical responses display significant progress towards understanding of how the details fit in to a larger framework.

Grade C (2.0) Adequate work that satisfies the assignment, a limited analysis of material explored in class.

Solutions to computational problems display significant, though perhaps mechanical, understanding of basic procedures. Theoretical responses display an preliminary understanding of the topic at hand, but lack connections to the larger framework.

Grade D (1.0) Passing work that is minimally adequate, raising serious concern about readiness to continue in the field.

Both computational and theoretical responses display some non-trivial knowledge and skills, but raise concerns about whether basic ideas and methods are understood.

Grade F (0.0) Failing work that is clearly inadequate, unworthy of credit.

Fundamental misunderstandings, mis-use of methods or theory, seemingly random or unrelated material, etc.

Table 1: Official definition of grades, as they appear in the College Catalog, together with interpretation for the purpose of this course (in italics).