

## SOME INFORMATION ABOUT GRADING

### I. GRADE DISTRIBUTIONS

The overall distribution of grades in this course over the last four times I have taught it has been:

A+	1%
A	19
A-	19
B+	19
B	12
B-	16
C+	5
C	3
C-	2
D+	1
D	1
D-	0
F	1

There is emphatically not a fixed grade distribution in the course, and the distribution varies noticeably from year to year. Nonetheless, at this point the distribution shown here provides a good first guess as to what this year's distribution may look like.

### II. REQUESTS FOR REGRADING

Grading is necessarily an inexact science. For that reason, we will not change scores on questions unless the score we have given is clearly inappropriate. If you think the score

for a question should be changed, return your entire exam to Galina, together with a written explanation of why you think the score should be changed, shortly after you receive your graded exam.

### III. GRADING EXAM QUESTIONS

Throughout, grading will be based on you what you actually wrote, not on our guesses of what you meant to say (or on what you did write but that we couldn't read).

In grading questions on the quizzes and exams (other than multiple-choice questions), we will use the following guidelines:

120% A truly phenomenal answer. Examples of things that warrant more than 100% are an unusually creative or elegant derivation of a result, spotting a complication we had overlooked in writing the problem, pointing out conditions under which the "correct" answer might not hold, or getting the correct answer to a question that turned out to be very difficult and that all but a handful of students answered incorrectly.

Although in principle there's no upper limit to how much credit one can get, in practice we are unlikely to go above 120%.

Examples of things that do not warrant more than 100% are including a derivation that's unnecessary to answering a question, spelling out the correct answer in gory detail, adding an answer to a related question, or anything else that is not relevant to answering the question that's asked. Indeed, such things are likely to lower one's score (see 80%, below).

100% An excellent answer. Not just correct, but concise and clear.

80% Correct, but... An answer that is correct, but somehow not entirely satisfying. The answer might be long-winded, or unclear, or somehow clunky. Examples of things that warrant 80% are an answer that gets to the correct result in an inefficient or roundabout way, or one that uses brute-force analysis when a conceptual short-cut is available. There does not have to be anything literally wrong with an answer for it to earn 80%.

Incorrect, but... The 80% category also includes answers with minor errors, such as simple algebra mistakes, that do not suggest any problems with the understanding of the material and that do not lead to the wrong intuition.

Note: 80% is still at least an A-. That is, if someone's average for the course is 80%, he or she will receive at least an A- for the course.

60% Analysis that's on the right track, but that has a non-trivial error or an important omission.

An answer that is based on a misreading of the problem but nonetheless demonstrates a correct understanding of the material that the question was getting at warrants at most 80%, but is more likely to earn 60%. For example, analyzing the effects of an increase in a variable when the problem asked about a decrease could earn 80%; a more serious misreading would yield a lower score.

40% An answer that definitely makes some progress, but makes a serious conceptual error, or does not get far.

20% An answer that makes no progress, or whose useful parts are offset by things that suggest serious misunderstanding. Examples of things that warrant 20% are answers that contain fundamental errors, answers that simply repeat ideas or models from the course but make no progress in applying them to the question being asked, shotgun answers that throw lots of ideas and equations around in the hope that something useful will appear, and chatty answers that do not go beyond the kind of economic analysis one would hear on talk radio.

No answer at all gets 20%, not 0.

0% An answer that reflects a worse understanding of the material than would be suggested by no answer at all. Typically this means an answer that suggests some type of fundamental misunderstanding.

Of course, not all answers fit neatly into one of these categories. We use them just as starting points and general guidelines. For example, an answer that's otherwise correct but is long-winded and contains a small algebra error would probably get less than 80% but more than 60%. In general, the 30-70% range is the most difficult, and the specifics will depend greatly on the details of the problem being asked and the mistakes we encounter.

Also, there will be minor variations to avoid fractional scores. An unproductive answer (or no answer at all) to a 6-point problem, for example, would get a 1 rather than a 1.2.

The intent of this grading scheme is to try to have the test scores reflect as well as possible what the tests reveal about your understanding of the material. Not all grading schemes do this. For example, consider the fairly common scheme of giving full credit

for a phenomenal answer, full or very close to full credit for an answer that is basically right but well short of entirely satisfying, generous partial credit, and no credit at all for no answer. This scheme gives too little credit for phenomenal answers and penalizes skipped problems excessively. For example, a student who gives amazing answers to almost every question but is unable to say anything on one question might get a lower exam score than a student who consistently gave answers that were only slightly better than mediocre. Yet the first student's exam would reflect a better understanding of the material than the second student's. By giving extra credit for truly phenomenal answers, reducing the penalty for questions skipped or missed entirely, and deducting a non-trivial amount for answers that are pretty much right but well short of perfect, the scheme we use avoids this difficulty.

On multiple-choice questions, we will grade conventionally: the right answer gets full credit, a wrong answer gets no credit. (No answer gets the number of points divided by the number of possible answers. For example, no answer to an 8-point multiple-choice question with 4 possible answers gets 2 points. Again, we may round to avoid fractional scores.)