Policy on regrading of tests
Economics 122
W. D. Nordhaus

These notes are the guidelines that are used with respect to regrading and grade appeals in Economics 122a for Professor Nordhaus and teaching fellows. The statistics, economics, and guidelines apply to this course only and do not necessarily reflect the views or policies of the Economics Department.

Clerical errors

If you believe that there are clerical errors on your grade, please send a written note (not an email) to Professor Nordhaus with the relevant bluebooks and a written explanation of what you believe to be the error. We will review it and contact you with our determination.

The Statistics of Grading Errors

The policy in Economics 122a on regrading examinations is based on the following view of examinations. There are inevitable measurement errors in grading examinations. This is well known in the literature on educational testing. In earlier experiments, random regrading of tests were undertaken to determine the reliability of grades. The results were, roughly, that grading usually had a standard error of about 1/3 of a grade on an individual part of a problem (e.g., between B and B+). If a test has sixteen parts, and the errors are independent, then the overall test error would be about 1/12 of a grade. This can be reduced by grading each examination twice, but the cost of doing so usually precludes that except for very important examinations. For example, if each test is independently graded by four readers, the error rate would be reduced by only half.

To give you some idea about what this means for Economics 122a, suppose that the measurement error (standard deviation) on a 7.5-point questions is 1 point. Extending this to the entire 75 minute exam, it would be about $1 \times \sqrt{10}$ (using the variance formula), or about 3 points. This means that about 16 percent of students would have adverse measurement errors of more than 3 points out of 75 points, and 2.5 percent would have adverse errors of more than 6 points. (The same number would have favorable errors!)

Is this tolerable error? Suppose the B range on a test is about 20 points. This means that 97.5 percent of students would have adverse test errors less than one-third of a grade. In terms of the final grade, if the midterm counts one-fourth, the measurement error would indicate that 97.5 percent of students would have adverse test errors less than one-twelfth of a grade. While any error in appraising students is regrettable, it is hard to see how this level of error can
be significantly reduced without enormously increasing the administrative costs involved. We also have a safety valve for large errors explained below.

**Problems with selective regrades**

In light of the above, we in Economics 122a generally do not regrade examinations when students believe that their grades have been mismarked by a small number of points. The reasons are as follows: First, it is extremely unlikely that a regrade of, say, two points would make any substantial difference on the final grade. Two points is one-tenth of a grade on the midterm, and one-fortieth of a grade for the course. Second, selective regrading does not recognize that examinations are measured with error, and therefore a substantial number of questions are likely to have errors of one-half or one point.

Third, it would lead to adverse selection in favor those with adverse measurement errors who ask for a regrading, as compared to those with adverse measurement errors who do not appeal their grade. So, it shows the distortions caused by the “squeaky wheel” approach to administration. Fourth, it leads to a “bad equilibrium” where all adverse measurement errors are appealed, and much time is spent in litigating and regrading all exams with adverse measurement errors, with a course more devoted to haggling than learning.

**Exceptions**

We do recognize that there are exceptions – the large-sigma events where a major error in grading occurred. Therefore, we allow for appeals in the following case: If a student feels there has been a major grading error, send your entire examination and a written explanation (not an email) of what you believe to be the error to Professor Nordhaus. If this is viewed as a potential major grading error, we will regrade the entire examination, not just the section with the potential error. Your grade may go up or may go down as a result. This procedure will help avoid the problems identified in the “Problems” section above by limiting regrades to the small number of cases with large measurement errors and potential major grading errors.

The deadline for such appeals is **two weeks** after the examinations have been handed out or are available to students.

**Note on the final examination:** The same general policy applies to the Final Examination. However, the bar is higher in that case. All regradings on final examinations require written appeals to the Registrar’s Office and a review by a committee of Yale College to determine if the grade change is warranted. They seldom succeed, so we seldom forward a request for a change.