

GRADING QUIZES, TESTS AND EXAMS

In most courses, short (maybe 10 minute) quizzes have replaced the handing in of problem sets. The quiz is a direct substitute for the latter, and generally involves regurgitating something from the problem set. It is not meant to challenge, but to motivate the students to do the problems honestly and conscientiously. This also shortens grading time for TA's. It is usually held at the very end of the tutorial. It is important to return it at the very next tutorial, and to take up any difficulties students experienced. You will likely have to write the questions on the blackboard. However, check with your supervisor about the feasibility of other approaches such as photocopying and distributing the quiz questions, or posting them up via an overhead projector. And remind your students at the first tutorial to bring blank paper to future tutorials for the quizzes.

We can learn a lot from others' experiences. Here are some comments from a very experienced TA: "Something I've learned from experience doing tutorials is that it's not necessary (nor possible) to go over every question from the homework. My least successful tutorials have been open question and answer sessions (you tell me which question you want to see, I'll do it at the blackboard, repeat until time is up). In my better tutorials I've decided what should be emphasized from the homework and picked sample questions using them to elicit discussion on the topic in general and the homework in a broad sense. My quizzes then follow directly from this. Working in the Stats Aid Centre on Monday mornings has been really helpful for finding out where the problems lie with most students and helping me determine what the focus should be that week. I usually have time to answer a couple of specific questions after that, but I think usually the tutorial has given the students enough confidence to return to problems on their own."

Tips on Grading

The following four strategies can help you be efficient and fair when grading tests and exams:

1. Mark one question at a time. Even though this involves handling each paper several times, you will still save a lot of time, and you will also find it much easier to be consistent. (Of course the fact that it is easier to be consistent is one of the reasons for the saving in time.)
2. Answer the question for yourself before beginning to mark it—even if you know the answer from past experience and your supervisor has supplied a marking scheme. The payoff for doing this is that your mind will be more ready to relate what students say to what you expect and to assess the relative importance of the amazing variety of valid statements and mistakes that they will come up with.
3. Prepare a list of what you will give marks for and how many marks you will give, and a list of mistakes that you anticipate and how many marks you will deduct for them. (If your supervisor has supplied such a list, all you will need to do is rearrange it in whatever way will make it easiest for you to use.) Such a list will save you a lot of time by saving you from having to go back and reconsider answers that you have already graded.
4. Another possible approach is called “grading sideways.” Instead of going through a pile of many solutions to the same problem and grading them sequentially as you read them, quickly go through all the solutions and arrange them in stacks, each stack containing only those problems done in the same way, or with the same answer. For instance, one might subdivide a set of electronics problems by putting all those with load lines drawn in a given direction on the same stack. Then, subdivide these stacks into smaller stacks, in each of which the same mistake was made.

After the divisions are made, go back and grade the papers, starting with the best ones and finishing with the worst. This saves the problem decisions until the last, when you've gotten thoroughly familiar with all the possible mistakes the students can make. (If you use sequential grading, Murphy's Law will insure that the first paper you pick will be

done in some weird manner, and you'll lose a lot of time trying to determine whether or not it was a valid method.)

This technique has some interesting side-effects. It helps pick out cheaters—by correlation. Also, by putting off the grading of the worst papers until last, you are able to change a grading procedure halfway through without having to go back and change a lot of previously marked papers.

This "trick" can be a powerful time-saver, and possibly cut a quarter to a half off grading time. Naturally, there are some types of problems for which this method won't help (for instance, every one of the solutions may be different).

Inevitable Complications

Grading answers to questions that are not highly structured is not just a matter of deciding how many marks to assign to each of the elements you are looking for. Neither you nor your supervisor can possibly foresee all of the ideas and combinations of ideas that students will come up with. For instance, when a student makes an error this simplifies a problem or proof, but some good work follows, or uses a different interpretation or misinterpretation than was intended and does some good work, or applies a less appropriate though not completely off-base analysis, how much should you reduce the mark? The possibilities are endless, so it is important to find out as much as you can about your supervisor's views on the relative importance of different things. You can also consult with the other, perhaps more experienced, TA's for the course, in some cases, to ensure consistency and reasonableness.

You also need to know whether the grade for an answer should depend at all on anything other than the statistical or mathematical content. If the essential mathematical/statistical content is the same, does a disorganized and hard to follow response deserve the same grade as a clear well organized one? Different instructors have different views about things like this. Consult your supervisor when a situation like this arises. Another major complication can arise when in a multi-tutorial course, each TA marks just

his/her own tutorial papers. If you are grading harder than other TAs, your students will discover this and complain. If you are grading easier, students in other tutorials will discover this and complain. Check with your supervisor about part-marks philosophy, and how to handle certain types of (maybe unexpected) responses to questions. Prevention here is the key. It is a real headache for your supervisor, when confronted with this type of complaint from students, and dealing with it after the fact is very difficult indeed!

Grading Appeals

Students may ask you to reassess your grading of a particular question. This is an ENTIRELY LEGITIMATE request. You may have missed something, misunderstood something, added up marks incorrectly, or even erred somewhat in your initial assessment of some work. Let the student state his/her case. Listen politely, and then make your decision. Try to stay calm and unemotional. Do not get into an argument, even if the student is extremely persistent. By all means, do explain your logic to the student, and if relevant, also indicate to the student the need for you to be consistent across the class in your standards. But be firm and avoid an endless back and forth, one-upmanship debating game. Tell the student that he/she may request a reevaluation of the paper by the course supervisor (this usually entails re-grading the entire test, not just one question), if unhappy with your grading.

When the query is non-trivial in nature, or just to save some class time, I would suggest telling the student to write a note explaining his/her point and to attach it to the paper. Then you can calmly reevaluate things later on.

Sometimes students say things like "Well that is what I meant to say", or "I wasn't told I had to show all my work". You should reply that you can only mark what is written, and indeed you have to do it in a comparative way based on the quality of that written work, so those who express things more clearly and thoroughly deserve more marks.

Sometimes students may complain that the question was somewhat ambiguous or not phrased clearly enough. For these cases you can refer the

student to the course supervisor. Moreover, you can urge the student that for the future they may need to spend more time on the course material and exercises to increase their prowess at interpreting questions. Being able to properly interpret a typical problem setting is something assimilated during the course, and test questions will not go overboard to "clarify" things that should be understood by that point in time.

Entering Marks

In a multi-section course, you will receive a list of students registered in your tutorial section in time for your first tutorial. Invariably there will be students who register late, or change their tutorial. You will receive instructions on how to handle this, since the procedure changes from course to course.

You will likely be entering grades into a computerized marks recording system, perhaps via the Blackboard course management system. Guidance should be provided by your course supervisor (or perhaps a head TA). Remind your students to keep all of their quizzes, tests, etc. until the end when they can check the posting of course records and then resubmit these if there are errors. If you have any hand-written records, be sure to drop these off with the course supervisor at the end, along with unreturned tests.

Note that a zero is not the same as a blank mark. **Do not enter zero unless someone has actually written something and merited zero.** Sometimes, a special coding is used for marks missing due to a valid reason such as illness; make a computerized adjustment for these. Check with your supervisor.

It is VITAL that you record in the system each and every grade that you have even if you believe that this person is not in your tutorial, or if you think that this person has dropped out of the course. Often matters arise later regarding course drop-outs via petitions and deferred exams, and the course supervisor will then need all available data. If you are asked to assign a tutorial grade for a student and this person was only present for the first 2 weeks, you still need to compute a grade based on that, and record it.

Returning Tests and Problem Sets

Return tests and problem sets in tutorial. Tests should be returned by handing them out individually to the students, not by having them pick them up from a big batch you have spread out on the front tables. The latter would violate confidentiality and make it easy to lose someone's paper. Afterwards, you should not leave them lying around somewhere, like outside an office in a box, or in the Stats Aid Centre, or somewhere in the departmental offices. If not picked up, bring them to future tutorials and Stats Aid Centre hours. When the course ends, drop them all off with your supervisor.

Limiting Cheating

We want to take all reasonable measures (and occasionally ingenious ones) to limit cheating. However, there are trade-offs. Although students already know that we don't want them to cheat on tests/assignments, it is still a good idea to remind them that cheating is an academic offense and can lead to serve penalties. However, do treat them as responsible adults and not as individuals who are looking for a way to cheat. If you find yourself in a situation where you are sure that a student is cheating, do not discuss it with the student. Hold on to any evidence and talk to your supervisor.

Some students cheat by altering their tests and then saying that there was a mistake in the grading; and we are extremely vulnerable to this kind of cheating because grading mistakes do occur. If you find yourself in the position of having to increase a mark even though you suspect that the test may have been altered, you should do two things: Be pleasant about it. You may be dealing with an honest student who was the victim of a grading error. Arrange to keep photocopies of the student's subsequent tests.

A great deal can be done to prevent students from altering their tests and submitting them for re-grading. If your supervisor requires that tests be written in pen, there will then be less scope for altering them afterwards. Some students will still write in pencil—but if it says right on the test "Write in pen, not pencil," we can reasonably refuse to re-grade tests that are written in pencil. Of course this question of policy is one of the many things that you will need to discuss with your supervisor at some point.

Announce, when returning tests, that a sample of the tests have been photocopied. One instructor used to deal with suspicious cases by telling a student with an apparently altered test offered to him for remarking, "That's okay, you keep it, and I'll just check my photocopy." If you forget to announce that you have made photocopies, you might wish to try this.

When you mark tests there are simple things you can do to make cheating difficult: for instance, draw a diagonal line through blank spaces that could be used to expand or replace an answer; put some sort of symbol (such as n.a.) beside questions which aren't answered; circle in red the correct letter beside each multiple choice question that is wrongly answered or not answered. You will find that this sort of "cheat-proofing" soon becomes automatic. In fact it becomes so automatic that some T.A.s do it when they mark final exams—even though there is no point, because the originals of final exams are not returned to students.