1. BEING A TEACHING ASSISTANT (TA)

Position Description

Welcome to the Department of Statistical Sciences! We hope that your experiences here as a TA will be a positive learning experience for both you and your students. If there are any serious concerns with your job assignment (e.g. timetable conflict), see the Associate Chair Graduate immediately. Once you start work, any problems that arise should be immediately discussed with your course supervisor. As a TA you are a member of CUPE 3902 Unit 1. There is an elected CUPE union steward in the department available for consultation about any union-related matters.

TAs in the Department of Statistical Sciences do many things, including marking, teaching tutorials, holding office hours or Stats Aid Center hours, proctoring tests and exams and record-keeping. **At the beginning of the term it is essential that you meet with your course supervisor to find out which of these duties you will be performing and when they will be due and to identify any possible conflicts.** Although your work may be described as a certain number of hours per term, it is bound to be irregular. There may be times when you will have a major marking job to complete in a limited time, and other times when you have only a little work or even none at all.

TAs in the introductory courses typically have some regular weekly duties (preparation, tutorials, and office hours), but then have a lot of work to do in a relatively short time when there is a test or exam. You need to know (and are entitled to know) when the busy times will be, so that you can plan your own work to avoid crises. Your course supervisor needs to know if you

are likely to have some crucially important obligation just when a test needs to be graded. It is unlikely that the test can be moved, but possibly the marking can be left till after your own obligation has been dealt with, and the students forewarned not to expect their tests back as soon as might otherwise be the case. If this kind of scheduling can't be done, perhaps the problem can be solved by arranging an exchange of work with another TA who is working in the same course or is capable of working in it. The sooner that problems like this are identified, the more likely it is that they can be resolved satisfactorily.

You need to be well informed about a great many things—such as the scope of the course, the level of the course, and the role of the tutorials if you will be giving tutorials. It is also important to have a reasonably accurate estimate of how much preparation you will need to do. Communication with your course supervisor is very important throughout the year. **Check your email and departmental mailbox regularly.**

Hiring Policy

It is important to apply for positions on time. Check for the TA vacancy postings on the website or outside the departmental office and apply before the posted deadline.

The highest priority in hiring is for those graduate students who are due a second, third or fourth reappointment (see CUPE 3902 Unit 1 contract), and for new grad students promised TA work in their admission offer. If you are not in this category, you are in competition with others, and should do what you can to maximize your employability. Those who show a high level of competence in past work, and who have flexibility (variety of courses listed on the application; readiness to work at other campuses; etc.) will do best in obtaining work. Past teaching evaluations and instructor preference may also play a big role.

Description of Duties and Allocation of Hours (DDAH Form)

Your supervisor will provide you with a job description for each TA assignment that indicates the nature of your duties and the estimated average hours for a proficient TA to perform each part thereof. Sign it, make a copy, and give the original to the Department Manager, Angela Fleury. You will meet with your supervisor again halfway through the term to evaluate whether or not the initial estimates of your hours are correct and make any needed adjustments.

This form however cannot take into account the great variety in people's approaches to doing a particular job. You have an obligation to yourself not to be overworked. You also have an obligation to communicate with your supervisor, about ways and means of performing the duties in the hours allotted. The total hours will not be altered, so you should communicate with your supervisor as often as possible, if you believe that you will be going substantially over the allotted time. You may have to amend your method of grading, or the number of problem sets or number of problems graded per problem set, or reduce the number of Aid Centre hours, etc.

Please inform your supervisor as soon as possible if your hours are close to being exhausted – do not wait until close to the end of the term. Also, please discuss any concerns about the job description right at the start, and as they arise through the year.

The responsibility for avoiding overwork is a JOINT ONE between you and your supervisor!

Interpersonal Relationships / Conflict of Interest

Be friendly, but reserved, respectful and professional when dealing with your students. Most teaching assistants are only a few years older than the students in their class. The students and the teaching assistant are members of the same generation. This helps you relate to the students on a personal basis and helps you provide the "personal touch" to their university education. However, remember that you have some degree of authority and power over them, since you are going to be grading them. You are not their

friend. It is not a good idea to go to dinner or movies with them or form other social or personal relationships with them while they are in your class**. If you find that you develop a personal relationship with a student or you are a relative or personal friend of someone who registers in your course section, arrange to have the student transfer to another section.** If that is not possible, tell the course supervisor about the situation and he/she may be able to arrange to have the student's assignments and tests marked by someone else.

Similarly, should it ever be the case that students enrolled in the course you are TAing inform you that they need some additional out-of-class private tutoring and would be happy to *pay you for such services*, please refer them to the Statistics Department. **It is not appropriate for you to do paid private tutoring for students enrolled in a course at the same time as you are teaching/assisting the course.** (It may be possible to do so once you are no longer responsible for the course, but not prior. Indicate to the departmental office your availability for private tutoring for this course).

You may also find that some students consult with you when they are having difficulties in their academic work or in personal areas. There will be areas in which you do not have the skills needed to help students, even though you will want to lend a "sympathetic ear" to them. You should refer them to one of the many experienced counselors at the University. In order to do this, you need to know where to find trained individuals available to help students. For example, college registrars know all the rules about dropping and adding courses; there are counselors available to help with psychological issues. The university provides a study skills counselor, an international student advisor, an ombudsperson, counselors specialized in helping students who have physical or learning disabilities, etc. (please see the list of phone numbers at the beginning of this handbook for a quick reference guide).

2. CONDUCTING TUTORIALS

Some Important Do's and Don'ts

There are different styles of tutorials, but whatever the style, the following general comments apply.

Make sure that you can be heard comfortably from all parts of the room. It is usually necessary to check, because different rooms can turn out to be very different. (One way to check is to ask.) Of course, being audible isn't simply a matter of speaking loudly enough; it also involves speaking slowly and clearly—and to the students, not the chalkboard! Another thing: please speak with inflection and not in a monotone. (How many times have you heard people talking about Professor So-and-So "droning on as usual"?—and how enthusiastic were they about the person and the course?)

The audibility of your students is more likely to be a problem than your own audibility. Especially when they are timid about speaking, students often speak too quietly to be heard by everyone in the room. This problem can be fatal to any discussion if something isn't done about it, but at the same time you need to be careful about how you deal with it, in order not to make students regret having spoken at all. Maybe you can say something about not having caught the last bit of what was said; or, instead of saying anything to the student, paraphrase what was said as a preliminary to inviting comment from other students (or whatever it is that you want to do next). It is a good idea to mention at the first meeting that it is necessary to speak quite loudly to be heard by everyone "in a group this size" or "in this room."

Pauses are another important aspect of speaking. After you ask a question, wait—to allow every one time to think. Also, after a student asks a question, again there needs to be time to think: time for you to think, and probably a longer time for your students to think enough so that their minds will be ready to come to grips with somebody's response to the question. Similarly, statements other than questions are often simply wasted if time is not allowed for them to be absorbed before something else is said.

If English is not your first language, and you do not understand something a student has said to you, please ask them to repeat things slowly or rephrase what they have said. Ask them to let you know if they cannot understand you. Don't pretend to understand, if you do not. Try to SLOW DOWN your speaking speed, to project your voice, to talk directly to the class, and to avoid mumbling. You can also ask the Undergraduate & Graduate Administrator or the Associate Chair of Graduate Studies about university services that are available to help you improve your English if you are interested. Check the department bulletin boards for notices about such classes.

Besides what you say, there is also what goes on to the chalkboard. Be sure that it is legible and visible, large enough and dark enough, and not hidden from students by an obstacle such as a lectern or desk–if in doubt ask the students if they can read what you have written. At the end of the first meeting, have a *look for yourself,* from *a* back corner of the room, at what you have written.

If you think it is worthwhile for students to copy something from the chalkboard, remember that they will need time to do it.

Of course: be well prepared; arrive a few minutes early; and don't run overtime. **Classes begin at 10 minutes past the hour, and end on the hour.**

Students with Disabilities

Students with disabilities may approach you to discuss their special needs. They should go to Accessibility Services to request special accommodations for test or exam writing, not to you, but otherwise, do your best to make the classroom experience accessible for them, and if uncertain about what actions you may take, e.g. regarding quizzes or assignments, consult with your supervisor.

Encouraging Participation

Discussions that generate questions and encourage active participation provide an effective way of student learning.

Some topics give rise to discussion very readily. Many statistics tutorials however are concerned with questions that if taking at face value may not promote discussions. You need to help coax students along. For example: by asking "How would you design and then analyze a study to compare the wear for 2 different shoe sole materials?" the students may not know where to begin. Perhaps start by describing such a study, writing down some simple data, and asking how to proceed to answer the experimenter's questions.

What can be done to get students involved in discussing questions like that? Here are some suggestions:

1. Be gentle. It is essential to have an atmosphere in which students feel welcome to participate and are not afraid that they may be embarrassed or humiliated.

   You will sometimes be surprised at how little students understand. Many things that came easily to you won't come at all easily to average and even above-average students, let alone below-average ones. Your expectations are especially likely to be unrealistic in the case of first and second year students, because many of them don't know how to learn statistics (or to be more accurate, and/or they have wrong ideas about how to do it). You can expect students to ask questions and say things that you will find surprisingly uninformed. When this happens it is important to respond in a positive way, so that neither the student who spoke nor the others who are listening will be intimidated into not asking "stupid" questions in the future. Quite often you will be able to respond to a question by saying in all sincerity that it is an important question to get sorted out—while resolutely hiding your surprise that anyone would need to ask it.

2. Obviously, be ready with questions designed to start discussion and questions designed to lead it further. With many problems the best approach is to stand at the chalkboard and develop the result as the discussion proceeds. Perhaps start by writing down the names of 8 subjects for the study. Ask what type of experimental design would be

appropriate. Ask why one type would be superior to the other type. Is it necessary to randomize? How would you do so? Then use a Random Number Table (or better yet run some off of your computer using R, matlab or Excel) to actually do so (in the back of most intro stats texts). Fabricate or use some data from the textbook, and write the data down on the board (or project to the screen from your computer). Ask how to proceed to analyze the data. Do you have to make any assumptions? How can you check them? What can/should you do if the assumptions are mildly or severely violated? After you ask a question, wait a few moments for the students to process the question and formulate a response. Give different people a chance to respond to questions. Ask if they follow or are lost. Ask if they have questions. Try not to explain something exactly the same way twice.

Often the most valuable approach is to ask the student who provided the solution how they thought of dealing with the problem the way they did. An amazing number of first and second year students only want to know the solutions to problems and don't realize that what they need to learn is how to approach a problem when they don't have any idea what the solution will turn out to be.

If the advice you got when you asked a question was wrong, it is important that you try to think of a way to respond that doesn't make the student who gave the advice feel cut down. Maybe you can convey the impression that the student's response was one that you more than half expected, because students often take that approach to that sort of problem, and then explain that there is a difficulty. Or you might say something like "Yes, it's very tempting to come at the problem that way, but it turns out that there is a difficulty."

3. Try to have one or two questions ready that would be valuable to raise after a problem has been dealt with; sometimes everything goes swiftly and as a result your students haven't had much of a workout. If there is time left over these can be used to give them something to think about. For example, ask what constitutes a type I and type II error, and how

these are controlled. Or about other possible designs or non-parametric approaches to analysis (what do we mean by "non-parametric?"). Perhaps, discuss how to use the course's computer package to analyze such data.

You might ask the students for some further examples of comparative (paired and independent samples) studies, or for hypothetical ones to investigate some question of interest to the student or to you. You can discuss how the procedure you are discussing now ties into/extends/differs from previous procedures (e.g. if discussing the one-way ANOVA F-test, you can ask how this ties in to the t-test and if the assumptions differ; or how this is similar/dissimilar from the chi-square test of association and from a simple regression or correlation analysis).

Don't get carried away though. Keep in mind the time you have and the necessity to discuss a good number of problems during the hour. You can come back to a particularly interesting discussion point at the end, if time permits, or you can just pose some of these questions briefly for students to think about. Or save your best tricks for last, after some important basic material has been covered.

The key point is: ask questions of your class, ask, ask, ask! This will encourage participation, and liven up the class considerably. Even if it is only, "Do you follow so far?" and "What should I do next?"

How Much Participation Is Enough?

Even when a tutorial works well and you have a comfortable atmosphere and active participation, there may be some students who never say anything. You can make a point of ensuring that they can catch your eye at moments when someone (possibly yourself) is just finishing speaking, so that it is clear that they can get a word in edgewise if they want. If they don't want to say anything, and they appear to be listening and thinking, the importance of inveigling them into saying something is debatable. If the

group is too large, as many of our groups are, you may be grateful to have a few quieter students.

When Is General Participation too Time-Consuming?

Not often. Even when an assignment appears to be too long, quite often it isn't because right answers are suggested promptly and few questions are asked or if you aren't very successful at generating discussion and have to fall back on dealing with some of the material by lecturing.

Sometimes, though, the discussion may be unusually time-consuming, or you may use up a lot of time reviewing something important that seems to be widely misunderstood—with the result that you then find yourself running out of time. An obvious solution is to abandon general discussion and "cover" the remaining material quickly yourself. But an alternative worth considering is just to continue the successful discussion and then say that you will distribute written notes on the left-over problems at the next tutorial. If you can do this easily, the advantage of doing it is obvious. But if you ever do get involved in anything like this, be clear about exactly what it is that you are undertaking to do. If you mention that you will bring written answers to the rest of the assignment next time, somebody will want to know how to get them sooner, somebody else will want to know how to get them if they are not at the next tutorial, and the more general question of why don't you provide written solutions to all the problems all the time may also come up!

Other Methods

Dyads and triads: A variation of this method was used successfully by a STA221 TA one year, who even gave colourful names (of birds) to each group. Students, in groups of two or three, discuss an assigned question or problem. All the groups can discuss the same problem or different questions can be given to each group. Students, who are reluctant to speak out in a larger group, will talk when with they are in groups of two or three. Groups are given a stated amount time (5-15 minutes) to complete the task. You can circulate and monitor what is going on. Then, each group reports back to the

rest of the class (or submits a written answer to the quiz question), after selecting a member as its reporter.

Tutorial Quizzes

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 for the First Class

Beforehand, be sure to meet with the course supervisor and discuss the role of the tutorials, obtain the course outline, textbook, solutions manual (not to be lent to your students), and first problem set. Pick some good discussion problems from it.

Check where the tutorial room is in advance, and arrive a few minutes early and greet the students as they arrive. Start on time (i.e. 10 minutes after the hour).

Write your name on the board (along with the course number and title, so they know they are in the correct room). Tell them your name and how you want them to address you (perhaps by first name). Tell them what your area of study or research is and why you are enthusiastic about teaching this course.

DO NOT tell them that the subject of this course is not one of your areas of interest or research, or that you have never taught this course before, and hence, know very little about it (i.e. don't pass on your insecurities to the students). Students have paid for and have a right to expect a competent teacher. Also DOT NOT say things like "I am only a teaching assistant," as if teaching assistants were a low and not very worthwhile category of instructor.

Try to begin to get to know your students during the first class. For example, you could have them fill out index cards with info like-name, area of specialization, math background, why they are taking the course, what they think or expect of this particular subject; maybe even some data for future analysis like height and shoe size.

Run the first class in the way you want the class to operate during the rest of the term. Be sure to get into the statistics content during the first class (perhaps a question and answer session on the first problem set). There may be no quiz at the first tutorial, but you could still post a "quiz" question on the board, for discussion or feedback purposes. If you want the students to participate in discussion, get them involved in discussion during the first

class. If you spend the first session lecturing, you are giving the students the message that the purpose of the class is to listen to you.

End the class a few minutes early, so that individual students can come up to ask you questions about the course.

If you experience any difficulties in your first class, discuss it with your supervisor right away.

Do expect to enjoy your teaching! If you work at being a good teacher, you should find it one of your most enjoyable, professional experiences.

3. GRADING TESTS AND EXAMS

No one really enjoys grading! However, it is an essential duty that must be completed fairly and efficiently.

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.

4. OTHER MATTERS

Stats Aid Centre Hours

If holding hours in the Stats Aid Centre (a drop-in help room) is part of your job:

1. Spread your time among all of the students present. Consider using the blackboard if a number of students appear to have similar questions or difficulties.
2. If you do not know the answer to a question, simply say so but also find out the correct response for next time.
3. Do not just give quick solutions when you are asked about points of theory or about exercise or test problems. Try to lead students towards understanding for themselves.
4. Do be reliable. Stats Aid Centre duties are as important as tutorials. If you cannot make it, there will surely be people there waiting and waiting, growing frustrated, and likely complaining to the departmental office or course supervisor. If you cannot make it for tutorial or Aid Centre, the best approach is to arrange a substitute or swap deal with another TA. Your supervisor will really appreciate not having to get involved. If not possible, report the problem ASAP to your supervisor. In an emergency (e.g., traffic accident, illness, etc.), call the Statistics Department office (416-978-3452), and leave a message that you cannot make it so that a note can be posted at the room or a last minute substitute can be made.

How to Invigilate (Proctor) a Test

Note carefully and follow the instructions of your course supervisor regarding the pick-up of test papers, and try to report early, so that your supervisor won't start worrying about a last minute absence, and what to do about it (there is enough stress on test night!).

Know where the test location is beforehand. You may be asked to post it in tutorial, and should be able to give directions to your students.

Make sure you bring a copy of the **room reservation slip** with you. It should have the phone number for the U of T police, who can open up the room, if it is locked. And on rare occasion, there can be confusion about reservations, so if someone else is claiming the room, and refuses to leave after seeing the reservation, phone the course supervisor for advice right away.

Arrive at the test location at least 15 minutes before the scheduled start, so that you can assist students, and get things organized and started on time. Help students get seated properly. In many rooms, this means ensuring that they sit with one seat between any two students. You might specify that they should sit only in the first, third, fifth, etc. (vertical) rows. If possible, make it difficult for a student to copy from someone directly in front as well. It is extremely important to do everything possible to minimize the opportunities for cheating. Distribute the papers face down, before the start time, announcing that they should not touch the papers yet.

Check that the room conditions are the best possible, e.g. opening windows, checking lighting, telling the music band down the hall to quiet down, etc. Report any bad conditions to the course supervisor afterwards.

Post the starting and ending time on the board, and thereafter, post the current time every 15 minutes. Announce to the class the time when there are 15 minutes left, in a one hour test, and announce the midpoint as well in a 2 hour test.

Announce that students should display their student I.D. cards at the corners of their desks, and that no cell phones or other unauthorized aids should be in their possession. Students' books and bags generally are to be placed somewhere at the front or the back of the test room. Tell the students to begin when appropriate. Whether or not you start exactly on time, it is important to give exactly the specified amount of time. If you give more, surely other students in other tutorials will hear of this, and complain to the course supervisor about their disadvantage.

Circulate during the test, looking for disallowed aids, and other possible problems. Confiscate disallowed aids with the test paper, but give the

student another test paper to finish the rest of the test. If you suspect the possibility of some copying going on, immediately move one of the students. Do not explain why. You are in charge, so just do it. Proving cheating, and pursuing this through the academic channels is extremely difficult. PREVENTION IS WHAT WE HAVE TO FOCUS ON.

Keep all your conversations with other TA's and students as quiet as possible. Don't stand behind a student and read or appear to read his/her paper. This makes a student nervous.

Be very alert for students holding up their hands to get your attention (so don't sit at the front with your head buried in a book). If they ask for help on a question, remember that you cannot help them to solve a problem, e.g. by giving a little hint. You can assist with interpreting of some words or phrases, and occasionally in the interpretation of a question, if you are convinced there is some genuine ambiguity. However, this is a gray area. You do not want to assist students in interpreting things they should be familiar with. You can tell the students that if they are not sure of the interpretation of something, they should make a clear note on the paper indicating their particular interpretation.

Assist late arrivers to get seated quickly. You cannot give them extra time, but you can make a note of the time of arrival, should they arrive quite late, and forward to your supervisor.

Midway through, go around signing in students on a sign-in list, checking out carefully the I.D. for those you do not recognize. Impersonations have been known to occur. Count the signatures, and do a head count.

When there are 2 minutes left, announce that 2 minutes remain and that students should finish up what they are doing, and that now everyone should stay seated until all the papers have been collected and an announcement has been made that they may leave. When time expires, announce that everyone should stop writing. Go around collecting papers in some logical fashion (e.g. back of room to front). Do not ask them to pass their papers down the row. If people start to get up, repeat loudly that everyone must

stay seated. Do not tolerate those who ask for another minute to finish something.

It is important to execute things well at the end, as students have been known to not hand in their papers, later claiming that they in fact did. When you have all the papers, count them. If they do not match your earlier count, immediately check around the room, and later report the discrepancy to your supervisor, and indicate whose paper is missing.

Obtain the phone number of your supervisor, so that you can call during the test if necessary. Find out where the closest phone is located at the test site. If you think you have found an error in the test, call it in right away.

Help

There may be times when you would like to discuss something connected with your teaching with someone else. Other graduate students and your supervisor are obvious possibilities. Another possibility is to talk with the Associate Chair Graduate.

Useful Departmental Contacts for Teaching Assistants		
Jamie Stafford, Department Chair	SS 6019	416-978-5709
Angela Fleury, Department Manager	SS 6020	416-978-4449
Christine Bulguryemez, Assistant to the Chair & Finance Admin	SS 6018	416-978-5041
Alison Gibbs, Undergraduate Associate Chair (STA)		
	SS 5016A	416-946-7589
Sam Broverman, Undergraduate Associate Chair (ACT)		
	SS 6016	416-978-4453
Sheldon Lin, Graduate Associate Chair		
	SS 6006	416-978-5969
Andrea Carter, Graduate & Undergraduate Admin Andrea Carter		
	SS 6022	416-978-5136

Dermot Whelan, IT Manager	SS 6013 416-978-5166

Other Useful Telephone Numbers

University of Toronto Bookstore 416-640-7900
Counseling and Psychological Services (CAPS) 416-978-8070
Accessibility Services 416-978-8060
Academic Success Centre 416-978-7970
Campus Police (Emergency: 978-2222) 416-978-2323
Centre for International Experience 416-978-2564
International Student Advisor 416-946-8509
Graduate Students' Union 416-978-2391
Arts & Science Student Union 416-978-4903
Health Service 416-978-8030
Legal Assistance 416-978-6447
Mathematics & Statistics Library (BA 6141) 416-978-8624
Robarts Library 416-978-8450
Gerstein Science Information Centre 416-978-2280
Lost and Found (St George Campus) 416-978-6252
Ombudsperson 416-946-3485
Community Safety Office 416-978-1485
Sexual Harassment Office 416-978-3908
Sexual and Gender Diversity Office 416-946-5624
Anti-Racism and Cultural Diversity Office 416-978-1259
Status of Women 416-978-2196