

# TA's Handbook

Department of Mathematics, University of Houston

August 24, 2005

## Contents

### 1 Introduction

Throughout this handbook you will find much useful information on your teaching job as a teaching assistant, as well as many strategies or tips for teaching skills.

Whether this is your first teaching assignment or you have already had some teaching experience, we hope that the general information and guidance contained in this handbook will be useful to you. It is intended to provide a broad view of the educational process and also to serve as a resource for you to draw upon when you need practical information and advice about specific aspects of instruction.

The teaching assistant plays a vital role in the education of our undergraduate students. To many first- and second-year undergraduates, you will be the most important link to the University of Houston.

### 2 Your Teaching Assistantship

#### 2.1 TA Assignment

Drs. Henry Decell and Matthew O'Malley are currently responsible for teaching assignments.

In order to avoid conflict with student course schedules, all TAs' must fill out the Course Selection form in the website before the new semester.

If you are supported by a faculty member (fully or partially), it should be indicated in the Course Selection form. If you have certain specific requests or concerns related to your teaching duties, you should include them in the Course Selection form.

Teaching assignment notices will be placed in each TA's mailbox the week before each semester. You must check your mailbox during that week.

## **2.2 Duties and Hours**

Typical duties of a teaching fellow consists of one or some combination of the following:

1. Working in MathLab as a tutor.
2. Conducting recitation sessions for Calculus or Linear Algebra classes.
3. Grading homework for a professor.

In the teaching assignment, you will find your duties, the course number (if you are a recitation class TA), name of the instructor (if you are grader or recitation class TA), and hours (office hours, or the hours required in the MathLab).

## **2.3 End-of-semester evaluations**

At the end of each semester, TAs will be evaluated by professors, or the Director of the MathLab on their academic and teaching performance.

## **2.4 Renewal or loss of the teaching assistantship**

In the early spring of each year, the Graduate Studies Committee will evaluate all TA's academic and teaching performance to determine whether or not to continue or discontinue their teaching fellowship for the next academic year. Students will be notified shortly after the evaluation.

The Graduate Studies Committee may revoke a teaching assistantship at any time if a TA makes serious a mistake repeatedly and is unwilling to correct it.

## **2.5 Who to see for difficulties with teaching**

Report any teaching difficulties or problems to the Graduate Director. Do not procrastinate. Seek advice or help immediately.

## 2.6 Foreign TAs

The University requires all teaching assistants who are not native English speakers to pass the SPEAK test. Any graduate student should either pass the SPEAK test, or equivalently take the course LCC 6034: English for International Teaching Assistants and Faculty, which is offered by the Language and Culture Center (LCC).

Here are some tips for international teaching assistants:

1. **Be relax:** If you are a foreign graduate student and are also adjusting to a new culture and/or language, you may be nervous. But your self-confidence will come. Remember: you are very knowledgeable in your subject or you would not have been chosen to teach.
2. **Be well prepared:** If you have been asked to teach a recitation class, prepare an outline of the material (you want to cover) to which you can easily refer and choose and work out some questions before going to class. Try to anticipate student questions.
3. **Improve your English:** Effective communication skills are important to your success as a teacher. You should find many ways to improve your English. For example, you could find and use video tapes of math courses (e.g., Calculus) in the Library to improve your English. Avoid using words you cannot readily pronounce. If your terms might be misunderstood, write them on the blackboard/white-board.

## 3 Teaching a regular course

If you are a PhD student in your last year, you may request to the Graduate Director to teach a regular course. If approved, you will be assigned to a mentor who usually is a senior faculty member.

You must have experience in teaching recitation classes and have good evaluations. For international students, passing the SPEAK test or the LCC6034 course is a necessary condition.

## 4 Tutoring work

### 4.1 Duties

A TA who receives a notice to work certain hours at MathLab should contact the Director of the MathLab as soon as possible to receive instructions and determine the working schedule.

MathLab is located in 222 Garrison. A TA must follow the rules at MathLab.

## 5 Grading work

### 5.1 Duties

A TA who receives a notice to be a grader for a certain professor should contact the professor in person or by e-mail to receive instruction as soon as possible.

A TA must contact the professor **in person before the new semester**. If the TA is unable to contact the professor by e-mail or by internal mail, the TA may find the professor in the classroom where he/she is teaching.

A TA must follow instructions from the professor.

TA should finish grading work and give graded work back to the instructor in time.

Some instructors may require the TA to have office hours (at his/her office or MathLab).

All grades must be properly recorded. At the end of the semester, all of the records should be given to the professor.

## 6 TAs for Recitation Classes

### 6.1 Duties

A TA who receives a notice to work at the recitation class for Calculus or Linear Algebra for a certain professor should contact the professor to receive instruction as soon as possible.

You may pick up a copy of the textbook from our academic advisor before the new semester.

The duties include (but are not limited to) conducting a recitation class, grading homework and exams, having office hours, and proctoring exams.

### 6.2 The Classes must be met as scheduled

You are not authorized to dismiss or reschedule your class without prior approval of the Chairman, the Associate Chairman, the Director of Undergraduate Studies, or the Director of Graduate Studies.

You are not authorized to have anyone else teach your class without prior approval.

Should you be unable to meet a class due to an unforeseen emergency, you are expected to make every effort to notify the Math Office and request somebody to meet and /or dismiss the class. You can call to the Front Office (713-743-3500), your mentor, the Chairman, the Associate Chairman, the Director of Undergraduate Studies, or the Director of Graduate Studies. Upon your return, you are required to see the Director of Graduate Studies and explain your emergency.

### 6.3 Read the notice of the teaching assignment carefully

Read the teaching assignment carefully. You will find information on class, the name of the instructor, classroom, and office hours, etc.

### 6.4 Record keeping

All grades for quizzes, exams, homework, and in-class work must be properly recorded. At the end of the semester, all of the records should be given to the professor.

### 6.5 The first day of class

Teaching for the first time can be a scary experience. But successful instructors tap that anxiety; their nervous energy makes them dynamic teachers. The following hints may help you to get through that first day of class.

1. **Check out the classroom:** Check out the classroom. When the classroom is empty, you may spend a few minutes “practicing”.
2. **Familiarize yourself with the course syllabus:** Whether teaching a recitation, the first day is often dedicated to explaining the course goals and assignments. Anticipate questions and rehearse your answers.
3. **Meet with the instructor:** As a teaching assistant, you must meet with the course instructor. Ask about the objectives for the course, the grading policy, and what your responsibilities will be. If any part of the syllabus is unclear, be sure to ask about it.
4. **What will be told to students?** Write down vital facts on the board: your name, the course number and section, your office hours, telephone number (department) and your e-mail address.

The purpose of the first class session is to introduce the course to your students. Explain your goals for the semester. Show them the textbooks and explain where they should get the material they need for the class (bookstore, library reserve, reading packet, web page). Be explicit about what assignments must be completed for the course, how grades are accessed, and who does the grading. Explain your policies regarding attendance and late assignments.

5. **Student information:** You may ask your students to fill out 3 x 5 inch index cards with their name, student ID number, e-mail address and telephone number. You

might ask students to list any special needs they have: learning disabilities, an athletic schedule that might interfere with class attendance, or fear of speaking in public. The information on the index card will make it easy for you to set up a grade book or to contact students who are having problems. In general, it can provide information that will make you a better instructor.

6. **Speak slowly and clearly:** Always speak clearly and slowly, repeat important points, and write anything your students should remember on the board.
7. **Start Teaching:** The first class is probably not the best time to introduce complex ideas, theories or problems since many students are still “shopping” for classes and not all of your students will make the first day of class. However, it is important to give students a sample of what they can expect. Introduce the subject, or hold a casual discussion related to the course material. Students need to become familiar with how you will conduct the class, your voice and your expectations. The first class can set the tone for the entire semester.

You may give a review on some basic material.

8. **Be Enthusiastic:** Enthusiasm is often the best teaching technique. If you enjoy and respect the material, your students will also.
9. **After class:** Review. Look through your student index cards or your attendance notes. Begin the process of learning names and preparing a grade/attendance book.

## 6.6 Teaching tips and techniques

Every college instructor dreams of the ideal classroom: students listen attentively, taking notes, asking questions and who are prepared to discuss the weekly assignment. Likewise, students want their courses and recitations to be engaging, intellectually stimulating and relevant to their academic enterprise. While everybody wants the perfect classroom, establishing and maintaining a dynamic classroom requires continuous work. Teaching assistants sometimes complain about unprepared and unmotivated students while, ironically, undergraduate students often grumble about dull instructors and boring classes.

Here are some tips and techniques that may enliven your classroom and stimulate your students critical thinking skills.

1. **Develop a positive relationship:** Research indicates that students who feel comfortable in the classroom and have a positive rapport with the teacher are much more likely to learn.

2. **Know your student's names:** By learning your student names you take the first step in establishing a semester-long relationship with them.
3. **Know your students:** This may sound simple, but it requires a conscious effort.
4. **Create an intellectual classroom:** There are many subtle ways to keep a class engaged in the course material. Make sure that your notes are well organized, that you are speaking clearly and precisely, that you offer signposts (verbal outlines) to make it easier for students to take notes and listen attentively, and always - when lecturing or leading a discussion - that you be energetic. A monotone or a dull, tired voice will put even the most interested student asleep.  
  
As you speak, move around the classroom. Eye contact will force them to pay closer attention to a lecture or help to involve them in a discussion. It helps to make a lecture seem a little more personal.
5. **Use the chalkboard:** The chalkboard is perhaps the most common aid used by instructors and a useful aid that can be used to emphasize important information, clarify (using charts and graphs) difficult ideas and organize a lecture or discussion. Keep the following in mind when using the chalkboard: Write Visibly. Make sure that you are not writing below the line of sight or writing in an illegible scrawl.
6. **Keep the material on the board:** Keep the material on the chalkboard as long as possible. Fill in each panel from right to left (if you are right-handed), one panel at a time, and erase only the first panel when you have filled in the last. Do not erase the original; you want students to be able to see the changes. If you make a mistake, the same rule applies. Correct the mistake with additional notations and explain the mistake but leave the original in place so that your students can follow the corrections.  
  
Students rightly assume that what is on the board is important. Use the chalkboard to highlight and emphasize. Put no insignificant information on the board.
7. **Allow time:** Give students time to copy chalkboard material into their notes before asking them to comment and before moving on to a new topic. Don't assume that the students are always with you. Sometimes they cannot catch up with you. You can tell from their faces that they get lost, or they feel comfortable. You may use words such as "so...", "therefore...", "then...", "and..." to give more time to students.
8. **Be on time for class:** If you are a teaching assistant, be on time for class.
9. **Get to the point:** The recitation class should focus on the material required by the professor. Don't talk about some other irrelevant topics.

10. **Experiment:** Great teachers constantly evaluate themselves and look for new ways to interest their students.

Keep track of your best ideas.

11. **Encourage questions:** Students gain a greater understanding when they become active in the learning process. The simplest way to involve students is to encourage questions. Questions allow students to clarify what they do not know and to explore issues that interest them. Encourage students to interrupt with questions or provide time for questions at natural breaks in the class or recitation.

However, often students do not ask questions because they fear their questions will be dismissed, ignored or brushed aside. If a student feels that his or her questions were unwelcome, that student may never ask another question during the entire semester.

The teacher must weigh the advantages gained by permitting and encouraging questions against the need to maintain tight control.

If some students ask questions which are too special and may not be helpful for general students, you may answer them after the class.

When you ask a question, wait for a response. Do not answer the question yourself; repeat it, or replace it with another question until you have waited at least thirty seconds. Students need time to think about the question and prepare their responses. Research indicates that when you wait ten seconds, students respond more.

Vary the questions you ask. Praise your students answers.

12. **Respect your students:** Avoid sarcasm, biting humor or public critiques of students. No matter how well-intended, a remark that embarrasses a student seldom encourages the student to work harder and often makes it difficult for the student to return to your class at all.

Try to be more positive, and to avoid being negative. Don't say something like "it is a very easy exam," "you even don't know that simple stuff." Remember that some students have a poor math background. Always review some known formulas, even for middle school math.

Try to avoid using words such as "easy," "obvious" "trivially," "clearly" because it may not be easy or obvious for some students.

13. **Treat students as colleagues:** Unintentionally, some instructors patronize their students. More effective instructors treat their students like colleagues and see the classroom as a place where both instructor and student can learn. Share your academic

experience with your students. Let them know where you stand on academic questions, why you might feel a certain theory or position is in error, but provide room for them to disagree with you.

14. **Address inequalities:** Good teachers constantly evaluate their own experiences and make adjustments when necessary. If you notice that foreign students, minority students, male students, or female students are not participating in class, you need to consider how you might address that inequality.

Don't teach just for the advanced students. Thinking about the average students.

15. **Make yourself available:** Maintain reliable office hours (and consider email office hours as well). Respond quickly to telephone or e-mail inquiries from students. Students will visit a teaching assistant once; if they do not find him/her in the first time, they give up.

Before and after class make time to chat informally with your students. When you meet a student in the hall or on the campus, smile and give a personal greeting. Call each student by name; it makes a great deal of difference.

## 7 Research assistants

### 7.1 Research assistants

In addition to teaching fellows, there are currently about 10 to 15 graduate students who are supported either fully or partially by individual faculty members as research assistants. This form of support generally only becomes available to more advanced graduate students who have established a research relationship with an individual faculty member. The same rules on tuition and fees apply to research assistants as apply to teaching fellows.

## 8 Other Considerations

### 8.1 Disabled students

Americans with Disabilities Act of 1990 (ADA) became effective in July of 1992. The ADA:

- 1) prohibits employment discrimination against qualified persons with disabilities;
- 2) requires public places that offer goods and services to be usable and accessible for all people; and

3) provides for reasonable accommodation in employment for qualified individuals with a disability.

It has opened up opportunities in higher education for people with serious disabilities. Today, any institution that receives federal funding must make its programs accessible to those with disabilities. Since UH has complied with the Americans with Disabilities Act (ADA), the number of disabled students at the university has sharply increased. You, as an instructor at UH, have a responsibility to see that the rights of these students are not violated.

Once you have disabled students in your class, you should realize that they are just like the other students. Be careful to treat these students fairly: neither avoid them nor single them out for special treatment, and take care not to insult them by treating them as unusual or by patronizing them.

At the beginning of the semester, make a general announcement inviting students to come to you or to speak with you after class about any questions or problems they may foresee in your course. Demonstrate a willingness to help them in whatever way you can. As a member of your class, the disabled student should be held responsible for the same material as the others. You may and should, however, make any reasonable accommodations you can to assist the student in completing the course requirements.

What kinds of assistance or accommodation should you expect to arrange? This will vary according to the student and should be determined by the student's ADA coordinator. The student may need to take an exam at the the Center for Students with Disabilities (CSD), or spend more time to do homework. Contact the professor and receive advice.

## **8.2 Avoiding sexual harassments**

Sexual harassment is unlawful: It is prohibited by Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972.

Sexual harassment is a serious problem in universities, and it is receiving increasing attention. Sexual harassment is not, however limited to male professors harassing female graduate students; TAs of both sexes may harass or be harassed by undergraduate students and professors of the opposite or the same sex.

Various definitions of sexual harassment have been offered, including "unwanted sexual comments, unwanted sexual overtones, often offensive sexual materials, unwelcome fondling, and sexual assault". Another definition is that sexual harassment is promotion of stereotypes, unnecessary touching, patting, pinching, leering and/or ogling, sexual demands accompanied by implied or overt threats.

TAs should be very circumspect in their dealings with students. Charges of sexual harassment may be taken to court; even if not proved, an accusation would be very damaging

to a TA.

In addition to avoiding such actions, TAs must also be very careful when dealing with students who are attracted to them. Although most universities do not have a formal rule prohibiting TAs from dating students, such behavior is clearly not a good idea. Students are often young and impressionable and can be hurt by an aborted romance with a TA. Also, TAs who date students will find themselves facing a conflict of interest when assigning grades.

If you have any question, contact the Chairman or the Graduate Director.

When a student is in your office, you always keep your office door open.

### **8.3 Academic integrity**

Academic integrity is an issue that goes hand in hand with the issue of testing and grading because no system of testing and grading can be a fair one unless all students are reasonably assured of competing equally for grades. No student should be allowed an unfair advantage through the use of dishonest methods.

Make it difficult for students to cheat on exams. Try to make the atmosphere comfortable within limits.

After making up a test, keep it in a secure place. Do not leave tests lying around the department printers and the office, or in your departmental mail box.

If students are allowed to bring calculators into the exam, decide in advance if there are to be any restrictions: are programmable calculators permissible? Will students be allowed to share calculators?

Walk around the classroom during the exam. Do not leave the classroom unattended. If you sit down, do so in the back of the room.

If you see a student cheating during the exam, take action immediately. A student who seems to be trying to peer at another student's paper may be stopped with a meaningful look. If the student continues to look, insist that the student move to another part of the room.

If you do find clear evidence of cheating on an exam or a paper, remember that you are obligated to report the case to the faculty advisor for the class or to the department chair. You are required to report any incident of suspected academic dishonesty. The student will get a fair hearing, but if found guilty, will be penalized for this act. Cheating by a single student is eminently unfair to the others in the class; it is your obligation to protect the rights of honest students. If you do not, they in turn will feel cheated by you.

## **8.4 Supplies Policies**

All department equipments and materials such as xerox machine, telephones, computers, print papers, mails and supplies are provided for professional use only, not for personal use.