

**The University of Chicago
Division of Biological Sciences**



Teaching Assistant Handbook

2008 - 2009

2008-2009 TEACHING ASSISTANT HANDBOOK

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I. TEACHING ASSISTANT AGREEMENT

Before you begin a teaching assistantship, it is important to meet with the professor and establish the goals and expectations—both those that the professor has for you as the TA and those that you might have for the professor. You may want to sit down with the professor and write up a “contract” delineating the tasks you are expected to perform. Having a written understanding will prevent any discrepancies over what your role as a TA is. Some issues you may want to address follow:

A. Possible Duties for the Teaching Assistant

- **Attend lectures/labs**
- **Present a formal lecture**
 - It is recommended that everyone TAing for credit should present at least one lecture.
- **Run discussion sessions**
 - Establish what material should be covered in the discussions
 - Review what was covered in lectures?
 - Cover additional materials?
 - Administer quizzes?
 - Review homework/tests?
- **Office hours**
- **Pre-exam review sessions**
- **Writing homework/exams**—all, some or none
- **Grading homework/exams**
- **Non-teaching duties** (photocopying, handling AV equipment, etc.).

B. Duties for the Professor

- **Observation**
 - Attend some discussion sessions to evaluate the TA’s performance
 - Observe TA’s lecture and provide constructive feedback
- **Give TA guidelines**
 - What to cover in discussion session
 - How to grade

C. Additional Issues to Discuss

- **How to handle cheating/plagiarism, late work, changing test times, etc.**

It is a good idea to have a firm policy that is announced to the class at the start. That way, there is no misunderstanding over what constitutes cheating and what the penalties shall be.

- **Weekly time commitment**

- **Feedback**

You might want to schedule a midterm meeting with the professor to evaluate how well you have met the goals delineated in the “contract”. It might be useful to hear the professor’s opinion of your teaching skills at a time when you can still work to correct any flaws.

II. THE FIRST CLASS

It is said that anticipation is half the fun when you are looking forward to an event. It is also half the fear when you are apprehensive about an unknown quantity. Most teachers are not immune to anxiety before starting a class, whether they are facing a new set of students, teaching a new course, or standing up in front of an audience for the very first time. The knowledge that the first class sets the tone for the whole course does not help. Careful preparation goes a long way to mitigate nervous anticipation. If you are well prepared, you will make a much better impression on your students, your presentation will be smoother and, if you have written notes, you will have something to cling to if nervousness makes you forget your own name.

If you have the opportunity to deliver a formal lecture while a TA (hopefully you will), the following information should be helpful. Some of what follows pertains to the actual delivery of a formal lecture as well as leading your first discussion section.

A. Preparation

- Try to visit the room where you will be teaching. Is it big enough? Can you rearrange the chairs for a discussion group? Can the blackboard be seen clearly from all parts of the room? If you plan to use audio-visual equipment, are there convenient electrical outlets? A screen?
- Talk to people who have TA'd the course before. Their experiences can provide you with useful information about typical questions that students ask, problems that have arisen, points that need extra coverage, etc. You can pump these more experienced TAs for "how-to" tips as well. There is nothing that says you cannot build on other people's experience.
- Talk to the course instructor to find out what he or she expects of you. The instructor will provide you with a syllabus of the course so you know what material is being covered. This will help you plan your first session. Remember too, course instructors will be evaluating your teaching performance and the better they get to know you as a person, the more favorably they will look on you.
- Find out if the books needed for the course are available in the bookstore and how much they cost. Also check that books have been placed on reserve in the library, if applicable. The Course Director should be able to obtain a teaching copy of the textbook for you to use. Please return it at the end of the course for use by the next TA.
- Chalk website: Determine if and how you are going to utilize the Chalk website for the course. This has become a great resource for the instructors and the students. The material from last years course may be archived and just needs to be updated.
- One of the greatest fears of new teachers is that they will run out of something to say after ten minutes. One way around that is to over-prepare, to set out more material than can ever be covered in one class. This will give you confidence, and if you structure your material so that you can continue in the next class, you will not waste your preparation.

- Practice your presentation before the class starts, if possible before an audience—a close friend or your spouse—or in front of a mirror. Ask for feedback.

B. Conducting the First Class

Your students look to you to set the pace and tone for the class. Come early and stay late. If they see someone who is well organized, responsive to their inquiries, and enthusiastic about the course material, they will feel more confident and will be ready to cooperate with you throughout the rest of the course.

- Although some instructors may want you to plunge straight into the material, spending at least the first part of the class on general, administrative, non-threatening details will help both you and the students settle down. Be ready to start the class at the assigned time. Your preparation and organization will set the tone for the class.
- Tell the students your name and how you would like them to address you (Mr., Ms., your first name, etc.).
- Write your name and the course name on the blackboard. This may seem repetitious but it serves several functions. Latecomers will see that they have come to the right place. Those in the wrong place have a chance to slip out while you are writing and your back is turned. Hearing your name and seeing it written will fix it in your students' minds.
- State your office hours, your phone number and your office address. Say who will take messages if you are not available. Be available to students before and after class for questions and comments. Many students only need 5 minutes of your time to solve their problem and may not feel it necessary to make it your office hours to talk about it.
- If you like, tell the students a bit about yourself, the research you have done and why you are interested in this subject.
- Find out about your students. If the class is small, ask the students to tell you their names and something about themselves. This also helps them introduce themselves to each other. If the class is too large, consider using a seating chart for the first couple of weeks. Students can also write their names on 3 x 5 cards and include their addresses and phone numbers. You can make a master list from this and distribute it the next session. This helps you track down any student you need to talk to and helps the students make contact with each other. Try to learn your students' names as soon as possible. They will appreciate your interest in them.
- Distribute copies of the syllabus. These should also include the course number and name, your name, office address and phone. You can never have too much repetition of important details.
- Briefly outline the material to be covered in class and what you expect the students to do. This is the part that interests the students most. Tell them the required textbooks and readings, the number and dates of examinations, information about assignments, guidelines for papers or class projects, how the course will be graded, whether class notes exist, and other useful information. The students will appreciate how organized you are.
- Make clear the policies about attendance, latecomers, assignment deadlines, and other formal details.

- Be prepared to answer students' questions about the course. If they come up with a question you are not prepared for, do not bluff your way through. Note the question and promise an answer next session. *Deliver on that promise.*
- Start covering actual course material. Doing substantive work will help wavering students to make up their minds whether to stay with you or drop the class. Both you and the students will derive satisfaction at having covered some ground already.

III. OFFICE HOURS

The department may or may not assign offices for use by teaching assistants. You may well have to conduct tutoring sessions in your own research facilities, so make sure there is some degree of privacy.

You may be expected to hold regular office hours (2-3 per week) for seeing students on a walk-in basis. Try to schedule a combination of times throughout the week when your students are likely to be free. Finally, offer meetings by appointment for those who cannot make your regular hours. If you are working as a lab TA, you may want to hold some of your office hours in the lab to answer procedural questions.

Office hours are useful for going over mistakes on papers and tests, discussing future assignments, clarifying points in a previous lecture or demonstration or just getting to know your students better. The sooner you meet face to face, the sooner you can all relax. The rapport you can establish with students in office hours is likely to carry over to the classroom.

You may find that many students do not take advantage of this opportunity to talk with you informally. There are several ways to encourage them. Some TAs make at least one meeting mandatory. If you can get students to show up at least once and they find the experience pleasant and useful, they are more likely to turn up again voluntarily. Let them know frequently that they are welcome. Invite them individually. A comment on a paper (e.g. "Please see me about this") produces around a 75 percent response.

In reality, you will find student visits will be cyclical. Expect to see more faces at the door just before exams or before the deadline for a paper or project. You might need to schedule more hours to cope with the rush if you have a large class.

A word of caution: As a new TA, you might be tempted to be too helpful, rewriting your students' work, or giving them answers that they should be able to work out for themselves. You may listen to heartrending stories of why work is delayed and find yourself extending deadlines far beyond the bounds of reality. Yes, you do want to help the students overcome problems and do the best they can, but you are not there to do the work for them. Do not assume the role of student in your own class!

IV. LECTURING

A. Planning

- You should know your subject matter thoroughly if you are going to be able to talk about it for an hour or more.
- Analyze your audience. What level are they? Do the students have any prior knowledge of the material you are offering?
- Gather your materials together before you write so you have all the necessary sources at hand. Get together enough material so you can be selective. If you cram in everything you know about a subject, your lecture will end up being just a string of facts and very dull.
- Decide on your format. Are you going to write out your talk word for word, write an outline, or have notes of key words to prompt you? Whatever you decide, you should have done enough detailed preparation to be comfortable with the content of the lecture.
- Practice the lecture. In front of a mirror, with a live audience (friend, spouse), or with a tape recorder.

B. Writing

- Write out what you plan to say. If you are nervous about public speaking, writing out the complete text might seem the safest way. You don't have to do so much instant thinking and have only one thing to concentrate on. This method has the drawback of being inflexible, however, in case someone asks questions. There is also a tendency to use vocabulary that is more appropriate to read than to hear, so you may sound as if you are reading, not speaking. You can easily lose your place, too.
- Alternatively, write an outline, with main topics and subheadings of points to be covered. This can be as detailed or sketchy as you like. It has the advantage of forcing you to use more spontaneous language so you will sound more natural. You can also see ahead and judge what to leave out if time is running short. If you are not yet a fluent speaker, there are disadvantages of "er's" and "um's", fumbling for the right words, or a danger of not making the connecting points of your topics clear to the students.
- Plan on covering not more than four or five major points in an hour. There is a limit to what people can absorb in one hour of talk. An audience's attention wanders after about 15 minutes. To maintain the audience's attention, use examples to illustrate your points. Relating theory to the real world helps people to grasp a concept. Briefly summarize each point as you finish talking about it, which will help students catch up. You can insert an anecdote or even a joke at the points when attention seems to be falling off *as long as the anecdote or joke is appropriate to the material.*

C. Presentation

Be enthusiastic about your material. This applies whenever you are teaching, whether in a lecture, a discussion group, a lab or a field trip. If you appear to be bored and uninterested, you will very quickly transmit the feeling to your class. After all, if you can't be bothered, why should they? On the other hand, if they feel your interest and enthusiasm, it will help generate their own.

- Speak clearly and loudly. You must be heard at the back of the room. If you normally have a quiet voice, try going to the lecture room in advance with a friend who sits at the back of the room. Practice a few minutes of your lecture, projecting your voice toward your friend so he or she can hear you clearly. This gives you the opportunity to get used to the pitch at which you are going to have to speak, however unnatural it feels at first.
- Let students know up front how you want to deal with questions—will you stop at intervals for questions, accept them at the end of the period or be prepared to answer them at any point during the hour?
- Eye contact is important. Avoid turning your back to the students. If you need to read from the screen, stand far enough to the side of the room to where you can easily look at the screen and look back at the students. Look at the class often, even if you are reading your lecture. Don't just sweep round the room with your eyes but look directly at students. You can choose a few students around the room and talk to them. This will make your lecture more personal for everyone. However, do not concentrate on just one student or you will make that person embarrassed and uncomfortable.
- Do not be afraid to use gestures and different poses to keep your students visually interested. Giving a lecture is more of a theatrical performance than you think. Standing glued to the lectern with your hands at your sides is not much to look at. You can sit on the desk, lean against the wall, move around the room a bit. The more relaxed and casual you can look, the more interested the students will be, because you will project an air of confidence in your subject. But keep to what suits your personality. If it is totally unnatural for you to gesture or move around, then do not do it, since it will just look forced.
- On the other hand, do not overdo the movement. A continual pacing up and down can be very distracting for the audience. Try to curb distracting mannerisms, such as fiddling with your hair or tugging at your tie or necklace.
- If you need a moment for thought, pause silently. Try to avoid “um,” “er,” “ahem,” as punctuation for your thoughts. It is a difficult habit to break, but too many “um's” and “er's” break up your delivery and irritate your audience.
- If students are taking notes, allow some time for them to write down key points. People can absorb information aurally much faster than you can talk, but they can only write about one-fifth as fast as you speak. Repeat important new points or concepts, write key words on the blackboard, give examples.
- Since you do not want to encourage students to try to write down your words verbatim, you may want to give handouts at the beginning of the class, with an outline of the lecture, or complex data that you cannot cover thoroughly in the lecture. Leave wide margins and white space so students can add their own notes. Number all the pages of handouts and staple the sheets together. The ability of a large number of people to mix up loose pages is phenomenal.

D. Teaching Aids

BLACKBOARD

- Use for presenting difficult terms, an outline of your talk, diagrams, technical data, or emphasis.
- The blackboard is useful if you tend to talk too fast—having to write things down can slow your pace of speaking.
- Clean off the blackboard at the beginning of the session or your students will ignore you while they read the notes left on the board from the previous class.
- Do not *fill* the board with material before class—students will get caught up in copying down everything you have written and will ignore what you are saying.
- Unless the lecture room is sloped, the bottom part of the board will probably not be easily visible from the back of the room. You should find out beforehand what the cut-off point is.
- Do not talk with your face to the board, even though the silence while you write on the board may seem like an eternity. With practice, you will learn to write partially facing the class so you can talk.
- Do not stand in front of what you have just written.
- Do not erase what you have written too quickly. Students need time to copy it down. It is difficult for them to think and copy at the same time, so they will not take in what you are saying if you continue to talk while they write.
- Write legibly and boldly and LARGE. If your writing is terminally illegible, forget the blackboard as a tool.

OVERHEAD PROJECTOR

- Transparencies work best if prepared in advance, rather than writing them as you go. If you do write on transparencies as you talk, look at what is being projected as you would at slides. Speakers who use this visual aid often write too small or too much for the overhead projector to handle. Worse yet, they stand at the projector pointing to something on the transparency and obscure from the audience what is being projected!
- Limit the amount of information you prepare on a transparency. Six words per line and six lines per transparency is about the maximum.
- Do not make your lecture and transparencies duplicates of one another.
- Be careful about overusing transparencies or slides where you have to darken the room completely. Leave enough light on so that students can see to write their lecture notes and they do not fall asleep.

HANDOUTS

- Use them instead of the blackboard for structures and complicated diagrams.
- Remember to leave plenty of white space for students to add their own notes.
- Do not make the handouts too detailed or students will either spend the rest of the class reading the notes or will rely on the notes and not turn up for class.

DIGITAL PROJECTORS AND POWERPOINT

- Digital projectors are available from the audio/visual offices for each instructor. You should make arrangements to check them out in advance. You should also coordinate with the professor as to who will provide the laptop computer for the lecture and load his / her presentation onto the computer before coming to class.
- Make sure you know how to configure the laptop for the projector prior to coming to the first class. This can be a time consuming process and may end up cutting into lecture time.
- Make sure the presentation is as large as possible for the screen and in sharp focus.
- Avoid using animations. This can often be distraction for the students. A limited amount of animation to help organize the presentation is acceptable.

CHALK WEBSITE

- Most of the courses on campus utilize the Chalk website. This website provides a means of sending e-mail, posting announcements, tracking grades and attendance, posting lecture handouts, and provide contact information for the students and instructors.

- Most instructors allow the teaching assistants to update and maintain the website for the duration of the course. You should discuss with the professor in advance as to how he / she would like to incorporate this into the course, and have the website set-up prior to the first class. Most students will navigate to the site to look at the syllabus and meeting schedule.
- More information on the Chalk website can be found at <http://chalk.uchicago.edu>

V. DISCUSSION SECTIONS

Discussion groups in the Biological Sciences at the University of Chicago typically focus on developing or clarifying material covered in lectures given by the Course Director. They provide an opportunity for students to voice their own ideas about the material, to ask questions, and discuss the application of principles raised in lectures. The TA provides feedback, identifies and elucidates parts of the material that were obscure or confusing to students and develops problems for the class to solve or points to be covered in greater depth. Many faculty members consider discussions less demanding than lectures, but they can be the most difficult part of teaching.

A. Preparation

- First and foremost, you will be most helpful to your students in discussion sessions if you attend all the lectures and can gauge the professor's performance and the students' receptivity to the material for yourself. Discuss with the Course Director the material you should cover and what the goal of the discussion is. Are you reviewing lecture material? Preparing for an exam? Emphasizing analytical skills? You will mostly be expanding on material already covered, not presenting brand new material. Stylistically, you and the course instructor may differ. You need to adapt your teaching to what the professor has dealt with and be prepared to fill in gaps.
- If it is practical, arrange the room in a semicircle or some other way so that students can all see each other and you are part of the group, not standing at the head of the class. In many cases, however, you will need access to a blackboard to elucidate points or write down key words.
- If you are not sure how to get the ball rolling, provide students with specific questions or problem sets ahead of time for them to prepare for the next session. Anticipate questions that may come up or common mistakes that may occur in the problem sets.

B. During Sessions

There are two basic ways of conducting a discussion: to direct the conversation, that is, to ask questions that call for specific responses and where you control the discussion closely, or hold open-ended discussions that throw the floor open to allow students to formulate the questions and control the discussion, with you in the position of guide. In the biological sciences, a combination of methods is often used.

QUESTIONS

- Avoid questions that, however complicated they may be, only require a yes or no answer. Avoid rhetorical questions requiring no answer; programmed answer questions, with a specific answer in mind (this turns a discussion into a guessing game); vague questions that are so broad that students do not know where to begin an answer.
- When you do ask a question, give students time to answer. If you are asking for a thoughtful response, you must give students time to think. Wait at least 15 seconds for a response (try it out in private first to see how long a pause that means). One of the most common mistakes TAs make is expecting instant replies and assuming that silence means ignorance or non-cooperation. If an answer is complex, students need time to formulate their thoughts. If there is no answer after your pause, rephrase the question and try again (beware of rephrasing that changes the actual question being asked) or approach the subject from a different perspective. Do not be afraid of silence. If you start answering your own questions quickly, in order to fill the vacuum of silence and move on, your students will stop trying and will let you do all the work, but if you wait a while, they will feel as uncomfortable about silence as you do and will try to fill the gap.
- Beware, however, of pitching your questions at the wrong level of knowledge. You are never going to start up a discussion if you are asking questions way above the heads of your students. It is better to start off at a very basic level, where you can assume everyone is knowledgeable, and move to newer areas.

DO'S AND DON'TS

- When someone makes a mistake, correct it without disparagement. Never indulge in put-downs, even if phrased humorously. If students feel you might try to embarrass or humiliate them, they will shut up.
- On the other hand, do not be overly tolerant of errors; try to strike a balance between challenge and encouragement.
- Encourage students with your body language.
- Show enthusiasm when listening to a response by smiling expectantly and nodding as a student talks.
- Keep eye contact with the student who is talking.
- Be sensitive to clues you give the students. They will try to read you so that they can respond appropriately and give you what they think you *really* want.

THE STUDENT WHO TALKS TOO MUCH

One way of toning down the avid talker and pulling in non-participants is to avoid looking in the direction of the persister while structuring comments in a way that precludes that person's participation (e.g. "Let's hear from someone who has not yet contributed"). You can also talk privately to that person and ask for his or her cooperation in making way for the quieter students.

THE STUDENT WHO WON'T TALK

This can be helped by having students prepare material beforehand or by allowing a short time for students to write down the answer to a question. Having something written to refer to can help a shy or timid student. Calling on someone directly may help. Often shy students have something to say, but lack the courage to make the first move. Once the silent ones speak, encourage them with positive body language. If students find their tentative efforts at contribution are well received, they may have more courage next time.

A LULL IN THE DISCUSSION

Relax. Every conversation needs a chance to catch its breath. People may be digesting what they have learned or the topic may be exhausted. If the pauses are too frequent, however, you may need to pay more attention to your material. You may also be inadvertently shutting down the flow of talk by dominating rather than facilitating the discussion.

YOU RUN OUT OF MATERIAL

If that happens, ask if students have any more questions (do not forget to give them time to think of some) or if there are any other topics they would like to discuss. If not, let them go early. Do not keep them penned down the whole hour just for form's sake.

Discussion sections should help students sort out their ideas and comprehension of a subject and put their thoughts in order. Students, especially undergraduates, are often semi-articulate when they put their thoughts into words and may make muddled or confused statements. If a student asks a question that comes out garbled, rephrase the question before you answer it for the benefit of the other students, to make sure they know what their colleague was trying to say, or lead the student back over his or her statement with further questions to help the student analyze and structure his or her ideas in order to present them verbally in a comprehensible manner. Ask the student for examples or restate points for him to verify or reject. This is an exercise that involves a considerable amount of mental discipline but is permanently rewarding as students gradually learn to express themselves clearly.

At the end of the session you can summarize the points the students have made. This will confirm their positive contributions and make them feel good about participating next time.

VI. LABORATORY SECTIONS

A. Planning

- Meet with the course instructor to determine what your responsibilities are and what you are supposed to accomplish. Be sure you know the principles that the experiments in the lab are meant to demonstrate. Study the theory on which the experiments are based. This will help you to deal with most student questions.
- Perform the experiment yourself in advance to see if it will work as anticipated. Going through the work yourself will also make you aware of difficult areas where you may have to offer the students more help. Pay attention to the time taken for each part of the experiment, so you can help your students pace themselves. If handouts are useful, prepare them ahead of time.
- At the start of the quarter, check over all the equipment in the lab—what there is, how many of each item, where it is kept and whether it is working properly. You will be able to judge whether you will have to divide the class into pairs or groups or whether there is enough space and equipment for everyone to work separately. Find out where supplies are kept and who is responsible for ordering more and know what to do if something breaks. Check all these points with the course instructor for guidance.

B. Presentation

- Explain the safety procedures with the students and warn them about specific potential hazards. Explain lab rules (which you should strictly adhere to yourself), what the penalties are for leaving a mess or being late, etc.
- Tell the students the purpose of the lab and what you expect them to do. Provide them with any necessary instructions. Demonstrate any part of the procedure that may be problematic, to avoid having to explain it multiple times as each group gets to the difficult part. Tell them, or write on the board, the approximate amount of time they should spend on each part of the experiment.
- Inform the class of the procedures for writing up and submitting results and reports. Be as explicit as possible.
- Do not expect a quiet and orderly session, especially if students have to work in pairs or groups. They should be encouraged to work together and help each other.
- Circulate among the groups. Resist the temptation to do the experiment for them or jump in to correct a problem. Try instead to ask questions that will get them to work out the problem for themselves. Ask questions to find out if they know what they are doing and where they are heading. Be accessible and friendly but do not try to control or interfere. Encourage the students to ask you questions.

- Summarize the results at the end of the session with the whole class. If there is time, you could have a short discussion about the experiment to find out what the students have absorbed. Introduce the next session's experiment briefly, so students know what to expect.
- It is not acceptable to allow students to remain in the laboratory to finish an experiment without a responsible individual (i.e., TA) present. Decide on a policy ahead of time with the course instructor on how to handle slow workers. If the instructor wishes to set time limits, the students will have to curtail the experiment without completing it; otherwise, be prepared to miss dinner some days!
- Be sure students clean up their areas before they leave. Report breakages as soon as possible and set any broken apparatus to one side, clearly labeled, and take stock of consumable reagents and materials before the next session. The success of the next session often depends on the state of the laboratory after the previous session.

VII. EVALUATIONS

A. Examinations

Testing is an important two-way communication. It lets both you and your students know how much they have learned. It also can tell you how well you are teaching. Teaching Assistants at the University of Chicago generally do not construct the formal (midterm and final) examinations for a course but they may be asked to submit test questions to be included in exams and edit the final draft of exams. Additionally, they may wish to give quizzes or small tests during the course to monitor their students' comprehension and progress. A pretest at the beginning of the course can be appropriate, to assess what the students already know about what is to be learned. Discovering their strengths and weaknesses can help you modify your teaching accordingly.

PURPOSE

Before you construct the test, review the objectives of the course. Your test should reflect the skills you are trying to develop in your students. For example, if the course material mostly involves the memorization of facts, you should not give a test that asks the students to analyze the material. You have not prepared them to do that. You should also test different subjects in proportion to the emphasis they have been given in class, since the students will study that way.

Keep in mind that a student may comprehend the material well but may not be able to integrate it as quickly as you can. Be sure to allow ample time for the test, or do not make the questions too long. Do not use trick questions.

Remember that the point of a test is to find out how much your students know, not to prove how much you know. Do not test material that was not covered in class. Even if you have told students they are responsible for learning material that has not been discussed in class, they will perceive an exam as unfair that asks about material you have not covered.

PREPARATION

Exam questions are of two basic types:

(1) Limited-Choice Questions

The student chooses among given alternative answers (multiple choice, true/false, matching items). These are easier to grade but harder to prepare.

(2) Open-Ended Questions

The students have to formulate their own answers (sentence completion, short answer, essay, problems). Essays are less appropriate for a quiz, since they take longer for the students to write, and they cover less material, although in greater depth.

There is no general policy at the University of Chicago as to what kind of exams may be set and you can do what suits you best. A very practical form for periodical quizzes in undergraduate courses is the short answer. With this format you can ask for definitions or short discussions. It gives the students practice in writing, forces them to think, and does not take too long to complete. Such tests are less difficult for you to write than, say, multiple choice, where you have to think of three or four plausible answers *as well as* the correct one. For laboratory courses or advanced graduate level or medical school courses, problem sets or essays might be more thought-provoking exercises.

It is not a good idea to include questions such that the answer to one question depends on the answer to a previous one. If students make a mistake the first time, they will perpetuate the error and be penalized multiple times for one mistake. Also, avoid providing clues in one question for the answer in another.

Proofread the exam after you have written it and get someone else who knows the material to proofread it as well. Even minor errors can cause big problems later. Be sure you prepare enough copies of the exam and check all the copies to ensure there are no missing pages. Ask a colleague or another TA to read over the test for ambiguities in the questions or in the preliminary instructions. Also ask your proofreaders what their answers to your test would be, or tell them the answers you expect. You may be asking a different question from the one you thought you were asking.

RETURNING THE EXAM

Grade and hand back tests as soon as possible so students can derive the maximum benefit from the exam by seeing the evaluation while the test is still fresh in their minds. Unless you intend to discuss the test in class, hand it back at the end of the session, otherwise the students will be looking at their grades and mistakes and ignoring what you are trying to teach.

B. Proctoring

- Check ahead of time with the course instructor about handling unexpected events (late arrival, cheating, leaving the room, illnesses, talking, eating, smoking, etc.).
- When you are proctoring an exam, do not do your own work and forget what is happening in front of you. You are there to prevent cheating. Keep looking round the room periodically but do not distract students or make them nervous by standing over them. At the end of the allotted time, collect exams as quickly as possible and keep an eye on students who show a tendency to linger behind.
- You are also there to answer any questions that arise. If the exam is being given in more than one room, make sure *all* the students receive all the same information.

C. Grading

- Your course instructor may ask you to grade exams. He or she will probably provide you with a key to the answers and instructions on what weight to give the various items. You should discuss grading with the course instructor and any other TAs in the course ahead of time to ensure that you all apply uniform criteria and thus grade fairly across the class. Decide in advance if there is more than one correct answer to a question and what to do about partially correct answers.
- One of the problems of grading a large number of exams or papers is maintaining consistency. If you try to read them all at the same sitting your interest will naturally wane and you will pay less and less attention as you read on. Try to read small batches at a time and take breaks or read all the answers to one question before beginning to grade other questions. After a break, read over the last couple of exams you already graded to see that you are still being fair. Another useful technique, especially for large classes, is to look them all over first to gain a flavor of how well (or badly) the class did as a whole; then go through in detail and assign points. If the majority of the class did poorly on a particular question, you may want to modify the point assignment, etc.
- If the grading is divided between multiple teaching assistants, do not have more than one TA grading the same question (unless it is a multiple choice exam). For example, if there are three essay questions and three TAs, each TA should grade one question for the entire class to maintain consistency.
- When grading the tests throughout the quarter, try to be fair and consistent. It is not reasonable to start off grading tests leniently at the beginning of the quarter and then suddenly become picky and harsh in the final. You will bewilder the students, for whom grades are very important and who will have adjusted their learning efforts to match what they think you require of them.
- If you have papers to grade, write comments on what you read. A paper handed back with just a grade and no comments is disappointing to students, who would like to know what you thought of their efforts. Try to say enough so students can learn something from your comments. A “NO!” or “Wrong!” in the margin, without further comment, is not much help. Write praise as well as criticism or the effect of your comments is too downbeat. A “good point” written in the margin will cheer up a student who otherwise has not done well.
- If the exam consists of problems or essay-type questions, make sure the partial credit is specified where pertinent and final points given at the end of the problem or on top of the page (if each page has one question). Clearly distinguish partial from total credit. Since the exam is a learning experience, it is helpful to provide a detailed solution to the problems or essays, showing where partial credit was given, after the exam. These are obviously the best kinds of exam questions, but invariably the issue of partial credit causes the greatest consternation on the part of students. Two points lost can be a serious blow to a student’s ego as well as making a difference in letter-grade cutoffs, etc.
- Write comments and grades in ink so that they cannot readily be altered. However, it can be very depressing to get back a paper or exam covered in red ink, so remember to write both positive and negative comments. It is often helpful to write some comment after the last sentence of the exam or draw a line where the essay or problem solution stops, to prevent add-ons where students innocently come to you later and point to a final

paragraph or further derivation that you had “missed”, which now includes all the points that were not there before.

- Keep records of your evaluations and grading. These may be helpful if students dispute your decisions. It is important to take students seriously in a matter of dispute. You may have added up scores wrongly, or missed some material. If you offer to re-grade an exam, do not do it on the spot. Have the student leave the test with you. This gives you time to look things over carefully and also gives the student time to calm down. If the grade remains the same, explain why and what the standards are.
- Be careful not to get caught between course instructor and student in grade disputes. Find out ahead of time if you or the course instructor are expected to settle disputes and if the instructor will back you or at least consult with you if a student goes directly to the course instructor for regarding. It is the instructor’s ultimate decision on how to handle these matters, but it undermines your efforts and authority if you do not both work together.
- Do not post individual results publicly. Students have a right to confidentiality. Make sure the grade is not visible when handing back the exams. Either fold the exams to conceal the grade or write them on the inside cover of the bluebook. In addition, you can post the grades on the chalk website. Each student can only see their grades. The website will also calculate the mean and distribution for you automatically.
- Do post answers and overall test results (class average, mean, and letter grade cutoffs) so students know how they fared. In your answer key, address some of the most common mistakes made on the exam. This can reduce the number of students who come back to you with questions about the exam.

D. TA Evaluation

At the end of the quarter, TAs hand in questionnaires about their TAships, whether they were good teaching experiences, what the duties involved, how much student contact they had, and so forth. Here are some of their comments from past years:

“A good experience because it gives you the confidence to deal with students and teaches you how to talk in a group and lead sessions.”

“It is very important for students to learn how to teach if they are going to become professors, but learning by being a TA depends very much on the course director.”

“Invaluable; a very positive experience.”

“Good experience, only limited by the amount of time I could put into preparation for lectures and discussions.”

“The TA course would be a benefit to anyone, whether they have teaching experience or not.”

“The undergraduate population contains elements which are better than the graduate population and it is a pleasure to teach them.”

“As my first teaching experience it was very valuable. I feel bad that my students had to be my guinea pigs.”

“Good experience, interesting, sometimes fun, educational.”

“I think I learned quite a bit about my own skills and inadequacies. This experience has certainly helped me analyze my teaching methods and abilities.”

“I gained a lot of confidence as a teacher and learned to think on my feet.”

“It was an excellent opportunity to review basic material.”

“I have learned a lot while teaching this class and I have gained confidence as a result.”

“I found [the experience] quite rewarding but quite scary. We need more good teachers.”

“A person looking for a TA position should be prepared to put in a significant amount of time and want to talk to students. I would have taught to get the experience, even without the requirement.”

VIII. GENERAL INFORMATION

A. Health & Safety

No one knows when an emergency will occur, so it is important to know about basic safety practices. Planning ahead is important. The students in your class will look to you for help if something goes wrong. You should learn what to do in case of an emergency.

LAB SAFETY

- Be sure you know the established safety routines for the laboratory where you are TAing. Ask the lab manager or course instructor to tell you the general procedures maintained in the lab.
- Before starting the course, review the procedures it will entail and pinpoint any particular hazards that may arise (poisonous chemicals, flammability, corrosive action on equipment, radioactivity, carcinogenicity, potential risks to lab cultures or animals, etc.).
- Go through the procedures with your students the first day of class. Make them aware of potential hazards in the lab, but do not terrify them.
- Instruct the students in the proper use of lab equipment—fume hoods, pipette bulbs, etc. If a piece of safety equipment is not working, inform the lab manager or course instructor. Do not continue with procedures without the required safety equipment unless you are specifically instructed to do so.
- Accidents may happen in any lab. Report *any* accident, however minor, to the course instructor and the director of the laboratory. If anyone is injured, however minor it seems, get medical advice (see Page 25 for Emergency Numbers) and offer to have the person escorted to the clinic, either the University Health Service during working hours, or Mitchell Hospital emergency room when the Health Service is closed. The University Police will provide transport to the clinic (123 or 2-8181).

FIRE

Activate the fire alarm. This rings automatically with the Chicago Fire Department, Chicago police and campus police. Also call the campus police (123 or 2-8181) if you can. They appreciate knowing in advance what kind of situation they will be facing (large or small fire, chemical fire, etc.) and will convey the information to the fire department. Do not be afraid of calling out the big guns, even if the fire seems small enough to be put out with a fire extinguisher.

B. Security

If you see an intruder or discover theft, call the University Police (**123** or **2-8181**) without delay. If you suspect one of your students of theft, talk to the Course Director immediately and let him or her decide how to proceed.

C. Discipline

CHEATING

Discuss with the Course Director what his or her policy is in regard to students' cheating on exams or lab exercises before the course begins. Cheating does not happen very often but you should know in advance what steps to take if it does, rather than muddling through at the time. Timing is often very important in resolving these issues to the benefit of all involved.

PLAGIARISM

The same applies. Discuss policy with the course instructor ahead of time. If you are teaching new undergraduates, they may not yet realize what constitutes plagiarism. Explain the instructor's policy to them including how much collaboration among students on papers or projects is acceptable. In some lab courses, student's work with partners or in groups, so decide ahead of time with the course instructor and explain unambiguously to the students when group activities become the individual's responsibility.

D. Problems

You may find students are ready to talk to you about things they would not say to the course instructor, especially in the more private setting of office hours. Rely on the student to tell you what he or she has come to speak to you about. If you suspect a student has some hidden problem, let the student tell you about it. You should not press the student to disclose it, however. If all a student needs is a sympathetic ear, you can provide it. If problems are serious, refer students to their student adviser or to the Student Counseling and Resource Service (2-9800). Similarly, if you are concerned about a student, talk to the Course Director or contact the student's adviser.

If students engage in unacceptable aggressive or disruptive behavior in class that you feel you cannot handle, again, contact the Course Director or the student's adviser for help.

E. Relationships

[From *Teaching at Chicago*] Is it ever acceptable to date one of your students? The answer to this question is a simple and unqualified “No”—not for as long as he or she is your student. When you assume instructional responsibility over other students, you also assume a professional position that precludes many social possibilities because the relationship is no longer nonhierarchical. However limited your instructional role may be, it is nonetheless a position of authority, and that authority should not be brought into a personal relationship—for the sake of your professional responsibilities and for the sake of the potential personal relationship. Ultimately, however, the burden of responsibility is with the instructor. The Policy and Procedures on Sexual Harassment, adopted by the University Senate in May 1990 states:

“Because those who teach are entrusted with guiding students, judging their work, giving grades for papers and courses and recommending students to colleagues, instructors are in a delicate relationship of trust and power. This relationship must not be jeopardized by possible doubt of intent, fairness of professional judgment, or the appearance to other students of favoritism.

“One of the unstated tenets of our policy and our commitment to a climate free from sexual harassment has been the view that it is unwise and inappropriate for faculty who have romantic relations with students to teach such students in a class, supervise them in research or graduate work, or recommend them for fellowships, awards or employment. Prudence and the best interest of the students dictate that in such circumstances of romantic involvement, the students should be aided to find other instructional or supervisory arrangements.”

F. Resources

NOTE: Procedures may be different for College, Graduate or Medical School courses.

AUDIO-VISUAL

The Biological Sciences Learning Center is a state-of-the art facility and many of the classrooms are fully equipped with audio-visual resources. Portable equipment for other rooms is available from the building manager's office. All TAs working in the BSLC must take audio-visual training, organized by the building manager, before using the equipment.

For classes held in the Medical Center, contact the Audio-Visual Department in Billings Hospital, S30, phone 2-6263. There may be a charge for rental, so you should discuss your needs with the Course Director in advance.

PHOTOCOPYING

The Course Director should provide you with access to photocopiers if you want to give your students handouts. The College provides free copying service for its courses (BSCD Office in Suite 300 of the Learning Center) if sufficient notice (at least three days) is provided.

G. Language Courses

The University provides courses in spoken English for non-native speakers of English. If English is not your first language and you would like to improve your pronunciation and conversational skills, these courses are recommended. The University Graduate Affairs Office, International House, and the Hospitals Academy all offer courses at various levels. Some are free, the rest range from \$25 to \$80. Contact the University Office of Graduate Affairs for details (2-7818).

H. Useful Phone Numbers

Any Emergency (UC Police)	123
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Health Services (UC Primary Care Group) 5841 South Maryland Avenue, R-100 (Mon-Fri 8:00 am – 4:00 pm; Sat 8:00 – 11:30 am)	2-4156
Medical Advice (Nurse)	2-1915
Poison Control	800-942-5969
Chicago Police or Fire	9-911
UC Radiation Safety Office	2-6299

Student Counseling & Resource Service	2-9800
Dean-on-Call (UC Police will notify)	2-8181

BSLC Building Manager (Don Churilla)	2-2978
Billings A/V Dept (to make slides, posters)	2-6263
Crerar Library – Reference	2-7715
Crerar Library – Reserves & Stacks	2-8375
Chalk website	http://chalk.uchicago.edu
Bookstore (textbooks)	2-7116

Classroom Reservations	
BSLC (Don Churilla)	2-2978
Medical Center (Conf Rm Reservation Line)	5-2105
Cummings & all others (Kevin Davis)	2-7883

BSD Graduate Affairs Office	
Dr. Nancy Schwartz – BSD Dean for Graduate Affairs	2-6426
Parag Shah – Associate Dean for Students	2-5853
Shay McAllister – Admissions & Registration Coordinator	4-2105
Melissa Lindberg – Student Programs Coordinator	2-3905
Maureen Okonski -- Administrative Assistant	4-7409

IX. RECOMMENDED READING LIST

The following books are all available at the Regenstein Library. They deal in greater breadth and depth with the topics covered in this handbook, as well as discussing the philosophy and theories of teaching and learning. You are encouraged to take the opportunity to explore in depth some of the issues that this handbook can only touch on lightly.

Bok, Derek. *Higher Learning*. 1986. Harvard University Press.
Essays on the development of educational systems.

Booth, Wayne. *The Vocation of a Teacher: Rhetorical Occasions: 1967-1988*. 1988. University of Chicago Press. Collection of speeches from a University of Chicago professor who consistently wins teaching awards. Read for interest.

Dunham, Jack. *Stress in Teaching*. 1984. Nichols Publishers.
Material from high school experience but has a good analysis of manifestations of stress and how to deal with it.

Eble, Kenneth E. *The Craft of Teaching: A Guide to Mastering the Professor's Art*. 1984. Jossey-Bass Publishers. The theory and philosophy of teaching with good practical hints.

Ericksen, Stanford C. *The Essence of Good Teaching*. 1984. Jossey-Bass Publishers.
Theory and mechanics of teaching and learning.

Ericksen, Stanford C. *Motivation for Learning: A Guide for the Teacher of the Young Adult*. 1974. Michigan Press. Theory of education and learning. Very readable.

Gullette, Margaret Morganroth. *The Art and Craft of Teaching*. 1982. Harvard-Danforth Center for Teaching and Learning. Looks in depth at theory of teaching, combined with practical advice.

Highet, Gilbert. *The Art of Teaching*. 1954. Random House.
Discussion of teaching methods with reference to famous teachers and historical figures. Ranges from high school to university teaching.

Jaques, David. *Learning in Groups*. 1984. Croom Helm.
A detailed analysis of the theory and practice of group learning.

Kimball, Bruce A. ed. *Teaching Undergraduates: Essays from the Lilly Endowment Workshop on the Liberal Arts*. 1988. Prometheus Books. Includes essays on teaching science and teaching in general.

Lowman, Joseph. *Mastering the Techniques of Teaching*. 1984. Jossey-Bass Publishers.
Offers practical advice.

- Mager, Robert F. *Preparing Instructional Objectives*. Revised 2d edn. 1984. Fearon Publishers, Inc. How to express accurately the learning goals of a course. Along the way, the book offers practice in using language carefully.
- McKeachie, Wilbert J. *Teaching Tips: A Guidebook for the Beginning College Teacher*. 1986. D.C. Heath and Company. More than just tips. Includes theory and research studies.
- Reynolds, M.C. ed. *Knowledge Base for the Beginning Teacher*. 1989. Pergamon Press.
This book is on 2-hour reserve in the REGENSTEIN library.
- Stenhouse, David. *Active Philosophy in Education and Science: Paradigms and Language-Games*. 1985. Allen & Unwin. A broad background discussion of education. Analytical, formalized theory.
- Whitehead, Alfred North. *The Aims of Education*. 1929. Macmillan.
Essays on education. Based on the English system but includes reference to the American educational system.

X. ACKNOWLEDGEMENTS

Sources for this work were:

- *Teaching Fellows Handbook 1991-92* (Harvard University)
- *Teaching Assistants Handbook The Graduate School* (Northwestern University, revised edn. 1990)
- *Teaching at the Ohio State University: A Handbook* (Ohio State University, revised edn. 1992)
- *Teaching at Stanford* (Stanford University, revised edn. 1989)
- *Getting Started* (Stanford University)
- *The TA Handbook 1991-92* (University of California, Los Angeles Teaching Assistant Training Program)
- *A Handbook for Teaching Assistants* (University of California, San Diego)
- *TAs as Teachers* (University of California, Santa Barbara, 1991)
- *Teaching at Chicago: A Collection of Readings and Practical Advice for Beginning Teachers* (University of Chicago)
- *A Handbook for Teaching Assistants at the University of Illinois at Urbana-Champaign* (University of Illinois, revised edn. 1988)

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