

# Teaching Assistant Handbook

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Advice for New Teachers

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Please visit our website:

<http://www.celt.iastate.edu/teaching/TAhandbook.html>

- Resources for International TAs
- International Community Resources
- Services and Professional Development Opportunities
- Useful Books and Websites for TAs

# WELCOME TO IOWA STATE

Welcome to Iowa State University and congratulations on your appointment as a teaching assistant. We hope that this handbook will be a useful resource as you become acquainted with your program and department, with Iowa State, and with the complex tasks you will face as a TA.

This handbook is the result of a great deal of work on the part of many people: the Teaching Assistant Training Advisory Committee, members of the Graduate College, and staff at the Center for Excellence in Learning and Teaching (CELT). It contains our best efforts at collecting the information and advice needed to assist you with your work as a TA. However, this is general advice on situations affecting teaching assistants campus-wide, so please check with your department for specific policies related to your training and the expectations of your position. We hope that this handbook will supplement the training and advice that you receive from your department or program.

In addition to this handbook, much more information and support for TAs is available on the Graduate College (<http://www.grad-college.iastate.edu>) and CELT (<http://www.celt.iastate.edu>) websites. Also, CELT offers workshops, discussion panels and faculty forums, and organizes the University Teaching Seminar each August before classes begin. CELT's Learning Technologies staff also offer seminars, workshops, and consultation on effective use of technology in teaching and learning.

As an advanced graduate student, you may be interested in applying to CELT's Preparing Future Faculty and/or Graduate Student Teaching Certificate programs, which provide teaching, mentoring, and learning opportunities that give postgraduates an advantage in a competitive academic job market.

We hope you often refer to this handbook as you gain experience as a teaching assistant. Best of luck in both your studies and your teaching, and in making the most of your graduate education at Iowa State University.

Steve Mickelson  
Director, CELT

## CHAPTER I: TA APPOINTMENT

# What It Means To Be a TA

### Looking In Two Directions

The god Janus, whom the ancient Romans revered, might be an appropriate symbol for the teaching assistant (TA). Janus, god of gates, of entrances and exits, is represented with two opposite faces—looking forward and backward at the same time.

Like Janus, a TA is also in the strange position of looking backward and forward as both a student and a teacher.

You-the-Student may be sitting in class, taking notes at 9 a.m. At 10 a.m., You-the-Teacher may be standing before a group of students while they take notes. At home, the You-the-Student may be working on your assignments for class, while You-the-Teacher has to plan the assignments to give your students the next day. You may write a paper, then turn around and grade the papers your students have written for you. This can be unnerving, humbling, and even frustrating. Yet because you are so close to both the teaching and learning process, you are in an ideal position to be conscious of both sides of the “gate” of knowledge.

Janus was also the god of good beginnings, and beginnings should be important to you as well. First of all, the way you begin teaching at your first section meeting may be important to how the rest of the semester goes. Second, serving as a TA is the beginning of an apprenticeship, possibly leading to a career as a college professor. This handbook aims to help you in that undertaking.



## Pros and Cons

Let's begin by looking at some of the advantages your TA position offers:

1. It helps you finance your graduate education by earning a monthly stipend, entitling you to in-state tuition, and providing year-long health insurance. Also, some TAs may receive a tuition scholarship which pays part of their tuition (for more, see the Graduate College Handbook at <http://www.grad-college.iastate.edu>).
2. Your assistantship gives you a role in the everyday life of your department. You will have a mailbox, probably a desk, and even a cubbyhole where you can hold office hours. The office staff will learn your name, and you will get acquainted with the other TAs, who form something of a support group in many departments. You will feel a part of the department and know that you are needed, a significant advantage for a newcomer to graduate school.
3. As you review your subject to prepare to teach, you are also embedding it in your mind, preparing for the comprehensive or preliminary examination you may have to pass before finishing your graduate degree. The questions students ask you will stretch your knowledge, and you may realize what you still need to master.
4. This teaching experience may be an important part of your education for the future, whether or not you aspire to be a professor. You will develop poise and self-confidence by standing before a group, thinking on your feet, and having to organize and structure information, and you will develop other skills beneficial in whatever career you pursue. Experience as a TA is an important employment credential for your curriculum vita/resume when you begin looking for your first job after graduation. Even the lesson plans, lecture notes, and other preparation you make for your TA assignment are likely to be useful to you later on.
5. Teaching can be a rewarding, creative act. You have tangible evidence that your efforts were worthwhile when you see

that your students understand and do well on tests; you may serve as a role model for some of them who decide they want to major in the field, or who write appreciative comments on the evaluation after the course is over. Because TAs frequently work with first-year students, you are important in their adjustment to college and will contribute to their first impressions of both the university and your academic subject. At a large research school like Iowa State, the small groups that you teach in recitation sections, labs, or studios may help to reduce the impersonality of the university for students.

6. Your collaboration with the faculty member who supervises the course is a valuable experience. She or he may be a source of useful advice on teaching. If you develop a good working relationship, this faculty member may become a mentor during your graduate career and a reference for you when you search for your first position after graduation.
7. Each year up to ten percent of a department's teaching assistants are honored with Teaching Excellence Awards from their departments and the Graduate College. They are invited to meet the Vice Provost for Research, a note is added on their transcript where future employers can see it, and they are recognized at graduation. Some departments also give monetary awards or base salary increments for such recognition.

There are a few potential drawbacks to being a TA:

1. You may be under pressure because you are also studying for a degree. Time management is an important aspect of teaching. Undergraduates insist on attention and expect you to keep up with the course. If you are trying to take courses, do research, or write a thesis, you may find your progress slowed. You are liable to opt for the teaching first because of the greater flexibility of doing research. Ironically, being reappointed as a TA frequently depends upon the progress you are making on your own degree rather than the effectiveness of your teaching ability.

2. Although you are not the final authority for the course, professors generally allow you to make many decisions, and the department stands behind you. The drawback to this authority is that you will occasionally be faced with a confusing or frustrating dilemma. Some of the hard decisions about final grades and problem students, however, may be referred to the faculty supervisor or to the department employing you.
3. Because you are probably close in age to your students, they may expect you to be their friend, confidante, or big brother or sister. At first you may be flattered, but if they become overly dependent, you may find yourself dealing with ethical issues (such as socializing with students, accepting gifts, or being unqualified to give personal advice outside your area). You are probably not trained as a counselor, nor do you have enough time to listen as much as some students would like. You will have to set limits on how much advising you do.
4. You are probably inexperienced and likely to make a number of mistakes during your first semester or two as a TA. Nothing could really prepare you for this assignment. You may be asked to teach in a course that you have never taken as an undergraduate, and you may worry about keeping one step ahead of your brightest students. You may also be discouraged when your students aren't putting forth the effort needed to succeed. When they do poorly, you may be tempted to blame yourself too harshly as a teacher for their shortcomings as students.
5. You may discover you are not a "born teacher" and do not enjoy the give-and-take of an undergraduate classroom. Almost all TAs get better with experience. If you don't, at least you will have learned that teaching is not for you and can plan your future accordingly.

## **Importance to the University**

Let's also look briefly at the benefits TAs bring to the university community:

1. Many courses at this university could not be offered at all without TAs. Involving TAs in multi-sectioned labs, recitations, and discussion sections allows faculty members more time to lecture, teach upper-division courses, and do research with their graduate students.
2. You probably had a course similar to the one you are teaching within the past four years. Therefore, you will remember more vividly than most faculty members what it was like to be an undergraduate and what was hard about the course. Such insights can be useful as you help your students learn the material.
3. You have the enthusiasm and fresh insights of a new arrival to the profession, which is one reason why some undergraduates have said the best teachers they ever had were TAs.

## **Types of TA Duties**

Departments vary in the responsibilities they give their TAs, but the most common TA roles and duties are described here in general terms.

### **Recitation or Discussion Leader**

Being a recitation or discussion leader is the most common TA assignment in many disciplines where lectures represent a major form of instruction. The supervising professor plans the course, makes the reading assignments, and presents lectures on a regular basis. The course will typically enroll a large number of students, sometimes several hundred, and the lectures will be held in one of the large auditoriums on campus. As a TA, you are usually expected to attend the lectures so you will be able to handle student questions and relate your own teaching to the lecture material.

The purpose of the recitation or discussion section is generally to have the students engage with and reflect on the course content

presented in the lectures. The students in the course are divided into smaller groups with no more than 25 or 30 students in each section. You meet with these students in smaller rooms, normally once a week, for a more interactive and practical class. Acting upon the supervising professor's instructions, you may moderate and stimulate student discussions, solve homework problems, assign and evaluate student projects, answer student questions, present additional materials, and generally serve as the personal contact for the students in the course.

You may be responsible for reading and evaluating written assignments submitted by students. In some cases, you might develop and monitor examination questions and quizzes. In other instances, the supervising professor will prepare the examinations, but you will grade them. At the end of the semester, you will either assign grades independently or will do so in consultation with the supervising professor. For courses with large numbers of students and recitation sections, there will probably be a number of TAs assigned to the course, and you will work together, for example, to prepare quizzes and grade examinations.

Because a recitation section is an extension of the larger class, the conduct of that section should reflect the supervising professor's personal style and pedagogical plans for the course. If you have any questions about how the section should function or what is expected of the students in the course, you should ask your supervising professor. In most cases, professors served as TAs during their own graduate training and will be sympathetic and able to clarify what they want you to do.



## **Laboratory Assistant**

Academically, working as a TA in a teaching laboratory functions very much like being a TA in recitation sections. You provide supplemental, practical instruction to a lecture course for students in smaller groups; develop, assign, supervise, and grade student projects in the lab; and periodically evaluate student progress and ultimately calculate a final lab grade.

Your range of duties may include overseeing laboratory safety and maintenance, preparing samples, stocking supplies, fabricating equipment, and trouble-shooting computer problems. In many cases, all the students work on the same project and you begin the lab with a short presentation and advice. In other labs, students work on different projects and you supervise more generally, assisting individuals when necessary. Even if you are not directly involved in instruction, you may be on duty to handle materials and problems that may arise. In all cases, the supervising professor is your major contact, defining duties and outlining expectations for the operation of the laboratory and of the instruction that takes place within it.

## **General Assistant to a Professor and Course**

This assignment generally involves duties to assist students in learning the course material, such as holding office hours and review sessions before exams; maintaining course web pages; posting solutions to homework problems; and grading quizzes, exams, and projects. You may occasionally make presentations to the class, for example if you have knowledge or experience about a particular topic or if the professor has to be out of town to attend a conference.

## **Grader**

Some departments assign TAs to be graders evaluating student exams, projects, and papers. Here again, you are an extension of the professor and should consult that person regarding what standards and expectations she or he wishes to apply to the evaluation process. Through grading, you will become aware of how individual students are doing compared with others in the

course and may then be called upon to counsel students about their performance.

### **Tutor for Help Sessions and Help Rooms**

Another common TA assignment is tutoring for a specific course or in a department help room. Departments that offer tutoring opportunities to students who need more help outside of class usually structure this help in one of two ways. One way is for you to work with each student individually. For example, when students have trouble with a particular problem, ask them to write it on the board or a sheet of scratch paper, and then talk it through step by step: what they are trying to find out, what they know already, what procedure they will follow, how they will begin, etc. At the first point of difficulty, ask questions (“Why did you use  $x$  for that?” “Where did that  $y$  come from?”), straightening that point out before going on with the problem. As a result, students solve their own problems, with some advice from you.

Another method is for you to work with a group of students, since what one student doesn’t understand is probably a problem for others as well. You can put the problem on the board, act as recorder, and ask others to volunteer ideas. By getting the group to interact and solve each other’s problems cooperatively, you can help students recognize the advantages of working together as a study group.

### **Course Instructor**

A less common TA assignment is serving as the sole instructor for a course. Several departments prefer using small sections taught by TAs, particularly in courses where students need individual help with writing, drawing, problem-solving, etc. Generally, you are given guidance by a faculty member teaching a similar course, along with a syllabus and policies for the course.

## Checklists for Teaching: Planning Ahead of Time

Departments vary in the amount of information and advice they give to their TAs. Some may lead you carefully, while others believe you should take the initiative in seeking your own answers. By asking lots of questions, you will feel more confident and prepared to handle unexpected situations that arise.

The following list will give you some ideas about what you may want to ask people in your department before the first day of class:

### To ask the department chair or graduate coordinator

- *Terms of your contract written in the letter of intent:* What duties will I have? What is the teaching load? Do I have a choice of courses to TA for? What is the usual length of time to serve as a TA? Are there limits on the number of semesters I can be employed as a TA? Is there a reapplication to be a TA each year or is my TA appointment automatically renewed?
- *Office space and facilities:* Do I have a choice of office space? What facilities and supplies (telephone, computer, photocopier, or other job supplies) are provided?
- *Employment opportunities:* Are there summer TA opportunities? Is it possible to hold another part-time job at the same time as the assistantship? What other means of financial support are available within the department?
- *Training:* Does my department offer orientation or training for new TAs? Who coordinates the TAs? Who supervises my course?
- *Evaluation:* Is my teaching observed and assessed by faculty or by lead-TAs? Do I have access to the results of my evaluation? Are written performance standards available? Are the student evaluation forms available for me to see? When are student evaluations given during the semester?

## To ask the course supervisor

- *Goals of the course:* Are there course prerequisites? What are the course learning outcomes? Is there flexibility in the way course content is presented? What is the level and range of abilities of typical students? What are the expectations for student performance?
- *Structure:* Is my section a highly structured course with each TA required to cover the same information and give the same tests, or is there more latitude in determining the material?
- *Linked courses or Learning Communities:* Is this course part of a Learning Community or Learning Team? Are students in the course also enrolled together in another course? Are they part of a residential community? To learn more about Learning Communities and Learning Teams at ISU, see <http://www.lc.iastate.edu>.
- *Course/Meetings:* When and where does the class meet? Are recitation and lab TAs expected to attend lectures?
- *Specifics of your section, lab, or other duties:* What are my responsibilities for preparing lectures? Evaluating student work? Getting or creating quizzes, tests, and assignments? In general, how much time will these responsibilities take?
- *Course policies and materials:* What are the policies for attendance? What is the department procedure for handling student requests to drop or add the course? Getting or creating a course and/or section syllabus? How do I post grades? How do lab or recitation grades contribute to students' course grades? Are there assigned textbooks and readings? Does the course have a web page or a WebCT component?
- *Department procedures:* What are department procedures when I am sick or have another necessary absence? What is appropriate dress when teaching?

## To ask experienced TAs in your department

- *Roles TAs play in the life of the department:* What are the department's expectations? Are we required to attend faculty meetings? Serve on committees? Socialize? How do we find out about departmental policies and activities? Getting things done in the department, e.g., copying, getting coffee, selecting a major professor?
- *Departmental guidance and support for TAs:* Are there weekly TA meetings? Do we attend course lectures? Are mentors available? What is the expected turn-around time for grading? What ethical issues might TAs face?
- *Approximate amount of time a TA spends:* How much time will I spend preparing for class? Meeting with students during office hours? Grading papers and tests?
- *Experiences other TAs have had with your assigned course:* Is this a difficult course for undergraduates? On what areas of the course do they need the most help? What are students' attitudes towards class?



## CHAPTER II: TEACHING TIPS

### The First Day of Class

#### Putting Your Best Foot Forward

The first day of class can create anxiety for both teachers and students. But if you devote some creative energy to planning the first day, you can lay the groundwork for a successful semester.

- First, be sure you are in sync with the professor of the course. This is a partnership, in which she or he is the lead partner. Follow the lead.
- Plan the first day of class carefully. Decide what you want to cover and how you want to present it. Balance is important. Divide the time among 1) introductions, 2) course policies and procedures, and 3) specific content that introduces students to the course, encouraging focus and enthusiasm.
- Check the room before class starts to study the layout and make sure everything is working. Note the size of the board, whether there is a projector and screen, where the lights are, whether the windows open, and whether the heat and air conditioning can be regulated. If you are going to be using audio-visual equipment that is not provided in your classroom, learn where the media equipment is stored in your building and make sure it will be accessible when you need it. Also, look at the room from the students' perspectives. Can they see you, the board, the screen?
- Think about logistics. How will you hand out the syllabus or pick up response cards?
- Go on AccessPlus to see names and photos of the students in your class. Remember that the photos are confidential material.
- Be prepared to admit that you don't know all the answers. Trying to bluff your way through a situation usually doesn't work and raises doubts in your students' minds about your reliability. Decide how you will handle questions you can't answer. You could write down the question, tell the students

you will check with your supervisor, and then follow up on it. You might choose to tell them up front, “I may not be able to answer all your questions right away, but I’ll try to find the answers.” This will make the students more comfortable about asking you questions and will start the semester off on the right foot.

- For much more on planning for the semester, see <http://www.celt.iastate.edu/teaching/planning.html>.

### **Checklist: Syllabus Construction**

Putting together your syllabus? Consider including the following:

- Office hours and location
- Contact information (email, office phone, website, etc.)
- A list of all required texts and/or materials
- A list of readings available through library reserve or on the Internet
- Course goals and objectives
- Attendance policy
- Late assignment policy
- Grading policy
- Statement regarding students with disabilities (see examples at [www.celt.iastate.edu/teaching/syllabus\\_disabilities.html](http://www.celt.iastate.edu/teaching/syllabus_disabilities.html))
- Statement on academic dishonesty
- Format for submitting homework or other assignments
- Any important information on classroom management
- A day-by-day schedule of class topics, reading assignments, and daily activities

## **Introductions**

- Be sure to let students know where, when, and how they can reach you during the semester. Place the name and number of the course on the board or screen along with your name, email address, office location and office hours.
- Introduce yourself, describe your experience and/or background in the course content, and let your students see your interest in the course. Share your enthusiasm for the course and the field.
- Ask students to introduce themselves by sharing their name, hometown, major, and their reason for enrolling in the course. You can also ask students to include information that will help you remember them more easily. For example, they could share a story about a current hobby or a favorite pet. If there is time, you may wish to pair students off and have them introduce each other. Even shy students often speak up when talking about the person next to them.
- Hand out 3x5 cards and ask students for the information they just gave in the verbal introduction, along with any confidential information that will help you assist them as a student. For example, have they struggled with this subject in the past?
- It can be helpful to students if you allow them time to get the names, phone numbers, and email addresses from two or three other students, so they can get notes from missed classes or find someone to study with during the semester. They can see that you want to help them and that makes learning easier for them.
- Conduct a warm-up activity. For example, students could play a word game to help them (and you) learn names. You could also have the class brainstorm important topics for the course or conduct preliminary debate on an issue central to the course content. For more activity suggestions, ask an experienced TA in your department or go to the teaching tips on the Center for Excellence in Learning and Teaching website: [www.celt.iastate.edu/teaching/tips.html](http://www.celt.iastate.edu/teaching/tips.html)

## **Course Policies and Procedures**

- Introduce students to the course syllabus and its contents, so they can return to the document for questions they have at a later time.
- Be sure to cover attendance and homework expectations, exam and grading policies, and class participation expectations.
- Explain major assignments, papers, projects, reports, and/or lab work.
- Make sure you have on hand copies of the textbook, lab manual, and any other materials used for the course.
- Let students know about library reserve readings and websites that would be useful to them in their study.
- Discuss with students how they can best read the text and study for this course.

## **Course Content**

Engaging students with course content on the first day expresses the importance of the class and gives them an idea of what they can expect. You can introduce the course content in one of several ways:

- Give a pre-test to ascertain where students are in their readiness for the course content.
- Provide an overview of the course, key concepts, and terminology, including what you will focus on during the semester and what will receive only limited coverage.
- Explain how the course builds on previous classes they may have had or how it meshes with higher level courses they may one day take.
- Offer a specific problem or challenge and work through it with the class to help them see how people in this field think about their work.

- Share your interest and motivation for the subject itself. Modeling enthusiasm is key to generating students' enthusiasm toward the subject.

## Presenting New Material

You may be called upon to present a lecture. Your purpose should not simply be to transmit information; a book can do this more efficiently. Lecturing is a useful way to provide structure, organize scattered material, pace student learning, and reinforce assigned reading by providing an alternative perspective or source of information.

Remember these points about the style and clarity of your lecture presentation:

- **Speak clearly and loudly enough to be heard.** This may seem obvious, but according to undergraduates, some TAs are mumblers. On the first day, you might suggest that people signal if they can't hear you.
- **Avoid distracting mannerisms.** This includes verbal tics like "um" or "you know" or straightening your notes or tie.
- **Provide an introduction.** Begin with a concise statement, something that will preview the lecture. Give the listeners a "map" of where you are going during the remainder of your presentation. Refer to previous lectures. Attract and focus the attention of your audience.
- **Repeat your points in two or three different ways.** Your listeners may not have heard or understood the first time, or may need more time to write your points down.
- **Present an outline.** Use the board, an overhead transparency or PowerPoint slide, or a handout. Then be sure that you refer to the outline as you move from point to point in your lecture so the students do not lose sight of the big picture (the relationships, relative importance, and causes and effects).

- **Emphasize principles and generalizations.** Research suggests that these are what people really remember—and they are probably what you really want to teach.
- **Include examples or concrete ideas.** Use specific examples that help both understanding and remembering.
- **Use short sentences.** Very long or overly complex sentences are more difficult to understand when heard than when read.
- **Stress important points.** This can be done with your tone of voice and by being explicit (e.g., “Write this down”; “This is important”; “This will be on the test.”).
- **Pause.** Don’t rush through your material. Give your listeners time to think and to write.
- **Make eye contact with each student at least once during the lecture.** This personalizes the lecture and increases a student’s sense of involvement.
- **Include brief lecture breaks** such as a minute for students to reflect on a question or write down their most puzzling point, or a shift to a different medium of presentation, about every 10-12 minutes.
- **Do not read a lecture.** However, it is quite reasonable to use a set of guide notes for details not worth memorizing and to make certain you cover all intended items.

*adapted with permission from A Handbook of Resources for New Instructors at UTK, Learning Resources Center, University of Tennessee, Knoxville and from W. Cashin, IDEA Paper #14, “Improving Lectures” copyrighted by Center for Faculty Evaluation & Development, Kansas State University.*



## Ways to Begin

Having prepared an interesting, detailed lecture, it is still sometimes difficult to decide how to begin delivering it once you are in the classroom. Here are some possible techniques for beginning a lecture, many of which rely on some kind of “hook” to capture students’ attention from the start:

- Give the lecture a title.
- State a question or pose a problem that will be answered (or at least better understood) by the end of the lecture.
- Give an example of the phenomenon to be discussed.
- Tell a personal anecdote or one about a friend or famous colleague.
- Create a demonstration that illustrates the topic or puzzles the students.
- Review some previously covered material, if essential for understanding the current lecture.
- Provide an overview of the lecture.
- State the objectives the lecture will accomplish.
- Tell a funny story or joke (if relevant to the materials).

*adapted with permission from J. G. Bailey (ed.), Handbook for Teaching Assistants: The TA at U of D, Center for Teaching Effectiveness, University of Delaware.*

## Helping Students Learn

It is important to remember that not everyone learns most effectively in the same way. Research on learning styles demonstrates that some people learn best by listening or reading, while others prefer discussion or manipulating materials. Whenever possible, your classroom should include a mixture of teaching styles—lecture, group discussion, small group activities, individual writing or problem-solving—which give students the opportunity to approach the content from a variety of angles. Here are some suggestions for adapting to the variety of preferred learning styles in your classroom:

- **Blend verbal and visual elements in your lectures.** Put important vocabulary or computations on the board or on an overhead. Consider providing an outline of your lecture on a screen or in a handout to help students follow along.
- **Break a lecture every few minutes with an exercise that involves students actively.** Give the students' minds an "exercise break" by posing a question or problem, telling an anecdote, or relating ideas to current events.
- **Get students talking.** Ask the class questions (and expect them to answer), or have them debate an issue important to the material. For suggestions on encouraging student participation, see the next section.
- **Get students writing.** Have them jot down their responses to material presented in the class. Ask them to write learning journals where they connect course content to their own projects and learning.
- **Get students moving.** Have students turn their chairs or move to different places around the room for small group work. For long classes, take a minute for students to stretch.
- **Bring materials for students to manipulate.** When possible, pass around objects related to your lecture or the textbook assignment. Incorporate hands-on activities into your class.

## **Classroom Use of Explicit Materials**

If you need to make a decision about the classroom use of a film or videotape, you should be aware of a policy developed in the Faculty Senate in response to a Board of Regents' request: "For sound pedagogical reasons, a faculty member may decide to use course materials that include explicit visual representations of human sexual acts. The faculty member has an obligation to inform students at the beginning of the course about the nature of that material. If a student chooses not to view the presentation(s) and the faculty member determines that alternative assignment(s) are not feasible, the student shall be permitted to drop the course without penalty (as an administrative drop) within seven calendar days of receiving the announcement of the presentation.." (*Faculty Handbook*, 10.6.1)

## **Involving Students**

### **Getting Student Participation**

- Encourage participation from all the students in the class. Some studies have shown that women may be overlooked and even actively discouraged from taking part in classroom discussions. Try to be sensitive to students who are quiet or even reluctant to get involved. Think of ways to include them, such as having students write out answers to questions before the discussion.
- After asking a question, wait for a response. Be patient. Do not answer the question yourself, repeat it, rephrase it, modify it, call on another student to answer it, or replace it with another question until you have waited at least ten seconds.
- Ask only one question at a time. A series of questions tends to confuse students. They are not able to determine just what you are requesting. Even if you believe that your question is unclear, wait for a response. You may find that students do

indeed understand. By attempting to clarify, you may change the meaning of the question and add to the confusion.

- Use a variety of probing and explaining questions. Phrase your questions with words that give clues about the type of explanation sought. For example, instead of asking “Why did we have a depression in the 1930s?” try “What series of events led to the stock market crash of 1929?”
- Encourage students to ask questions by praising them and reinforcing their contributions in a positive way.
- Have students nominate topics for discussion at the beginning of class. If the section material lends itself to open-ended questions, have a brainstorming session.
- If a discussion group is large, divide it into smaller units that can work independently. Move from group to group, offering guidance and asking and answering questions where appropriate.
- If you see potential in a comment, draw out the student by asking her or him to elaborate or to apply the point in new ways.
- Build on students’ points. After taking one comment, list it on the board and solicit other remarks. Withhold judgment until you have several contributions listed, then ask the class to regroup them. In this way, the work becomes a product of the whole class, and students still perceive less significant points as being contributions to the whole.

## Fielding Students' Questions

Just as asking the right kinds of questions can elicit the kinds of student responses you want, the way you answer questions and accept comments can influence the kind and number of questions and remarks students offer. The following suggestions may stimulate class discussion:

- Restate complex or inaudible questions for the whole class, or ask the student to do so.
- Listen carefully and show that you do. Look attentive; select key points and summarize and test students' understanding by rephrasing or by asking a follow-up question.
- Answer students' questions directly as often as possible. Try not to question them in return or stall if you don't know the answer. By responding directly—even with “I don't know”—you indicate that the question is worthwhile.
- Do not be afraid to admit you don't know an answer. Students will accept that you are not a walking encyclopedia if you are willing to 1) seek the answer and explain it later, or 2) tell them you will try to solve the problem in front of them, but have not had time to think about it carefully in advance. You can also seek the aid of other students in the class.

In summary, there is no “right” technique for dealing with individual student questions, responses, and remarks. If you make a student feel good about contributing, you show others in class that they, too, can find participation rewarding.

*adapted with permission from R. T. Hyman, IDEA Paper #8  
“Questioning in the College Classroom,” copyrighted by the Center for  
Faculty Evaluation & Development, Kansas State University.*

## Using the Board and Screens

Perhaps the most widely used medium of instruction is the chalkboard or whiteboard. The guiding principle of board work is to look at your writing as though you were a student in your own class. Some points to keep in mind while planning a board presentation are the following:

- **Students must be able to see and read what you have written.** Illegible or obscured work is valueless. Watch out if you have small handwriting, tend to scrawl, or write too lightly. Before class, write something on the board and then go to the back of the room to see if it is legible. Sit in one of the last rows and take a critical look at your board work. Unless the floor of the classroom is sloped, students in the middle of the room won't be able to see the bottom of the board. Some TAs like to mark off the "bottom line of visibility" with an underline. If there is a desk at the front of the class, keep it clear of objects that might obstruct vision. Additionally, keep your work visible for as long as possible. Don't block the students' view of the board when they are still trying to copy what you have just written.
- **Your board work must be organized so that students will be able to interpret their notes later.** First erase the board completely. This step is especially important in mathematics, where stray lines may be interpreted as symbols. If you are to solve a problem or prove a theorem, write a complete statement of the problem or theorem on the board, or write a precise reference. Fill one panel in at a time, always starting at the top and moving down. Make your notation consistent with that in the textbook or the professor's lecture, so that students do not have to translate from one system into another. Underline or in some other way mark the most important parts of your presentation: the major assumptions, conclusions, or intermediate steps that you plan to refer to later. Colored chalk or dry-erase markers may help to clarify drawings. Make sure these are available, or you will need to bring your own.

- **Erase only when you have run out of space to write.** Modifying board work in midstream can be frustrating for students who are trying to transcribe your material into their notebooks. A physics TA may reach a crucial point in the derivation of an equation and then quickly erase and replace terms. A biology TA may draw a diagram and then rapidly change first one part of the diagram and then another to show a process. (Think about what media are best for presenting drawings and diagrams in your course. Would a PowerPoint slide be clearer?) If you are modifying a drawing, use dotted lines or some other technique to show changes. Remember that students cannot make the same erasures that you do without losing their written record of intermediate steps; you can alter parts of a drawing much faster than they can reproduce the whole thing.
- **If you find that you have made a mistake, stop.** Don't go back over the last three panels madly erasing minus signs. First explain the error, then go back and make corrections, if possible, in a different color.
- **If you are presenting material that you want students to duplicate in their notes, give them time to copy what you have written.** Do not ask them to analyze while they are writing. When you want them to make or discuss a point, stop writing. Let the students catch up to you. Then begin your discussion. Similarly, if you have engaged in a long discussion without writing very much on the board, allow students time to summarize the discussion in their notes before you go on.
- **Avoid using the board as a large doodling pad.** Students assume that what you write on the board is important. The board should serve to highlight and clarify your discussion or lecture. Used wisely, the board will enhance and underscore your presentation.
- **Find out if you are using the board effectively.** At some point, ask your students if they can read or make out what you have written. Don't do this every five minutes—an occasional check, however, is in order. Someday after class,

without prior notice, request one of your good and one of your average students to lend you their notes. If the notes seem incomplete or incoherent, ask yourself what you could have done to make your presentation clearer. Or watch a videotape of your presentation, putting yourself in the place of a student taking notes.

**One way to avoid some of the problems of boards is to use a screen and projector instead.** You can save time by preparing problems, diagrams, and other information in advance on reusable transparencies. These transparencies can be done in several colors; you can write on them while you talk and still face your class. ISU classrooms are equipped with overhead projectors and screens, and many have digital projectors (ELMOs) or computer projectors. Projectors can also be borrowed from the audiovisual satellite located in the building. It is important to remember, however, that many of the same rules apply to screens as to boards:

- Give students enough time to take notes
- Don't block students' view of the screen or position an overhead transparency so that portions of the work are not visible from the back of the classroom
- Organize and present diagrams in a coherent manner
- Periodically check whether your slides or transparencies are effective teaching tools
- Give students copies of complicated drawings as handouts or post them to a webpage.

*adapted from an earlier version of the TA handbook of the University of California-Berkeley.*

## Teaching Laboratory Sections

As a lab TA, you have an opportunity for an unusual degree of involvement with student learning. You can observe your students at work and give them help where it's needed. Few other teaching situations offer the opportunities of a lab to provide individualized instruction to students.

### Preparing

**Self-preparation:** The most important thing you can do to ensure that your lab sessions run smoothly is to be well prepared. Before the semester starts, you should become acquainted with the storeroom of the lab so that time won't be lost during a lab looking for necessary equipment or materials. In labs with potential for student injury, you should know the location of the first-aid kit, basic first-aid rules, and procedures for getting emergency assistance (dial 911 or call the Department of Public Safety at 4-4428).

**Preparation of the students:** The first day of laboratory is a time when the students expect to learn the ground rules and become familiar with the lab environment:

- Set the proper tone. Be friendly, but firm. A laboratory is a structured situation and some ground rules will be necessary.
- Announce the name and source of all the materials the students need to purchase. Point out where equipment is in the lab. Explain in detail what preparation the students must make for each laboratory session and how they will be tested. List the materials available for reference, such as laboratory manuals and videotapes.
- Explain standard operating procedure and emphasize safety, including whether food and drink are ever permitted in the lab.
- Make clear to the students why laboratories are necessary. Explain in some detail what students can expect to learn in their laboratory experience. Usually, students acquire information, hands-on experience, and skills in the laboratory setting. Most experiments are repetitions of

important work done in the past that underline basic concepts of science and therefore provide illustrations of fundamental ideas. Since many experiments employ contemporary technology in their execution, students also acquire skill in using standard laboratory techniques, practice using common devices, and develop some familiarity with data analysis.

- Explain what sort of report is expected of each laboratory experiment and when it will be due. Check with your professor on whether a particular format is expected. Point out the criteria on which the report will be judged. Specifically, show how raw data should be handled, how calculations should be recorded, how graphs and diagrams should be inserted, and in what forms conclusions should be listed.
- Present the policies on grading, attendance, make-up labs, late assignments, etc. A handout summarizing your policies would be useful.

### **Planning**

- Know exactly what the students are supposed to learn and why. Your thorough understanding of the lab material will be useful in handling student questions.
- Perform the entire experiment in advance. By going through the lab yourself, you'll become familiar with some of the stumbling blocks that your students may confront, and you'll know the subtler points of the coming lab. You should have some idea of the quirks of the apparatus, the data obtainable, and the accuracy of the results that can be expected.
- Be sure to perform all the computations that the students will be doing and keep a record. These numbers will help you check for obvious errors on the part of the students. If you have difficulties, consult an instructor or TA who has taught the lab previously.
- Decide how to introduce the lab most effectively. Before students get underway with the day's lab, you will need to

demonstrate the procedures that they'll be following. Will students need a handout with written instructions?

- Prepare quizzes or other tests on preparation and/or procedures that you expect to use in the laboratory. Be sure that they make sense in terms of the students' assigned preparation and laboratory experience.
- Consider the steps to take if students come to the laboratory unprepared and are unable to perform the experiments. Resist the temptation to do their work for them.
- Determine the form of the laboratory reports; consider any departures necessary from the form used in previous experiments. Prepare any handouts or data sheets to be used in the laboratory session.



## Conducting the lab

**Beginning the class:** You should be actively involved throughout each lab session. Following the pre-lab or introductory lecture:

- Remind the students of the purpose of the lab.
- Show students how to handle the equipment they will be using.
- Demonstrate any difficult aspects of the technique.
- Emphasize the appropriate safety precautions.
- Point out any interesting historical aspects of the experiment.

Assess whether students are as prepared for the lab as you expect them to be. If you've asked your students to complete some readings or activities before the lab, check to see if they have. Ask them a few pointed questions, give a quiz, or ask for questions that students may have about the pre-lab assignment.

**Conducting the Class:** You should not be a passive observer during the lab. Circulate among your students while the lab is in progress, be available to give assistance, and ask and answer questions. Don't wait for students to ask you questions since they may be hesitant, especially early in the semester. Ask a few strategic questions of your own in order to figure out what students do or do not understand (e.g., "Once you plot those points on your graph, how are you going to find the best straight line through them?" or "Why do they tell you to make measurements with the current going both ways throughout the coil?"). Be aware that there is a difference between hovering over (and intimidating) students and circulating in a friendly way to let them know that you want to interact and help. Try to show your students respect and cooperation. Labs are not expected to be quiet places, so encourage them to interact with each other.

**Concluding the class:** Reconvene as a whole class, or if that's not possible, make sure you touch base with each team working on the experiment to discuss results, answer questions, and hear student reactions to the lab. Rather than telling students what should have happened, let them tell you what did happen. If their results are at odds with what you expected, encourage students to speculate about the plausibility of their findings. Try to help students generalize from their data to the concept or principle under study.

*adapted with permission from "Lab Sections and the TA," prepared by the Instructional Improvement Program, University of California-Davis and from "Tips for Physics Lab Instructors," by Dr. Frank Peterson, Department of Physics, Iowa State University.*

## **Teaching in a Studio**

Some aspects of teaching in a studio are very similar to teaching in other stand-alone or laboratory settings. For example, concerns about effective ways to give lectures and display visuals to the class occur in most types of teaching settings. In other ways, however, the studio experience is unique because you will be engaged so extensively with students' creative work.

### **Conducting the Class**

Most studio classes will be a mixture of instructor lecture/demonstration, group work, and individual project work. Because studios provide experiential, hands-on learning, the majority of class time will be spent on students' individual projects. You should not, however, be passive during these times. Below are some suggestions for conducting an engaged classroom studio:

- At the beginning of the semester, talk to the students about good studio practices, such as class preparation and effective critical skills.
- When introducing assignments to the class, show examples of how previous students have responded to criteria outlined in the assignment.
- Demonstrate any new techniques, tools, or media for the class as a whole. You can then address any individual difficulties as they occur.
- Call students up to your desk one at a time to work with you privately. This gives you and the student focused time to work on specific problems or ideas. You might also go through the steps the student is taking to achieve her or his project goal.
- Walk around the room, stopping to talk to students about their projects as they work. A benefit to this approach is that it allows you to interact with more than one student at a time. Students get the benefit of your comments to others.

- Encourage students to interact with one another to solicit feedback and suggestions.
- If you notice that a large number of students are having the same problem or concerns, call the class' attention back to you and talk through the problem as a group.
- Reconvene as a class at the end of each period. This gives you an opportunity to discuss any issues that have arisen during the class and to remind students of particular materials or pieces of their projects that they need to bring to the next class period.

### **Evaluating Students' Creative Work**

*Note: More general information on grading can be found in Chapter III.*

Because much of the evaluation in a studio involves assessing creativity and originality, evaluating student work can seem very difficult. Although individual judgment will always play a role in studio work, there are steps you can take to make evaluation easier and consistent:

- Determine clear objectives for each project and share those objectives with the students at the beginning of the project. Consider developing a rubric that identifies the weight given to each element of the project and distributing that to the students along with the assignment sheet. For more discussion of rubrics, see Chapter III.
- Ask students to write a self-assessment of their work. Have them write about what they did and why. You can then use the assessments to determine whether each student's project reflects her or his intentions.
- Put the completed projects on display and rank-order them in terms of their success in meeting the criteria for the assignment.
- Team up with another TA or professor teaching the same course and use one another as a check on your assessments of students' work

Some other issues to keep in mind as you evaluate students' work:

- Decide what role craft and presentation play in your evaluation. What happens if a student has a brilliant design concept, but the project itself is poorly constructed and falling apart?
- Decide what role process will play in your evaluation. If process is of interest, determine some way that it can be measured. One suggestion for measuring process is to use the students' journals, discussed below.
- Remember that "original" means "original to the student." Although you may have worked with the same or similar assignments before, this is new material to the students.
- Copying is not art. Successful projects do not simply appropriate material from other people. In situations where others' material is used (e.g., collage), the material should be integrated fully into the student's project.
- Practicality need not be a consideration in all projects.
- Each project should have an attainable goal for all the students, however much talent or inherent ability they may have.

### **Including Peer Critique**

An important skill in design fields is learning to give and accept criticism. Using peer critique in your class helps your students develop these skills in a controlled, non-threatening environment. Critiques can also provide students with a wide variety of feedback that will help them improve their projects.

One option is to schedule periodic small-group and one-to-one peer critiques during the project process. This allows students to receive feedback at a time when they can implement the suggestions being proposed.

Another useful form of critique occurs at the completion of a project. The artist begins by presenting her or his project to the

class, and then receives criticism from the class, a small group, or another individual in the class.

It is important to stress to students the importance of constructive criticism. This is particularly the case when a student may have a good deal of emotional investment in a creative project.

Encourage students to restrict their criticism to things that their classmates can do something about.



### **Using Project Journals**

The project journal is a record of a student's process in developing a project. The journal may include early sketches, project drafts, discussion of particular problems or successes, peer critiques, and self-evaluation. Many of your students will be hoping to enter controlled-enrollment programs at the end of their first year, so it is important that you guide them in the creation of portfolios and essays that help determine acceptance into those programs.

In addition, a well-constructed project journal can help you to evaluate a student's process or the extent to which the project realizes the student's intention.

## Advising Students During Office Hours

The TA's office is an important extension of the classroom. Most TAs have office hours, but students are not necessarily required to come in during those times. Usually office hours are scheduled before the semester begins and announced to the students during the first week. One alternative is to check with the students about convenient times before scheduling. Some professors may ask that you schedule your office hours at times that alternate with theirs, thus increasing the time that one or the other of you is available to students.

Your department will probably have some guidelines about the number of office hours you need to schedule each week. New TAs frequently schedule too many and find themselves unvisited except for the weeks just before and after tests or when major assignments are due.

How do you get students to come in? Let them know frequently that they are welcome. Invite them individually. A comment on a paper (e.g., "Please see me about this") brings about a 75% response. Stress the importance and value of office visits both to you and to them. Most TAs work with freshmen and sophomores who are not yet used to personal contact with their instructors at the university. If those first few who come in have positive experiences, the word will spread.

Some TAs find that posting the answers to quizzes or homework problems on or around their doors is an effective means of attracting students to office hours.

While many students may not take advantage of office hours, on occasion you may encounter those who are overly dependent on you either for assistance with course material or for companionship and counsel. It may be necessary to set limits with these students. You might ask them to try assignments on their own before coming to you for help.

*Note: Troubled students should be referred to the Dean of Students' Office or Student Counseling Services. Seriously depressed students should not be left alone; after calling the appropriate office, walk with the student to the Counseling Center or to the Dean of Students' Office. You can also call the Department of Public Safety (4-4428), who will provide the student with transportation to the appropriate office.*

## **Solving Homework Problems**

Working one-on-one is an effective way of teaching students how to work out problems and may be an important part of your responsibilities. One of the most beneficial aspects of office hours is the opportunity to hear individual students talk or think aloud about course material. This will give you a chance to know how students think, what they understand, and what their strengths and weaknesses are in working with course materials.

To make teaching during office hours more effective, you must make it student-oriented instead of teacher-oriented. Your goal is not just to show the student how to do problem number two, but to teach her or him how to go about solving problems and how to think while solving problems. In other words, you must get students to do the thinking and help them modify their thinking by having them slow down and use good problem-solving techniques. To get students to slow down and reflect on their thinking process, try some of these techniques:

- Have students read the problem aloud and tell you what is needed to solve it before they start to work it.
- Get students to work problems while “thinking out loud.” Encourage students to talk about what they are doing and why. This will slow down the thinking process and make it more explicit and more accurate. You can often help students check their reasoning and find their own mistakes by having them express exactly what they know about a problem. Prompts or questions that can help students clarify their thinking might include some of the following:
  - What are some possible ways you might go about solving this problem?
  - Tell me what you know about the problem.
  - How might you break the problem into small steps?
  - Tell me how you got from step one to step two.
  - What are you thinking right now?

- I don't understand your reasoning behind that step. Will you please explain?
- Model good problem-solving techniques. To make the process clear, demonstrate how you would go about reading and understanding a question before starting to work the problem and how you would solve the problem. After modeling the process, require students to work through a similar problem to make sure they understand.

*adapted with permission from A Guidebook for University of Michigan Teaching Assistants, The Center for Research on Learning and Teaching, University of Michigan.*

## **Serving as a Faculty-Student Liaison**

The TA position may place you in the role of go-between in faculty and undergraduate communication. This can be a fruitful aspect of being a TA when your mediation facilitates the learning process.

Try some of these methods for acting as a faculty-student liaison:

- Take time in discussion to ensure that the course organization and requirements are clear to students.
- Provide students with an opportunity in discussion sections to get clarification on confusing points in the lecture.
- Troubleshoot any problems with the professor's lectures (e.g., too fast, not loud enough, not enough written on the board, difficult to follow, etc.) and report them, *tactfully*, to the professor.

Always use tact and good judgment. It may be wise to wait until your supervising faculty member solicits suggestions. Some professors will be more concerned than others about how they come across to students. If you don't think your supervisor will be receptive to student criticism, it may be better to drop the issue or to provide the clarification students desire during discussion sections.

TAs may also be helpful in the construction of exams by indicating to the professor whether the proposed exam material

is adequately geared to the students' level of understanding. As a result of your contact with students in sections or labs, you may be in a good position to determine whether exam questions may be too difficult or not challenging enough.

*adapted with permission from Handbook for Teaching Assistants, Office of Teaching Effectiveness, State University of New York—Buffalo.*



## **Constructing Tests**

### **Choosing a Test Format**

There are two main types of tests used in university classrooms: “objective” and essay/short answer. Formats for objective tests include multiple-choice, matching, fill-in, or true/false items. Such tests allow an instructor to assess a large sample of course material and to use accurate and efficient test scoring. The disadvantages include a tendency to emphasize only “recognition” skills, the ease with which correct answers can be guessed on many item types, and the inability to measure students’ organization and synthesis of material.

While short answer and essay examinations are often easier to write than objective items, they are more difficult to grade and can take a significant amount of time, particularly if they are graded well. In some instances, however, essay and short answer items are considered the most effective means of assessing students’ mastery, particularly if it is crucial that students understand a particular concept or be able to synthesize course material.

When deciding what format to create tests in, you should take into account 1) the type of skills you want students to demonstrate (memorization, synthesis, etc.), 2) the number of tests you will have to grade, and 3) the amount of time allotted both for taking the test and for grading it. Speak with other TAs and professors about the types of tests they have used for similar material.

### **Writing Multiple-Choice Items:**

A very frequently used but difficult to write form of objective item is the multiple-choice question. There are numerous ways of generating multiple-choice questions and other objective test items. Many textbooks are accompanied by teachers' manuals containing collections of items, and your professor or former teachers of the same course may be willing to share items with you. In either case, however, the general rule is to adapt rather than adopt. Existing items will rarely fit your specific needs, so you should tailor questions to reflect your objectives.

Design multiple-choice items so that students who know the subject or material adequately are more likely to choose the correct alternative, and students with less adequate knowledge are more likely to choose a wrong alternative. That sounds simple enough, but you want to avoid writing items that lead students to choose the right answer for the wrong reasons. For instance, avoid making the correct alternative the longest or most qualified one, or the only one that is grammatically appropriate to the stem. Even a careless shift in tense or verb-subject agreement can often suggest the correct answer.

Additional guidelines to keep in mind when writing multiple-choice tests:

- Use the item-stem (the lead-in to the choices) to clearly formulate a problem.
- Include as much of the question as possible in the stem without loading it with irrelevant material.
- Randomize occurrence of the correct response (i.e., you don't always want "C" to be the right answer).

- Make sure there is only one clearly correct answer unless you are instructing students to select more than one.
- Make the wording in the response choices consistent with the item stem.
- Be wary of relying too heavily on answers such as “none of these” or “all of the above.”
- Beware of using sets of opposite answers unless more than one pair is presented.
- Do not confuse test-takers for the wrong reasons. Be sure to use correct grammar (for example, if your item-stem has a plural noun, the answers should all have plural verbs), and use negatives or double negatives sparingly in the question or stem. Except for terms specifically taught in the course, all words used in items should be familiar to the students.
- To test understanding, use items that require application of concepts and principles to new situations and examples.
- Design questions that tap the students’ understanding of the subject rather than those recalling only rote recall. Avoid writing items that are difficult because they are taken from obscure passages, such as footnotes.



## **Review Sessions**

“Hand out a review sheet prior to the session and expect students to come with questions. Anticipate the questions and make sure you have the appropriate visuals.”

—Animal Science TA

“I remind students of all the theories and concepts we covered since the last exam, and I provide opportunities for them to ask questions on things they don’t understand fully.”

—Human Development and Family Studies TA

“I collected the questions by students from their emails and grouped them into several key points; in the session, I outlined the materials first, then answered questions.”

—Biology TA

## **Creating Essay Tests:**

To reduce difficulties in grading essay tests, it is important to have well-designed questions. If it is crucial that students understand a particular concept, you can force them to respond to a single question, but you might consider asking them to write on one or two of several options. Remember that their mastery of a subject depends as much on prior preparation and experience as it does on diligence and intelligence. Even at the end of the semester, some students will be struggling to understand the material. Design your questions so that all students can answer at their own levels.

Some suggestions to enhance the quality of the essay tests that you produce:

- Prepare an answer to the question before including it on the test. Often questions cannot be answered satisfactorily within the constraints (e.g., time, number of points) imposed on the question. Sometimes a question may be unanswerable!

- Have in mind the processes that you want measured (e.g., analysis, synthesis), and start questions with words such as “compare,” “contrast,” or “explain why” that elicit the types of responses you want. Don’t use “what,” “who,” “when,” or “list.” These types of questions are better measured with objective-type items.
- Define the parameters of expected answers as clearly as possible.
- Don’t have too many questions for the time available.

*adapted with permission from Mentor: A Handbook for New Teaching Assistants, copyrighted by the Center for Instructional Development and Research, University of Washington with additional suggestions from Professor Frederick G. Brown, Department of Psychology, Iowa State University.*

## **Feedback from your Students**

*Note: sample evaluation forms are in the Appendix of this handbook.*

Students evaluate all classes at Iowa State at the end of the semester, and eventually you should receive the forms or results of the data from your department. However, by that time, it is too late to make changes for that particular class. It is generally useful to seek input from your students earlier in the semester so that you can adjust your teaching to improve student learning. Evaluating a class in progress helps students focus on their own responsibility for academic success and reflect on their learning styles. Moreover, it gives you insight to your own teaching that might have otherwise gone unnoticed. Some departments have a procedure and evaluation forms set up for mid-semester evaluation, but others do not. Ask your supervisor whether there will be any student evaluations during the semester and what questions will be asked. If no formal evaluation exists, you may want to organize your own.

There are three steps to soliciting feedback effectively:

## **Getting Student Input**

Keep in mind that you will get more useful information if you ask very specific questions. For example, rather than asking “what don’t you like about this class?” try “what suggestions do you have for structuring class time to improve your learning?” If you get feedback several times, vary the way you get it. One time have a list of specific questions; another time give out index cards and have students write on one side the things they want more of in the class, and on the other side the things they want less of.

Keep in mind that you will almost never get 100% agreement from a class. Because people have different learning styles, what one finds useful another may find boring.

## **Responding to Student Input**

It is human nature for most people to notice and be upset by the three negative comments and totally ignore the three positive ones! Don’t over-react to negative evaluations, but do consider whether they contain suggestions or concerns that you could use to improve your teaching. Use the positive comments to identify aspects of your teaching that are effective and should be continued.

As soon as possible, report back to the class a summary of their feedback, or at least the points you will respond to and use, acknowledging what the class generally feels satisfied with and the things you cannot change. When discussing the evaluations, keep your tone of voice and manner neutral. Avoid being defensive, angry or apologetic.

## **Using Student Input**

Choose one or two areas of concern that it is possible to do something about (not the textbook, for example, which you cannot change until another semester), and think what you could do that would address these issues constructively. If you feel comfortable, talk over your evaluations with more experienced TAs of a similar class or your supervisor. Tell the students what changes you are making and why, (e.g., “We’re really going to start class on time, beginning today. A number of you feel that

we're not covering enough material during the class. Starting exactly on time will give us an extra 5 minutes each class").

When students see you responding to their concerns, the class becomes more of a community and less of a "me and them."

### **Getting Feedback from Students**

"After every exam I ask two or three questions: What was the hardest part? Was there something you wish we'd taught you that we didn't? Is there some method of teaching we're using that is or isn't working?"

—Animal Ecology TA

"I actually created my own form which I gave at the end of the semester along with the department one."

—Botany TA

"The best evaluation I ever gave was 2 weeks into the class. I made it a mid-session activity so the students couldn't leave. I asked them to identify 1-3 things that the instructor does that succeed in helping you and 1-3 things that hinder or interfere with your learning. And I asked them to make practical suggestions for the instructor to improve his/her way of teaching."

—Ecology and Evolutionary Biology TA

"I always tell students I need constructive input, and just putting 'Bob sucks' is not constructive input! If there's something they don't like, they need to explain on the form what they would like to see done differently."

—Animal Ecology TA

## CHAPTER III: GRADES AND CLASSROOM MANAGEMENT

### Evaluating Student Work

In conjunction with your supervising professor, you may be responsible for evaluating your students' performance in class or laboratory and assigning them grades at the end of the term. Normally, you will be evaluating and grading work assigned for the students to complete, including quizzes, exams, projects, term papers, and/or laboratory reports. Many instructors also include in their evaluations an assessment of each student's classroom contributions. You may give numerical scores or letter grades, including plus and minus designations, if appropriate. Regardless of whether letters or numbers are used during the term, that information must be translated into a letter grade for both the midterm and final grade reports.

Students have the right to expect that the work they submit to you for evaluation will be returned in a timely fashion with appropriate marks, explanations, and corrections. Many students will also expect you to explain the evaluations and grading system, as well as advise them on how they might improve their performance. Much of this advice will be done in one-to-one discussions during your office hours or at mutually acceptable times.

Grading serves two main purposes for students: 1) their course performance is evaluated on their understanding of the content and in relation to the other students; and 2) they receive feedback on specific strengths and weaknesses in their knowledge and skills. Some assignments, such as final exams, are more focused on performance evaluation, while others such as on-going homework assignments are more geared toward feedback.

Your approach to grading will depend on the purpose of the particular assignment. If it is a test, you will probably just mark wrong answers, write in points next to correct answers, and total the scores. But keep notes for yourself on what questions or topics the students found difficult, and go over these in class at the first opportunity, maybe even before handing back the tests. If the feedback is more important than the evaluation, then on the

student's paper you would probably choose the one or two most significant areas on which to comment, including at least one positive comment. In some cases, you can ask a student or a group of students to come to your office hour to discuss a difficult topic.

Everyone agrees that grading must be fair and must be seen to be fair. You need to have a systematic rationale for the points or letter grades you give to each quiz or assignment, and this should not be secret or hidden from students. They need to know what is important on each assignment and how to interpret the feedback they get from the grading.

### **Grading Rubric for a Resume Cover Letter in a Business Writing Class**

#### **Content: \_\_ out of 20 pts**

- Includes all required elements, including address and signatures
- Presents job objective clearly
- Discusses a few specific qualifications for the job position
- Refers reader to enclosures and informs them of interview availability
- Maintains accuracy

#### **Achievement of purpose: \_\_ out of 20 pts**

- Conveys professionalism and competency through tone
- Demonstrates concern for the reader's purpose and context
- Uses organization and layout to highlight appropriate points

#### **Appearance/impression: \_\_ out of 10 pts**

- Conveys professionalism and clarity in layout
- Avoids spelling and grammatical errors
- Maintains clear paragraph topics and links between paragraphs
- Uses complete, clear sentences

#### **Cover letter total: \_\_\_ out of 50 pts**

Try these tips for developing a system for grading fairly:

- Answer the quizzes and tests yourself to develop model answers.
- For short answer questions, decide which ideas are essential to an answer and which are additional. For example, for the full five points for one particular answer you might expect the student to give three essential pieces of information and at least one additional detail. For four points, you expect the three essential items. For three points, you expect two of the essential items and one detail, etc.
- Read every student's version of one question together to develop a consistent grading approach. Make three or four ability piles as you read and then go back and assign the points to the middle ability ones, which can be the trickiest in terms of being consistent in the number of points you give. Generally, at the beginning you need to look through a number of answer sheets to get a feel for the test answers before actually beginning to assign points.
- Develop an assignment rubric (such as the sample rubric for a job application letter). The rubric analyzes the assignment, either by section or by perspective, and lists the criteria important to each and sometimes the number of points for each. The rubric is generally given to the student when the assignment is given and then used by you to decide the grade. Rubrics are specific to particular assignments, and while it takes time and effort to develop effective ones, the process of developing the rubric assists your teaching as you focus on what skills and knowledge you expect students to be able to demonstrate as a result of your teaching.

## **Grading Tips**

“Don’t give in to pushy students who think they deserve a higher grade—be prepared to fully explain why a grade was given and what type of work would have earned a higher grade.”

—Human Development and Family Studies TA

“If you are grading for a professor who writes his or her own assignments, talk to them about what they expect and what they told the students so that you all have your signals straight.”

—Animal Science TA

“I have students do a mock grading session, with papers from my other class. They have to, as small groups, decide on grades for papers and then list all the reasons they gave the paper that grade—and then defend the grade.

Usually two things happen: they grade harder than I do, and they start to realize that grading is no easy task, so they complain less when I give them grades they don’t like.”

—English TA

“Be consistent! Generate a rubric before you start and USE IT! For longer papers etc., I often duplicate the rubric, make comments right on it, and staple it to their assignment.”

—Animal Science TA

## **Grading Essay Tests**

Reading 200 essay exam answers presents special problems, especially when all 200 are responses to the same topic or question. Try these tips for developing a system for grading essay tests fairly:

- Your assessment may be fairer if you read and rate the essays without knowing the identity of the students.
- Grade all responses to one question before moving on to the next.

- Read five or six papers before you start grading to get an idea of the range of quality. Rank order the papers in groups before you assign grades.
- You are more likely to be thorough with the first few papers you read than with the rest and less likely to be careful with comments when you are tired. Stop grading when you get tired, irritable, or bored. When you start again, read over the last couple of papers you graded to make sure you were fair.
- Select “range finder” papers—middle range, or A, B, C, and D papers—to which you can refer for comparison.

In assigning grades to essay questions you may want to use one of the following methods:

- **Analytic (point-score) method:** In this method, the ideal or model answer is broken down into several specific points regarding content. A specific subtotal point value is assigned to each. When reading the exam, you need to decide how much of each maximum subtotal you judge the student’s answer to have earned. When using this method, be sure to outline the model (ideal or acceptable) answer before you begin to read the essays.
- **Global (holistic) method:** In this method, read the entire essay, make an overall judgment about how successfully the student has covered everything that was expected in the answer, and assign the paper to a category (grade). Ideally, all of the essays should be read quickly and sorted into five or so piles, then each pile reread to check that every essay has been fairly assigned to that pile, which will be given a specific score or letter grade.

### **Responding to Students’ Written Assignments**

Writing is a tool for communication, and it is reasonable for you to expect students to submit coherent, lucid prose. However, writing is also a mode of learning and a way for students to discover what they think about a subject. You should be willing to participate in this learning and discovery process as well as grade the product. This includes talking with students during the writing process, responding to their drafts, and giving the

students the kind of written feedback on their final papers that will help them to improve their writing in the future. You may also want to meet with students to discuss the strengths and weaknesses of their written assignments; this can help to reinforce the written feedback you have given.

The quality of student writing is often far below acceptable standards. Many TAs try to ignore the problem by insisting that writing skills are not part of their assigned subject area. This attitude results in further problems for both TAs and their students. Students become disheartened when they are penalized for writing problems that they do not understand how to avoid, and TAs are frustrated when subsequent written assignments continue to show the same grammar and structure problems. If you demand good writing, make your expectations known. Explain any writing problems that arise and tell students who need help how to get it (e.g., by sending them to the Academic Success Center).

Depending upon the number of students you have, you may have to spend anywhere from 10 to 20 minutes on a three- to four-page paper. Try to select only the most insightful passages for praise and only the most shallow responses or repeated errors for comment; in other words, don't cover a paper with comments. Avoid the tendency of new TAs to edit the paper for the student. Remember, also, that if you comment on and correct everything, a student loses a sense of where priorities lie. Do not give the impression that semicolons are as important to good writing and to a grade as adequate support for an argument.

### **Midterm Grade Reports**

You are required to update AccessPlus or WebCT with grades entered for all students who, at midterm, have grades of C- or lower. You should also indicate any students who are not attending class as well as anyone who is not on the list but is attending your class. The Registrar will collect this information and create a midterm grade report on AccessPlus to notify students who are not making satisfactory progress in a course or not attending the class. For advisers, the Registrar's Office creates a list of "Advisees with Midterms" as well as the

capability to view individual midterm grade reports, both available via AccessPlus. The Office of the Registrar also provides each college with a file of their students with midterm grades. In addition to reporting midterm grades to the registrar, you are responsible for informing the class of the basis on which midterm grades have been submitted.

### **Final Examinations**

All classes of two credits or more must meet during the time scheduled for the final examination, and no final examination may be given at a time other than that for which the exam is scheduled, except by permission of the dean of the college. However, you may arrange an exam at another time for an individual student. You must inform students well in advance whether the exam will be comprehensive (covering all the material in the course) or will test only material presented and studied since the last exam.

### **Final Grades**

Most final course grades are submitted via AccessPlus. To report grades via AccessPlus, see [www.iastate.edu/~registrar/accessplus/gradehelp.html](http://www.iastate.edu/~registrar/accessplus/gradehelp.html). If your course has a WebCT component, grades may be submitted via WebCT. See [www.celt.iastate.edu/webct/AdminTools/SubmitGrades.html](http://www.celt.iastate.edu/webct/AdminTools/SubmitGrades.html).

If you discover after submitting your final grades that an error has occurred, you should submit to the Registrar a Grade Change Card, found at

<http://www.public.iastate.edu/~registrar/forms/grade-report.pdf>.

This procedure is also necessary to resolve an Incomplete on a student's record and replace it with the appropriate grade once the course work has been completed. Such changes are restricted, so consult your course supervisor or department secretary before making any grade changes.

### **Notation System for Undergraduates\***

Student performance or status is recorded by the grades and marks described below. The grade point average (GPA) is calculated on the basis of credits earned with grades of A, B, C, or D, as well as F. Credits earned with P, S, or T are not used in calculating the grade-point average, but may be applied toward meeting degree requirements. A grade of NP (not pass) neither affects the GPA nor provides any credits. A cumulative GPA of 2.00 is required for a bachelor's degree.

Grades and Marks	Quality Points per Credit Hour
A	4.00
A -	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00
I (incomplete)	not calculated
P (pass)**	not calculated
NP (not pass)	not calculated
S (satisfactory)	not calculated
T (test out)	not calculated
X (drop)	not calculated
N (no report submitted)	not calculated

\* The notation system for graduate students appears in the Graduate College Handbook.

\*\* The course instructor assigns a letter grade, which is recorded as a P if the student has chosen the Pass/Not Pass option and the grade is equal to or higher than a D-.

## **Incompletes (“I”s)**

Sometimes a student who is doing passing work will be unable to complete a course in the normal time. This may be due to health problems, family emergencies, or other extenuating circumstances. With your permission, the student may request that an “I” or “Incomplete” grade be recorded on the Final Grade Report. You should ask to see some evidence of extenuating circumstances before you agree to this request. If you do agree to allow the student to take an Incomplete, you must also have that student sign an Incomplete Mark(I) Report form that describes why the student has not completed the course, what she or he must do to earn a final grade, and the last date by which the incomplete may be removed (not to exceed one calendar year). Both you and the student retain copies of this form; turn in the departmental copy when you report your grades. An unresolved “I” automatically is changed to an “F” by the Registrar after one year or just before graduation, whichever is earlier. More information about resolving incomplete marks can be found in the ISU Catalog.

Incompletes are only for emergency situations, and you may turn down a student’s request for an “I” grade. Depending on your role in relation to the class, you may need to go to your supervising professor before approving or rejecting a request for an “I” grade.



## **Grade Confidentiality**

Student records, including test results and graded papers, are confidential. You may find it convenient to post test scores or other grades to inform students of their progress, but you must make sure that the information is presented in a way that does not reveal the name or entire student identification number of any specific student. No social security numbers may be used in any way. Check on your department's policy as well before posting any student grades. Similarly, graded papers may not be left in a box in a public place, no matter how convenient such a pickup system may seem. Grades should not be given out over the phone because you have no way of ensuring you are speaking with your student on the phone.

## **Grievances**

Just as rules and procedures govern how faculty deal with student problems, so students are able to register complaints or grievances when they feel an instructor has treated them unfairly. In most cases, students will contact a supervising professor, academic adviser, or the department chair to state their concerns. And, in many cases, informal discussion and negotiations can resolve differences of opinion. If a student remains dissatisfied with her or his treatment, the student may contact Student Assistance, coordinated through the Dean of Students' Office. Depending upon the magnitude of the dispute and the degree of dissatisfaction, students could also initiate a formal appeal to a TA's supervisor. Appeals may continue up the administrative line through the college dean to the top administration of the university. Fortunately, appeals and grievances are usually resolved before they reach that level. For more information on the grounds and procedures for student grievances, see the *Student Information Handbook* on the Dean of Students' website (<http://www.dso.iastate.edu>).

## **Managing the Classroom**

Many of the policies you develop to manage your classroom have the potential to affect students' grades. When developing policies, first check with your department to determine if there are set rules to which you must adhere. Whether you use departmental policies or create your own after talking with experienced TAs and professors, be sure to clearly state your policies on your course syllabus. In all cases, you are required to make clear at the beginning of the term exactly what elements will be evaluated. It is not appropriate, for example, to include classroom participation in your final evaluation if your students have not been advised of this requirement. When developing classroom rules, keep in mind that it is always easier to loosen up tight policies than to introduce stricter policies midway through the semester.

### **Attendance**

Students are expected to attend class meetings as scheduled. As an instructor, you decide how to evaluate attendance in determining students' grades. Before doing so, check whether your department has a policy regarding attendance. Excuses for absence from class are handled between you and the student, and you may refuse a student's request that an absence be excused or require the student to submit proof of absence (e.g., a doctor's note).

### **Late Assignments**

Accepting late assignments with no penalty is unfair to students who meet the deadline and have less time to perfect their work. To discourage late work, establish clear consequences for late assignments and discuss those consequences with the students at the beginning of the term. For instance, you may lower the grade on a late paper so much per calendar day, or you may add extra requirements to late papers. You may also establish a point (e.g., one week; once the next assignment is due) after which you will no longer accept late work. If your supervisor does not already have a policy in place for late work, talk with experienced TAs about their policies.

## **Cheating**

The university has an established system for dealing with those who violate its conduct regulations. The All-University Judiciary (AUJ) committee establishes procedures for discipline cases. If you become involved in such a case, you should be familiar with how the AUJ operates and what may be expected of you.

It is wise to find out before you give exams or start receiving students' work just how your supervising professor would like you to handle instances of academic dishonesty. Often the professor will wish to take the leading role in dealing with any problems that arise, and she or he should be able to assess whether the incident should be reported to the Dean of Students.

If you are proctoring an exam and notice that a student is using unauthorized reference material or copying from a neighbor, you should attempt to halt that activity at that point or note the students involved and handle the matter after the exam ends.

### **Ways to Reduce Cheating on Tests**

- Create two versions of the test; ensure one empty seat is between students and make sure students sitting near each other have different versions.
- Be observant for whispering students and wandering eyes.
- Count the students taking the test; then before leaving the room, count the number of tests and/or answer sheets handed in.
- Enforce a rule that all books, bags, and personal items (like cell phones) are put away under chairs or placed at the front of the room.
- When returning tests, have students immediately check that points are added correctly; they must tell you that class period of any arithmetic errors. (If they want to dispute actual answers, they should wait at least 24 hours, a cooling off period, and then attend office hours or make an appointment to see you).

## **Plagiarism**

If you receive term papers or other materials that you suspect are plagiarized (i.e., copied in whole or in part from some other author), you should make a reasonable effort to identify the source of the copied material before discussing your suspicions with the student. In some cases, you will find that the student does not understand the distinction between appropriate use of sources and outright plagiarism. Often your counseling and guidance can help you resolve the issue with the student.

If after speaking with the student, you believe she or he has knowingly plagiarized all or part of the assignment, you must follow university procedures in dealing with the student. Although this is an unpleasant business, it is unfair to the students in the class who have done their work honestly to allow others to get away with cheating.

The best way to avoid plagiarism, however, is to prevent it. Below are some suggestions for preventing plagiarism in your classroom:

1. When giving a writing assignment, discuss plagiarism and its consequences. To help those students who simply do not understand plagiarism (e.g., they think it only means copying an entire paper or section word-for-word; they come from a culture that has a different attitude toward using the words/ideas of others), provide examples of various types of “borrowing” and discuss whether each is plagiarism.
2. When developing a major assignment, include several steps along the way so students have to work on the assignment early and turn something in to you on specific dates. For example, if you assign a term paper or poster on a topic of the student’s choice, you could also include another two steps, such as a project proposal and an outline of the project. This strategy minimizes procrastination and allows you to see what the students are working on and to guide them a little. Because of time limitations and fairness, you have to be careful to limit the scope of the feedback and give the same amount to all class members.

3. Make it clear in the assignment instructions that you expect students to hand in all their preliminary work together with the final draft of their project: their notes, doodlings, outlines, web and library printouts, preliminary computer drafts with notes and crossings out, etc. This material itself will not be graded, but will show the path the project took and demonstrate that the complete project was thought through and created rather than being downloaded whole from the web. Remind the students several times not to throw away their preliminary notes and drafts. Do not accept assignments that have almost no preliminary workings, and check that what is submitted relates to the final draft.
4. Alter assignments from one semester to the next to decrease the likelihood that students will borrow papers from others who took the course in previous semesters.
5. Make assignments specific to your course. For example, rather than asking students to write a paper on Stephen Jay Gould's contributions to the field of science, ask them to write about how Gould's book *The Structure of Evolutionary Biology* supports or conflicts with the principles discussed in your class.

For other ideas on deterring and detecting plagiarism, check out the web page on the Undergraduate Commons section of the Library website: [www.lib.iastate.edu/commons/index.html](http://www.lib.iastate.edu/commons/index.html).

### **Managing Difficult Situations**

We hope that your teaching experience won't include difficult situations, but sometimes these are unavoidable. Here are some suggestions for helping you negotiate these situations.

- **Aggressive or challenging students.** Critical thinking leads to deeper learning. If students are challenging accepted ideas, this can generate productive class discussions for everyone. First, demonstrate scholarly debate by showing students how to listen carefully, reflect thoughtfully, respectfully disagree and, when appropriate, use reasonable compromise. If the challenge is on a personal rather than academic level, see emotional situations, below.

- **Emotional situations.** Again, these can be an opportunity for deeper learning. Studies show that emotional reactions create strong memories. To keep the situation a positive learning experience, listen carefully to the student and continue to model scholarly debate. If this isn't working, asking the students to write out their ideas can reduce the intensity of the situation and make further discussion more fruitful.
- **Students who dominate discussions or disrupt class.** Sometimes an emotional or challenging student may have personal issues that are interfering with their ability to participate appropriately in the classroom. Discuss the situation with the student privately, though if this makes you uncomfortable your TA supervisor or department chair may consent to sit with you when you speak with the student. If you can, communicate how their behavior is disrupting everyone's learning in the classroom, and try to find ways to understand how the two of you can work together to make the classroom a better learning environment. For more advice, visit the University of Michigan's Incivility in the Classroom website at <http://www.crlt.umich.edu/tstrategies/Incivility.html>

It's very important to remember you're not alone. Your department, the Dean of Students Office, the Center for Excellence in Learning and Teaching, and Student Counseling Services can advise you on difficult situations. When in doubt, ask for help.

*adapted from W. McKeachie and M. Svinicki, McKeachie's Teaching Tips 12<sup>th</sup> ed., Houghton Mifflin, New York.*



## CLOSING REMARKS

We hope this handbook has given you some clues about how TAs fit into the instructional program at Iowa State. Your success as a teacher, however, cannot be guaranteed on the basis of reading and thinking about the job. The majority of your learning will come from actually teaching and from working with your students as well as faculty and other TAs. Don't neglect to ask colleagues for advice or pass up opportunities to share teaching victories and challenges with them.

We'd like to thank the many TAs from across the campus who shared opinions and anecdotes about their teaching experiences with us face-to-face, by telephone, pencil and paper, and email. This has allowed us to create a more personal and "real-life" handbook. Some of *your* experiences will probably mirror the ones quoted here, while others will be totally different.

No one said it would be easy to be a TA. In fact almost all the experienced TAs we talked to in preparing this handbook volunteered that they had had some problems in their first semester. However, they also went on to say that things got better as they continued: they adapted to student and professor expectations, took things in stride and learned how to deal with students more effectively while still completing their own assignments and research. Many have been successful enough to be honored by their departments with teaching excellence awards.

Being a TA is one of the most important roles anyone can play. If you take your job seriously, keep your sense of balance and fair play, and work on improving your teaching, you should experience a sense of real accomplishment.

Best wishes. We hope you have a successful semester.

## **APPENDIX:**

### **SAMPLE STUDENT EVALUATION FORMS**

Some of these sample questionnaires have been reprinted with the permission of the TA newsletter at the University of California-Los Angeles. Appropriate sections can be photocopied and completed by your students, or you may want to tailor the evaluation to your circumstances and the aspects of your teaching on which you want students to comment. These evaluations may be given during the semester as a supplement to those provided by your department.

### **PLUS/DELTA**

This simple midterm assessment technique asks students report things that are going well (Plus) and things that should change (Delta). These can be written on notecards or a folded piece of paper. One model for Plus/Delta questions is:

What is helping me to learn in this class?

What am I doing to improve my learning in the course?

What changes are needed in this course to improve learning?

What do I need to do to improve my learning in this course?

Informal surveys can collect student suggestions and opinions. A TA in Zoology used these questions:

### **INFORMAL SURVEY**

1. What do you like/dislike about this course?
2. What do you find most helpful?
3. Is there anything you'd like to change?
4. Is the course interesting? (Please specify why or why not.)
5. Any suggestions or ideas?

Questions with numerical responses (a Likert scale) can offer a measure of student opinion about the class, as below.

## LABORATORY SECTION

Please circle the number that best describes your opinion of this teaching assistant and this class. The numerical scale ranges from 1 (much below average/poor) to 5 (much above average/excellent). Some questions may not be applicable (NA) to this section.

### Key— 1 = Poor and 5 = Excellent

1. Makes difficult instructions in the lab manual clearer and easier to follow.

1      2      3      4      5      NA

2. Relates experiments performed in the lab to real world research.

1      2      3      4      5      NA

3. Is knowledgeable about laboratory theory and procedure.

1      2      3      4      5      NA

4. Is helpful in interpreting student's incorrect or inconsistent lab results.

1      2      3      4      5      NA

5. Provides helpful comments on lab technique before and during the experiment.

1      2      3      4      5      NA

6. Proportion of the time spent lecturing on lab materials.

too little                  just right                  too much                  NA

## DISCUSSION/RECITATION SECTION

Please circle the number that best describes your opinion of this teaching assistant and this class. The numerical scale ranges from 1 (much below average/poor) to 5 (much above average/excellent). Some questions may not be applicable (NA) to this section.

**Key— 1 = Poor and 5 = Excellent**

1. Is well prepared for the section or lab.

1      2      3      4      5      NA

2. Is responsive to students' questions.

1      2      3      4      5      NA

3. Uses class time effectively.

1      2      3      4      5      NA

4. Presents materials clearly.

1      2      3      4      5      NA

5. Provides helpful comments on homework assignments, papers, reports, or exams.

1      2      3      4      5      NA

6. Is knowledgeable about the subject matter.

1      2      3      4      5      NA

7. Effectively directs and stimulates discussion.

1      2      3      4      5      NA

8. Raises challenging questions or problems for discussion.

1      2      3      4      5      NA

9. Imparts enthusiasm for the subject matter.

1      2      3      4      5      NA

10. Adjusts the pace of the section to the students' level of understanding.

1      2      3      4      5      NA

11. Is concerned that students learn from the materials.

1      2      3      4      5      NA

12. Renders difficult materials from lecture or readings more understandable.

1      2      3      4      5      NA

13. Is available for help outside the class.

1      2      3      4      5      NA

14. Value of the TA's handouts.

1      2      3      4      5      NA

15. Consistency and fairness of grading.

1      2      3      4      5      NA

16. The TA's overall performance.

1      2      3      4      5      NA

## STUDIO SECTION

Please circle the number that best describes your opinion of this teaching assistant and this class. The numerical scale ranges from 1 (much below average/poor) to 5 (much above average/excellent). Some questions may not be applicable (NA) to this section.

**Key— 1 = Poor and 5 = Excellent**

1. Provided a diversity of materials, techniques, and content.

1      2      3      4      5      NA

2. The projects were valuable in understanding the course.

1      2      3      4      5      NA

3. Assigned projects were appropriate to the level of the course.

1      2      3      4      5      NA

4. Instructor's examples and demonstrations were clear and concise.

1      2      3      4      5      NA

5. Instructor explained steps carefully when discussing processes and techniques.

1      2      3      4      5      NA

6. Instructor explained the underlying rationale for techniques or styles.

1      2      3      4      5      NA

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*For more information, visit*  
<http://www.celt.iastate.edu/teaching/TAhandbook.html>

