University of Louisville

Graduate Teaching Assistant Handbook

Originally produced by the Office of Research & Graduate Programs and the Center for Faculty and Staff Development in 1987. Latest revision by the School of Interdisciplinary and Graduate Studies, August 2018..

TABLE OF CONTENTS

INTRODUCTION

The purpose of this handbook is to give graduate teaching assistants - particularly those that are new - information and suggestions that will help them better understand the situation in which they are working and provide practical information that will make their teaching responsibilities easier and more rewarding.

This handbook provides information from a number of sources, including University of Louisville Institutional Research, research and scholarship on college teaching, and experienced graduate teaching assistants (GTAs). Although different GTAs will have different experiences, there are a number of things on which they all agree. The points of agreement, as well as the reasons for the different experiences, are described in this handbook.

There are many practical ideas and suggestions in the following pages. You should not expect to learn them all or to put all of them to use immediately. You should not try to completely change your personal style nor strive to adopt all of the suggestions which follow. You must make your own judgments about what works best for you and for your students.

Although this handbook is directed toward your function as a teacher, it is important that you keep in mind your principal purpose - the attainment of a graduate degree. You will be faced with course work, examinations, deadlines, and requirements of your own. You will need to continue to excel in your own studies, even as you will want your students to excel. You will need to organize and discipline yourself more than ever while remembering the needs of your students.

It is an honor to be a graduate student and it is a high calling to be a teacher. Dedication and hard work can make both roles highly rewarding. I encourage you to develop a synergistic relationship between the two so that both you and your students will benefit throughout your lives.

I wish you success in all your efforts.

Paul DeMarco, Ph.D.
Professor of Psychology
Acting Dean of the School of Interdisciplinary and Graduate Studies

CHECKLIST

Before beginning your GTA assignment, the following items should be completed:

- ☐ Confirm type of assistantship (research, service or teaching) and number of months (ten or twelve)
- ☐ Confirm GPA requirement for your program (the School of Interdisciplinary and Graduate Studies requires a minimum 3.0, but some programs require you maintain a higher GPA)
- ☐ Obtain Cardinal Card (UofL ID card)
- ☐ Purchase parking permit (if necessary)
- ☐ Attend Human Resources Orientation (this may be online, but you will be contacted via email)
- ☐ Attend Graduate Teaching Assistant Orientation, hosted by the School of Interdisciplinary and Graduate Studies
- ☐ Read Graduate Teaching Assistant Handbook
- ☐ Complete the modules in the Graduate Teaching Assistant Orientation online at http://louisville.edu/graduate/gta
- ☐ Identify opportunities to interact with and learn from expert and peer teachers
- ☐ Gather and review resources to support your teaching
- ☐ Begin reflecting on your teaching philosophy and building your teaching portfolio

CHAPTER I: GENERAL INFORMATION

Cardinal Card

To take advantage of campus resources, you must first obtain your Cardinal Card, your official university ID card. There are two locations to have your card made: Belknap Campus – Houchens Building, 08K and Health Sciences Campus – Abell Building, First Floor Security Station.
Your Cardinal Card serves as your:

- Identification card
- Library card
- Facilities access
- Meal plan card (if applicable)
- Cardinal Cash purchases for vending machines, copies, residence hall laundry, campus food service locations

Parking

As a Graduate Assistant, you have the option of purchasing a purple or green student parking permit or a faculty/staff blue permit; visit http://louisville.edu/parking for details on the various permits offered and parking regulations. In order to purchase a parking permit, you can visit either the Belknap or HSC Parking Offices or purchase your permit online. Be sure to take your Cardinal Card and proof that you are a GTA (e.g. a letter from your department stating you are a GTA) if you wish to purchase a blue permit.

Although blue parking tends to be closer to campus than green or purple, blue parking lots fill up quickly (usually by 8:30 a.m.). Parking is available at all times in the Papa John's Cardinal Stadium lot and shuttles run regularly to the Belknap campus from 7:00 a.m. until 9:30 p.m.

International Students as Graduate Assistants

The University of Louisville requires all international GTAs, with the exception of those teaching a foreign language, to demonstrate their level of proficiency in the English language before they may begin their teaching assignments as GTAs. You will be notified by your department that you will need to demonstrate your English proficiency before you assume your teaching duties. Please contact your department to determine whether or not you must do the teaching demonstration. If you are notified that you must do the teaching demonstration, you must contact the School of Interdisciplinary and Graduate Studies at 502-852-6475 to make an appointment. Be sure that you provide your department and SIGS with your e-mail address so that you can be contacted, if necessary.

Passing this test does not guarantee that your speech will be easily understood by your students. You will have to make a considerable effort to speak slowly, distinctly, and with the inflection and emphasis patterns of native speakers of English. You can help your students by stopping frequently to ask if you have been understood, using the blackboard to illustrate points you are making, and providing hand-outs when the material is particularly complex.

SIGS also offers GS 601, Communication in Academic English, to help you gain fluency in spoken English; the course is offered as a three-credit, pass/fail course that can be covered with tuition remission for funded students. Please see your program director if you are interested in enrolling.

CHAPTER II: GRADUATE TEACHING ASSISTANT ROLES AND RESPONSIBILITIES

Types of Assistantships

The University of Louisville offers three types of graduate assistantships: research, service, and teaching.

1. A graduate research assistant (GRA) is assigned to a particular professor or project. Responsibilities will vary among the assistantships awarded and therefore need to be explained and clarified on an individual basis.

2. A graduate service assistant (GSA), like the research assistant, is assigned to a particular professor or project and can assume a variety of responsibilities according to the needs of the professor. These assistantships may, for example, require classroom-related tasks such as grading or organizing study sessions, or they may revolve around laboratory procedures.

   Only GSAs may be assigned outside their academic departments; therefore, if you have an extra-departmental assignment, no matter what your job description, you are classified as a GSA.

3. A graduate teaching assistant (GTA) assumes primary and frequently sole responsibility for a particular course. Regulations require a student holding this position to have completed a minimum of 18 hours of graduate work in the field; consequently, these assistantships are generally awarded only to those in the advanced stages of a master's program or those with a master's degree in their doctoral field.

It is your responsibility to know what type of assistantship you have been awarded. In most cases, you will have an immediate faculty supervisor, and your first task will be to clarify your duties and responsibilities. In some areas, these can be made explicit and routine, but in others you may have to learn to tolerate a schedule and job description that varies with the needs of the task. You will also need to know your department's policy for keeping office hours.

If you will be working with students, one of your early tasks should be to familiarize yourself with the University policies that pertain to students. These policies include:

- Code of Student Rights and Responsibilities:
  - https://louisville.edu/dos/students/studentrightsandresponsibilities
- Code of Student Conduct:
  - http://louisville.edu/dos/students/codeofconduct
- University's Student Grievance Procedures (both academic and non-academic):
  - http://louisville.edu/dos/students/studentpoliciesandprocedures/student-grievance
- FERPA (Family Educational Rights and Privacy Act):
  - http://louisville.edu/library/archives/university/stupriv
- Sexual Harassment Policy:
  - https://sharepoint.louisville.edu/sites/policies/library/SitePages/Human%20Resources/Sexual%20Harassment.aspx

Check with your unit to determine if any other unit-specific policies exist pertaining to students.

Questions Regarding Roles and Responsibilities as a GTA for Which You Should Know/Find the Answers

- What are my GTA duties for this course?
- What kind of time commitment can I expect to make to my GTA duties?
- How many and what types of section/lab meetings will I be expected to hold?
- Will you prepare issues to discuss or will I be responsible for developing the material to be covered?
- Are the students' participation and/or attendance requirements for the sessions/labs for which I am responsible detailed on the course syllabus or should I prepare a handout for the first meeting detailing these expectations?
- If I am teaching a lab or follow up seminar, am I expected to attend course lectures?
- When and where does the course meet?
- What are the required texts?
- Am I required to select the required texts?
- How do I obtain desk copies?
- What will my role be in testing, evaluation, and grading students?
- What criteria should be used?
- What are the standards for determining a pass or fail grade for this course?
- How will this standard be communicated to the students?
- Whose responsibility is it to inform students if they are failing?
- What are the particulars of the grading system, especially the department philosophy concerning, for example, incompletes?
- How many office hours should I schedule?
- Do I have a specified office? If so, how can I get keys to it and to the building?
- What is the protocol you expect me to follow regarding issues of academic integrity, of grade questions, or of students who seem to be academically at risk?
- What is my affirmative obligation to report certain situations disclosed to me by one of my students? This could include incidents involving sexual harassment, sexual violence, or a student expressing emotional distress.
- What is the protocol for emergency preparedness?

Your Role as a Student

The university and your faculty advisors will tell you that being a student is your primary role, that your studies take precedence over everything else. The GTA is particularly susceptible to two conflicting tendencies that often afflict new faculty.

First - graduate students are especially prone to the temptation to stop seeing yourself as a student, to decide that you already know more than those from whom you are learning, to become sick of people putting grades on your thinking and your work, to decide at some point that you no longer need to be bothered with accomplishing the assigned work. When you see yourself in this situation, consider that if the faculty members are doing their job, you should reach a point where you know more than they in one particular area. When you can move beyond what is in the books, the faculty have succeeded not only in teaching you the material, but also in teaching you to learn and create. It is important to remember their experience in surviving effectively in this field far outweighs yours.

Second - the urge to volunteer to do all sorts of extra projects. Volunteering is a noble activity, and therefore particularly insidious if you don't learn to control it. When your desire to accomplish exceeds your available time, you find yourself with a calendar that cannot accommodate the number of tasks you have taken on unless you give up sleeping and eating altogether. The end of the semester is especially dangerous because that is when you have to do all the things you put off doing during the semester so that you could accomplish the extras. You are not indispensable, and things will get done without you.

Some students seem particularly susceptible to the "imposter syndrome," the secret belief that you are not as capable as everyone thinks and will be discovered at any moment as the dunce you really are. As a consequence, you find yourself nodding in agreement to ideas that make absolutely no sense to you because everyone else obviously understands perfectly well. Thus, your original premise is reinforced: you must not belong in graduate school. Before you turn in your pencils and give up, consider this wisdom from a former doctoral student who contributed to this handbook: “We arrive expecting to learn everything, we move on to recognizing that we'll have to be satisfied with learning everything we want to know, and we end up settling for learning most of what we need to know. The real imposters are those who graduate thinking they know it all.”

Grades

Graduate students are required to maintain a minimum 3.0 GPA (see definitions in the Graduate Catalog); however, there are programs that require graduate students to maintain a higher GPA. Be sure to check with your department to determine their GPA requirement. Graduate programs offer professors the option of awarding plus and minus grades.

Academic Grievances

If you believe you have been treated unfairly or have received an unfair grade, there is an established process you can follow. The first step is to speak directly with the professor who you have the issue with. If the outcome of that conference is unsatisfactory, your department has a sequence of steps to take. Your academic advisor can advise you on the proper procedure.

Relating to the Faculty

Your relationship to the faculty can become a bit complicated with your new role, especially if you are a GTA. On the one hand, you are still a student. On the other hand, you are performing many of the functions of a faculty member. There are no hard and fast rules to govern this duality of roles. The best advice we can give is to remember that no matter how your students see you and no matter what your professional responsibilities, the faculty view you as a student. Certainly, there are expectations, and there are those professors who will be more willing to enter into a collegial relationship with their graduate students. Many (but not all) departments routinely include graduate students in many social functions. Nevertheless, to assume an element of familiarity or equality without being invited to do so can only lead to difficulties.

One mistake is to see oneself as indispensable. For the GTA, for example, the sight of those eager (and not-so-eager) faces waiting for you to say something profound, believing that you can say something profound, leads almost inevitably to the notion that somehow their fate lies in your hands. You cannot take every student failure as your own any more than you can take every student success as your own.

Students have a way of failing and succeeding in spite of, as well as because of, anything you did or could have done.

Address faculty members by their appropriate titles, unless invited to do otherwise. You may notice that other senior GTAs are on a first-name basis with some faculty members, but you can usually safely avoid calling them anything until you are certain what is suitable. However, in the classroom, always address any faculty member by his or her title.

Remember that a faculty member who cares enough to watch out for you, give advice, help you figure out where and how to get a paper published and offer moral support when you need it, may also be a future reference.

Funding

Participation in professional activities is vital to your career. When you need money for a special project or participation in a professional conference or seminar, begin well in advance to check out your options. Start with your advisor or your representative to the Graduate Student Council (GSC) travel and research funds. The funds are limited, and you may not get all you want or need from a single source, but if you meet the criteria, you have a chance of getting some help.

CHAPTER III: UOFL STUDENT BODY

The University of Louisville is Kentucky's premier, nationally recognized metropolitan research university. Established in 1798, UofL has 22,640 (Fall 2016) students, with an undergraduate average ACT of 25.5 (Fall 2016). With 7,074 (excluding instruction/research assistants) faculty and staff, UofL has ~17,000 students from Kentucky, including ~9,500 from Jefferson County.

Total Headcount:	**22,640**
Full-Time Equivalent:	18,814
Full-Time:	17,406
Part-Time:	5,234
Undergraduate:	16,033
Graduate:	5,808
Post-Doctoral:	155
Male:	11,173
Female:	11,467
African American:	10.2%
All Other Minorities:	12.7%
White:	72.3%
Student Classification (Fall 2016)	
Freshman:	3,712
Sophomore:	3,095
Junior:	3,479
Senior:	4,636
Undergraduate-Non-Degree seeking:	591
Post-Baccalaureate-Degree seeking:	266
Post-Baccalaureate-Certificate:	98
Graduate-Non-degree seeking:	220
Master's:	2,894
Specialist:	41
Post-Doctoral:	155
Doctor's Degree Professional Practice	
(Medicine, Dentistry, Law):	1,446
TOTAL:	**22,640**

CHAPTER IV: TEACHING

GTAs come to college teaching with a variety of teaching experience; but regardless of that experience, teaching takes up a great deal of time and mental space, of which graduate student have limited stores. Moreover, teaching is a skill that we are never done developing. Much like doctors or lawyers, teaching is a practice that we continue to demonstrate and in which we continue to improve over time. While this can seem overwhelming, it's great news. This means that all of us, even expert teachers, are always working to be better teachers. So, welcome to a community of lifelong learners and teachers.

As a community of learners who practice teaching, it's important to know that we have certain values. First, teaching is actually about learning. If we deliver content to students, but they don't actually know, understand, apply, analyze, synthesize, or create with it, it hasn't actually been learned. Moreover, teaching well is not something that we automatically do or don't do well. All of us can become better teachers. To do so, we must be reflective of our teaching practice. This allows us to both be honest with ourselves and our students about what is actually happening in a learning environment, but also gives us the opportunity to explore other avenues to accomplishing learning. There are best practices in teaching and learning, both broadly and within our disciplines. As such, a great way to become a better teacher is to learn from these areas of scholarship and participate in our community of practice by investigating and applying this research. Much as we do with research, taking a scholarly approach to teaching allows us to maintain a rigorous, but supportive learning environment.

This section on teaching is general, because many different disciplines will be using this handbook. This handbook is only the beginning. We encourage you to talk with and learn from faculty in your department, faculty mentors, Directors of Graduate Studies, Chairs and Deans, experienced graduate students, and other peers and colleagues, as well as reading about teaching in your discipline and reflecting on your own teaching to get a richer understanding of teaching in higher education. This section, though, should be enough to get you started.

Planning Your Course

While GTAs have a variety of responsibility for a course – from fully planning and running a class to simply being present, it is important for you to have an understanding about how the course is comprised. Backward design (Wiggins and McTighe, 1998) is a useful framework by which to frame a course. In backward design, first you identify what you want to students to learn – the learning outcomes, then you plan how you'll determine whether they've learned the concepts, and finally you decide the strategies and resources you'll need to help students learn the material.

Alignment is the concept that all these aspects of the course are connected, one influencing the next. Course alignment keeps the focus on what students should learn as opposed to focusing on content coverage or the kinds of assessment you want to include. Many courses have already established learning outcomes, but if not, or as you're creating learning outcomes for units, assignments, or activities, one great tool to use is called Bloom's Taxonomy. Bloom's Taxonomy helps to identify at what level students are learning – lower level learning like remembering, understanding, or applying, or higher level like analyzing, synthesizing, or creating. The goal, of course, it to make sure that the learning outcomes are appropriate for the level of the course and preparation of the student, but also that you're actually measuring the level of learning you want students to achieve. Think backwards for outcomes as well – outcomes for an activity should help meet outcomes for the day, outcomes for the day should help meet outcomes for the week, outcomes for the week should help meet outcomes for the unit, etc. All the way up to helping students learn what they should about the discipline. You can't do it all in one class, but your class should certainly be a part of the student's whole experience. Once you have all this established, you can work out how you're going to fit all of this into the class periods, how these goals can best be accomplished, and how you will test and evaluate the learning that you hope has taken

place. Do not hesitate to ask your faculty advisor or an experienced peer for advice on matters that are not standardized by departmental policy or procedure.

Preparation for Class

It should go without saying that you owe it to your students to be prepared for every class. This is a considerable task your first time through, especially for those of you who have sole responsibility for all facets of the course, but it will get easier as you become more experienced. Preparing for class requires that you have a good understanding of the material you're teaching. If you're teaching a class you've never taught, or material with which you're less familiar, this may mean that you're teaching yourself the material not long before you teach your students. While challenging, this is not completely unusual. The key is that you stay ahead of your students. Moreover, the more familiar you are with the material, the easier it will be to navigate and make decisions about the content in order to teach it effectively. You aren't expected to be an expert, but doing your best and providing students with a good learning opportunity should be a baseline.

Front Matter and Syllabi

Front matter is a fancy name for the class policies you put in writing and hand out to your students on the first day. If your department does not have a standard form to follow, ask an experienced peer for a sample. You may also visit the Delphi Center for Teaching and Learning at http://louisville.edu/delphi/resources/syllabus for guidelines concerning the creation, distribution, and modification of syllabi at the University of Louisville. In essence, your front matter ought to include the following information:

1. The course name, number, section, time, and meeting place.

2. Your name, office location, office hours, e-mail address and the phone number where you can be reached in person or with a message. New GTAs often wonder whether or not their home phone number should be given to students. This is an individual decision, but you ought to consider how easily and frequently you can be reached on campus, whether or not you expect students to notify you in advance of an absence, and whether homework assignments are specified on your course syllabus. If you do decide to give out your home number, make clear to your students from the beginning the hours at which you will accept calls and what kinds of problems you are willing to deal with at home.

3. Textbooks and materials required for your course.

4. Attendance policy.

5. Grading policy and criteria. Note that you are stuck with whatever you specify here. You must inform them of these policies and expectations, and you cannot change your mind and criteria midstream, so think carefully before you commit this to writing.

6. Policies regarding accommodations for students with disabilities. Contact the Disability Resource Center at 502-852-6938 if you are unsure about what to include here.

The University requires a complete syllabus to be on file for every course by a certain date each semester. These can be relatively simple or highly detailed. Some instructors combine the syllabus with the front matter, others separate the two. The syllabus is a course outline, including the materials to be presented or covered, reading assignments, work requirements, and test dates. If you plan a detailed syllabus, including homework assignments, this does double duty as a course plan, and it can save you class and office time by giving students the information they need to be prepared for class in advance. It

also helps them organize their own schedules. You can give an edited version to your students if it contains more than they need to know. Do remember that the Code of Student Rights and Responsibilities requires that any deviation from the original front matter or syllabus that concerns course procedures or policies be presented in writing to the entire class. If your department does not have a standard syllabus, ask your advisor or a colleague for a sample.

Don't make the assumption that your students know what a syllabus is, know how to read it, will check it regularly, or will use it for planning purposes. Explain all of this to students. In fact, many instructors find it useful to use to syllabus actively and regularly. Some will ask questions about it or provide a quiz about it on the first day or in the first week. Some will ask students to pull out the syllabus regularly to talk about what's upcoming and to serve as a reminder for students.

Using Class Time Well

One of the biggest challenges for new instructors is figuring out how to best use your class time. One of the best strategies for preparing for this challenge is to put together lesson plans. These are detailed outlines of what will happen in each class.

At the least, you should have outlined:

- Date
- Topic
- Class goals (outcomes)
- Background knowledge or preparatory homework due for class
- Outline of class including
    - Any lecture notes
    - Activities for the day
    - Assessments
- Assignments to give and reminders for students

It's also a good goal to estimate the amount of time so that you start to gain an understanding of how you teach, how students learn, and how you may be underestimating or overestimating your time usage. Set the expectation that class time is important by being early, starting class on time, and ending on time – and expecting students to do the same.

The First Day of Class

There are several things you can do to prepare yourself for the first day of class. One is to find your classroom ahead of time - it is exceedingly embarrassing to get lost and consequently be late. Unless you can carry off a grand entrance to an empty room, this is a situation to be avoided. Secondly, plan what you are going to say and how you are going to present yourself.

Whatever you decide, you need on that first day to introduce yourself and to establish your policies and expectations. This means that you must be able to explain clearly what students will be expected to buy, read, write, and perform, and how these tasks will be evaluated. Most of these expectations are established in writing on your front matter and/or syllabus. You will also want to go over the expectations orally or in writing an overview of the materials and subjects to be covered in the course.

Below is a sample schedule of events for the first class:

1. Write the course name and number on the board. Some students will be in the wrong place; now is a good time to let them slip out. If you discover you have too many students to fit in the classroom assigned, or two classes are meeting in the same room, muddle through as best you can or find an empty classroom. After class, report the problem to the department secretary who

can contact the appropriate person to correct the error, and leave written notice of the change in the old classroom before the second meeting.

2. Introduce yourself. Go ahead and think about how you want students to address you, and TELL them this. Mr., Ms., Mx. So-and-So are good options. Professor may be an option in some departments (some disciplines are picky about this until you have earned a doctorate). You can always use your first name as well. Consider what your choice says about you, and make sure you are comfortable with that.

3. Determine who is present. You may or may not have a printout of your class roster. You may want additional information anyway, so many instructors ask students to fill out 3x5 cards with their names, addresses, phone numbers, student ID numbers, and any other pertinent information. When you call the roll, ask what the students prefer to be called. Alternatively, it is a good practice for students to self-identify in case any official names do not match the name a student uses.

4. Have students exchange names and phone numbers with at least one other student so they can call that student rather than you for missed assignments, etc.

5. Distribute your front matter and syllabus. Go over this point by point and introduce the course as you go. You cannot assume they will read this on their own.

6. Consider sharing or allowing students to participate in developing class expectations. There are ways to do this that allow you as much or as little control as you like into what is finalized.

7. You could launch into your subject; you could have them do some sort of sample writing such as an informal writing on what they expect of the course. Be guided by how much time you have left and your anxiety level. You also need to be aware that the timeframe to add classes usually extends through the first week, and some students will not decide to begin classes until the last possible moment, so you will have to make arrangements to catch up these latecomers. This is an excellent time to help students consider the BIG QUESTIONS of your discipline, or to make early connections between the course and their goals. The more students can connect with the course from this early point on, the better.

8. Give any assignments you want them to prepare before the next class.

9. Congratulate yourself on having made it through your first big teaching hurdle. It definitely gets easier, but if you are still shaky, read the article "101 Things You Can Do the First Three Weeks of Class" from the August, 1986 issue of Teaching at UNL, included in the appendix of this handbook.

Assessing Student Learning

Assessing student learning comes in two primary forms – formative and summative. Determining what students know and are learning is important before, during, and after your course. Formative assessment of student learning helps you adapt your teaching for students and helps them better learn material. Summative assessment of learning help you provide benchmark grades to allow them progress through your course and their college career.

Formative Assessment

Many instructors make assumptions about knowledge students' have, both as they enter the course and as they progress through. It is important to get accurate information about what students actually know and understand to help you determine if there are any gaps and how to best address the gaps. While

many courses require prerequisites, there is no guarantee that students actually remember or understand what they previously learned. Therefore, if you conduct a prior knowledge assessment of some kind, you can begin the class with a full awareness of where your students are with the material. As a response, you may want to provide supplemental materials, rework your course outline, or address student knowledge gaps explicitly as a part of your instruction.

As you are teaching, it is also important to determine if your students are learning what you want them to learn. Collecting this information is easier than you might think. In fact, Angelo and Cross (1993), have an entire book of what they call Classroom Assessment Techniques that you can use and adapt to help you identify what it is students are actually learning. Simple ideas like asking students at the end of class to write on a note card what they are still confused about, or asking students to categorize certain concepts from class. This information helps you clarify concepts, shift your teaching approach, or help students better identify what is important in the material.

A more traditional approach to assessing student learning is testing. Some departments, especially those with large numbers of introductory sections, use standardized tests, thus absolving you of the responsibility of creating such devices. The practice is not without its problems, however, since it brings up the whole question of teaching to tests. Obviously you owe it to your students to see that they are given the material they need to complete these tests successfully, but that does not mean you can only teach them the answers. You must also teach them ways to discover and learn the answers.

If you do create and schedule your own tests, your major concerns will be how to test what you want them to learn, how often exams and quizzes can be administered without interfering with the reading and presentation of new materials, and how to grade the performance. For example, if you want them to learn to see the relationships among trends or ideas, a multiple-choice format may not be appropriate. If you give daily in-class reading quizzes, will you be sacrificing class time needed for other purposes? Should you use a curve? Do you have time to grade all this anyway? Once more, it is recommended that you discuss this with your supervisor or an experienced peer. In addition, ask a colleague to take the test so you can discover beforehand where the questions aren't clear and how much time you should allow. Do not expect your students to answer as quickly as you or a colleague can-they will need two or three times as long.

Generally speaking, it is a best practice to provide students feedback early and often, and to give students opportunities to practice with minimal possible points the kind of assessment you will be using to give them grades. Providing students with different kinds of ways to demonstrate their learning, including graded assignments, is ideal. In fact, if you can provide students the chance to choose ways to demonstrate their learning, even better. Other good practices associated with evaluating student learning are:

- Providing rubrics so that students have a clear understanding of what is expected of them,
- Providing examples of good and poor work to provide benchmarks,
- Scaffolding larger assignments worth more points so that students are more likely to be successful,
- Provide more detailed feedback when possible – research shows that students who receive more detailed and reasoned feedback improve their performance more than students who just receive a grade,
- Provide collective and individual feedback to save time

Summative Assessment

With summative assessment, you provide grades for demonstrating student learning. Your grading criteria should always be clearly established beforehand and your grading system should be as simple as possible. In addition to the obvious responsibility of grading individual students fairly and objectively, you also are required to provide the student with a grade-to-date before the final day to drop. You must also keep your grade records beyond the end of the semester in case a grievance is filed. Never throw any of

these records away without being certain of your department's policy for retaining grade records. Finally, a student's grade is never available to anyone other than the student unless you have written permission from the student or unless the person is a duly authorized representative of the university acting in that capacity. This means you do not discuss a student's grade with parents or other students, and you do not post student grades in a form allowing identities to be deduced. Do not leave exams lying about where anyone can read them.

Teaching Strategies

Lecturing

Although lecturing is neither always the best nor the only way to present materials in the classroom, there are situations and courses in which it is a necessary format. Lecturing is both an art and a craft; hence it requires perfecting over time. Nevertheless, there are certain guidelines the beginner can follow to reduce the chances that students will become bored.

1. The best training for a lecturer comes through work in public speaking and drama. At the very least, this sort of training teaches you to relax in front of an audience; at best, it will teach you to deliver your material in such a way that your listeners forget they are listening to a lecture. Grab every chance you can to take courses or gain experience in these areas.

2. Make an outline of your material. Very few people can lecture off-the-cuff and remain coherent to their listeners. If your classroom is equipped for it, PowerPoint presentations can be very helpful in organizing your lectures. The complexity of the presentation will determine the complexity of the outline. If you know this material so well you can recite it in your sleep, you will need only general headings to remind yourself to include everything. It can be very tempting, however, to then read from your slides, or include too much on your slides. Make sure to follow good presentation development and presentation protocol so you don't rely too heavily on this technology.

   If the material is relatively new to you, contains a lot of facts and figures, or if your thought processes tend to wander whenever the opportunity arises, you will want a more detailed outline. If you have thought of a particularly brilliant opening or metaphor or phrase, include it. But do not write the whole thing out and read it. If you've ever sat through a conference where the presenters read prepared speeches or heard poets reading their own work, you know why. If it has to be written out to be clear and coherent, use it as a hand-out rather than a lecture. Practice delivering the lecture beforehand to a colleague.

3. Know exactly what you want to accomplish and how much your students already know about the subject. Nothing causes student disinterest as quickly as a lecture that contains nothing new.

4. Prepare your students. Assign pertinent readings and any technical vocabulary ahead of time. If you want them to spend time listening rather than scribbling hurried notes, give them an outline.

5. In the opening section, explain the pertinence and relationship of this material to what has come before.

6. During the presentation, maintain eye contact with your listeners, not your notes. This not only allows you to scare them into staying awake, it also allows you to detect puzzlement and restiveness while you can still do something about it.

7. Move around a little. There is no rule that says you must remain glued to the podium. Do, however, remember that to be heard, you must face the students, and your movements should be natural and unobtrusive. If the audience begins to take bets on where you are going next, you

have lost them. Try to use students' names; provide tips, analogies, stories, and key paths to understanding; provide multiple view points and model your thinking, and cue students to important information.

8. Beware of distracting mannerisms such as punctuating phrases with "uhms" and "ahs" or shaking your foot. You won't be aware of these unless someone tells you about them or you see or hear them on videotape. So early on, arrange either to have a couple of your classes taped for your own viewing or offer to swap visits with a colleague.

9. Remember that it is a rare being whose attention span matches the 50-minute class hour. Break the presentation frequently with a change of pace - write on the blackboard, ask for questions, summarize the material thus far, or insert a pertinent anecdote. Relevant humor works wonders provided you do not end up appearing to be a stand-up comic rather than an academician. Lecturing can be very well done if active learning opportunities are included. Use graphics or media – but have students do work with them. Have them consider connections, work in small groups, or draw conclusions to share before returning to the lecture.

10. Leave ample time for questions, clarifications, and discussion at the end. Do not be surprised if you have to struggle in the beginning to get students to ask questions; they fear being told the question is stupid, so you will have to ease those fears. If they seem hopelessly dumbstruck, consider a different question-answer format such as small discussion groups or written summaries.

11. Have one of the students summarize the last lecture at the beginning of the next class. This is a good learning device and also allows you to discover where clarification is needed.

Active Learning

There are many assumptions about what "active learning" is and looks like. Active learning can be conducted during lecture, and completely absent from group work, so often our assumptions about active learning are wrong. The key to active learning is to engage students in the work of learning – not just reading, but making sense of the reading; not just writing, but peer-reviewing and editing; not just group work, but questioning and creating. It is the "active" part of working with material that leads to learning. The more students engage with material, consider it from different angles, investigate, explore, and manipulate it, and then try to teach it to others, the better they will learn it. There are numerous activities to help students engage with course content. Think of active learning as a process. First, students are introduced to the material. Then they revisit it with multiple ways of making sense of it. Then repeat that step often. Then, do something different and new with it.

Writing

Writing can be used as an active learning technique. Asking students to respond to a question by writing first allows those that need more processing time to think through their responses before they respond in front of others. Moreover, if students have responded in writing, then if conversation lags, you can always ask students to respond using what they've written. Additionally, writing can be used to have students engage more deeply with material. Asking students to reflect on a passage, a graphic, or a conversation and how it could apply to other class concepts encouraged *them* to do the work of learning.

Questions

Asking the right type of question to engage students can be difficult. As a general rule, the more open-ended the question, the more likely students are to respond. Some common question types include:

- Discussion starters
- Probing and challenging questions
- Connecting questions
- Predictive and hypothetical questions

- Analytical and evaluative questions
- Summary questions

Powers (1992) lists ways instructors can effectively ask and respond to questions:

- Use open questions to solicit responses
- Use closed questions to end discussions
- Provide correct, clear answers to students' questions
- If you are unable to answer a question, find the answer and report it back to students – or have a student find the answer and share it with the group
- Answer questions nondefensively
- Occasionally refer questions back to students
- Sometimes guide students to reach answers themselves
- **Don't ask a question and then answer it yourself**

Discussions

Just as every lecture is not a good one, every discussion isn't useful for learning. Structuring and guiding discussion is key. Using effective questions is a good way to begin a discussion, but not the only way. Asking students to address a problem, suggest a solution, reflect on a picture or graphic, or make connections can also structure a discussion. Make sure students understand if discussion is a part of a continuing lecture, or the beginning of group work or an activity. GTAs often find discussions challenging because of the lack of control and seemingly chaotic nature of the format. The more familiar you are with the material, the better you will be able to help students reach the level of thinking you want. Asking probing questions, redirecting comments and responses, and bridging gaps help you draw the path of material and thinking.

A common challenge in discussions is getting students started talking. A "think, pair, share" model, where students write individually, talk in pairs, and then share with the group, is an often used and useful technique. This not only gives students a chance to respond, but it can also diffuse the risk in responding with the wrong answer. Using students' names, and being willing to pause and wait several seconds is also useful. Using students' names shows them you know the names and also communicates student value. Pausing and waiting can feel incredibly uncomfortable, but rest assured that the discomfort you feel will prompt students to respond. Don't be afraid to wait even 30 seconds or a full minute, or to let students know that you're willing to wait. Other strategies to get students talking in their discussions are to provide pre-reading, assign roles in groups, and to have students move. Finally, modeling your thinking, and even telling stories of incorrect thinking or failures helps students understand the power of learning – making mistakes, failing, and persisting through learning.

Group work

If you chose to use group work in your class, it is incredibly important that you *teach* students how to work in teams. We often make the assumptions that students have either been previously taught or just *learn how to work in teams by working on teams.* Neither of those assumptions is typically true. Good practices for group work – particularly if students are working on a longer term project or come together frequently with the same set of students – include assigning students roles (that may or may not rotate), having students develop expectations, allowing students to evaluate each other as a part of the grade, and creating assignments that require collaboration, not just putting together individual parts.

Office Hours

One of the most important parts of teaching is making and keeping office hours. Even if students never use your office hours, allowing students to access you individually and for consultation not only communicates that you value this interaction, but that students *should* make use of any extra assistance they can get. Designate a time and place for your office hours and keep them. If you ever need to miss or

adjust your hours, you should publicize this to your students. Often GTAs will hold office hours just before or just after class times. This can be useful for both you and students as then information is fresh in your minds. Also, you might consider other times that might be useful to students. Some instructors have also been known to hold "virtual" office hours, where students can reach them online or via video chat. You're welcome to be creative, as long as you're still accessible to students. It's possible that students will be unavailable during your office hours. If that's true, you should reasonably try to meet them at other times.

Getting Students to Read

Getting students to read can be a challenge no matter the discipline, level of class, or quality of student. Below are some suggestions of best practices to encourage students read (or watch videos, or otherwise do the at-home assignment):

- Make use of what students read outside of class, inside class. Refer to information, relate concepts to reading, or have students do an activity related to the reading;
- Quiz students at the beginning of class on reading concepts. Quizzes don't have to be worth points other than attendance, but you'll get a sense of whether they've actually read. Or, actually give them points for the quizzes;
- Set the expectation that students will teach each other material. Have certain students responsible for certain material and other students other material, and have them teach each other. Then grade, or ask for peer evaluation.
- Many students have difficulty reading, or *think* they're reading well, because they don't know how. Explain how to read closely, how to ask questions, take notes, effectively outline or look through organization of reading, etc.
- If homework assignments that are worth points require students to read, they will be more likely to read.
- Make the material matter to them. The more closely it can align with their goals or they can connect with the material, the more likely they will be to *want* to read.

Classroom Environment

Establishing a positive classroom environment conducive to learning can make your job that much easier. Students who feel safe, comfortable, and valued will be more open to high expectations and a rigorous learning environment. You can build this environment by setting up expectations for your students and their behavior from day one. Establish guidelines for demonstrating respect, acceptable and unacceptable language, and ways to communicate. Using student names and explicitly stating your value for students and their learning helps them feel welcome and included. Helping students to identify how the course answers important questions or relates to their long-term goals can keep them invested in the material. Keeping lines of communication open and being willing to collect feedback from students about how the course is going allows you to address any challenges.

Motivating Students

There is a strong research base on how to best motivate students. Key factors include:

- Students feeling as if they belong
- Relating the course, material, and assignments to student goals, interests, and background
- Giving students the opportunity to contribute to class goals, expectations, assignments, and activities
- A clear understanding of how to be successful in the class
- Opportunities to get feedback and to be successful, contributing to confidence that students can be successful in the course overall.

Large Classes
There is often the assumption that interaction is impossible in large classes. In fact, there are some easy ways to build in interaction in large classes. Make an effort to at least get to know some students. Ask students to sit in specific seats or use ongoing name tents. Use “think, pair, shares” to have students work in small groups and then share to a large group. Encourage active participation and ask for feedback from multiple students. Utilize technology to get more input from large groups of students.

Studio or One-on-One Classes

- Scaffold your instruction. Provide more structure and guidance initially and slowly remove it as students gain confidence and skills.
- Not everything can be changed or corrected at one time. Diffuse feedback so that students can work on improving in reasonable amounts.
- Encourage as well as provide constructive criticism. With one-on-one contact, encouragement is often even more important than in larger group settings.
- Don’t just provide feedback, offer alternatives as well, so that students can begin to understand different ways of understanding concepts.
- Model your thinking and demonstrations. Show students how you think about the material or skill and how you get to a reasoned conclusion. Don’t be afraid to show incorrect options or mistakes to demonstrate that those are a part of learning as well.
- Practice with varied examples so that students see multiple way to understand a concept.
- Encourage students to participate in self-evaluation, and conduct your own self-evaluation.
- Have clear guidelines for availability and communication.
- Provide verbal cues and labels to save time.

Laboratory Work
If your responsibilities involve work in a laboratory, be certain that before you begin you know exactly what safety precautions must be taken and the precise routine to follow in the event of an emergency. If these procedures are not given to you in writing, ask for them. Remember that you are responsible for the safety of everyone present while you are working.

If you are expected to do demonstration work for students, or if the students will be performing their own experiments, determine exactly what you want to demonstrate and what you want the students to learn. Time spent on logistics and advance planning are key to successful labs. What preparation will the students need to do in order to make the best use of their lab time? Will you need hand-outs or material written on the blackboard ahead of time? Consider preparing “how to” handouts. Make sure you clarify expectations. Try the experiment beforehand to ensure it works and that you have all necessary equipment and materials on hand. This also allows you to make note of any potential problems or safety hazards.

When students will be working on their own for all or part of the time, you will want to circulate and act as a consultant. Can you encourage them to learn collaboratively rather than always to rely on you for answers? If you require the submission of a report on the lab activities, be certain you make clear to your students when they may work together and when the work must be completely their own. Utilize labs to simulate the process of scientific inquiry, helping students in the process of becoming scientists. Clarify the link between lab exercises and big picture course concepts. If you can, give opportunities for freedom so that students can truly experiment. For grading, break assignments into parts due on different dates. Provide examples, analogies, tips, and model your thinking.

Study Sessions
If you conduct a study session, be sure you know what questions should be asked and answered and leave ample time for student questions that might not have occurred to you. You should decide ahead of time how best to run the session. Should you ask the questions? Should the students work in small groups, coming to you only when they cannot collectively solve the problem? You may need a few

sessions with the group before you can assess the best way to work with this particular group of students.

Inclusive Teaching

Statement on Diversity in the University Community

The University of Louisville strives to foster and sustain an environment of inclusiveness that empowers us all to achieve our highest potential without fear of prejudice or bias. We commit ourselves to building an exemplary educational community that offers a nurturing and challenging intellectual climate, a respect for the spectrum of human diversity, and a genuine understanding of the many differences-including race, ethnicity, gender, socio-economic status, national origin, sexual orientation, disability, and religion-that enrich a vibrant metropolitan research university. We expect every member of our academic family to embrace the underlying values of this vision and to demonstrate a strong commitment to attracting, retaining, and supporting students, faculty, and staff who reflect the diversity of our larger society.

Inclusive teaching is more than just a university value, it's the hallmark of a quality learning experience. Research clearly demonstrates that how we learn is strongly impacted by who we are, and the lens we bring to our learning experience. The same is true of our teaching. Thus, not only is diversity a natural characteristic of a learning experience based on the teachers and learners involved in the process, diversity deepens, enriches, and contextualizes our learning.

While learning is inherently impacted by and supported by diversity, *exclusive* teaching can prohibit and negate learning. We, therefore, should take active steps to teach inclusively.

Academic inclusiveness can be influenced by:

- Course content;
- Assumptions and awareness of potential multicultural issues in classroom situations;
- Planning of class sessions, including the ways students grouped for learning;
- Knowledge about diverse backgrounds of students;
- Decisions, comments, and behaviors during the process of learning

Creating an inclusive learning environment makes content both interesting and valuable as it allows us to think critically about our material. Moreover, an inclusive learning environment reduces marginalization, recognizes a wide range of typical experience, provides cultural context, and makes students feel safe, supported, and encouraged. Relative to our content, Consider: whose voices, perspectives, and scholarship are being represented? How are the perspectives and experiences of various groups being represented?

Other good practices in creating an inclusive learning environment include:

- Don't have one student speak on behalf of a group
- Educate yourself
- Invite all students to participate (in different ways)
- Be aware of the dynamics of the room
- Ask all students what pronouns they would like you to use
- Point out problematic parts of resources you use
- Explicitly recognize diverse ways of knowing and learning
- Vary instructional strategies and assessment methods and provide choice when you can
- When you cover controversial topics, provide expectations for respect, environment, and language. Encourage students to freely express ideas, but set guidelines of your safe space. Be prepared to be proactive in addressing stereotypes and assumptions

International Students
Depending upon your English skills, you may have to make a considerable effort to speak slowly, distinctly, and with the inflection and emphasis patterns of native speakers of English. You can help your students by stopping frequently to ask if you have been understood, using the blackboard to illustrate points you are making, and providing hand-outs when the material is particularly complex. Before you decide that students are being rude or conducting themselves inappropriately in the classroom, talk to one of your American counterparts or to the students themselves. It may be a difference in expectations and customs rather than deliberate hostility or misbehavior. Studies show that international GTAs who approach teaching tasks with good humor and a genuine desire to help students to learn are rated very highly by their students. These are the qualities valued in any graduate assistant, regardless of nationality. Moreover, the international graduate assistant can teach something his or her American counterpart cannot: that certain types of learning and knowledge have no cultural boundaries and others flourish when culturally diverse perspectives encourage a re-evaluation of methods of inquiry and their accompanying belief systems.

Student Athletes
Student athletes are unique cases because of their schedules. You will need to decide on a system whereby the athlete who has been absent from class because of his or her game schedule can make up the work missed. During the semester, you will receive sheets asking for grades-to-date and comments about the class performance of any scholarship athletes enrolled in your class. By filling them out and returning them quickly, you can help the Academic Services for Athletics Office spot potential trouble and get extra help to these students. Questions or problems should be referred to that office at 502-852-7100.

Students with Disabilities
There are no general rules for assisting students with disabilities in the classroom; you simply have to be creative and sensitive to their needs and do your best to see that these students have an equal opportunity to learn the material. Do ask the student with a disability how you can help; do not assume that you should expect less of this student. Remember that not all disabilities are visible. Student with learning disabilities may also require supplemental accommodations. The University's Disability Resource Center can provide you with help or advice in this area. A statement regarding the university's policy on providing accommodations should be provided in your syllabus, and students should be prepared to provide you with documentation from the DRC regarding appropriate accommodations. If you are uncertain as to how to provide accommodations, there are excellent university resources, including the DRC as well as Beth Case (502.852.7689) in the Delphi Center for Teaching and Learning.

One important thing to remember is that having a student with a disability in your class provides you with a great gift. It forces you to think about your material well in advance and in new and different ways. You better learn the material and begin to think about it in new and different ways. Moreover, your new ways of thinking and preparing almost always end up benefiting *all* students in your class and their learning experiences.

Technology
It is your responsibility as a GTA to be familiar with the different technologies that will impact your teaching assignment. If you are the instructor of record, you will be required to use ULink, the online student records portal, located at http://ulink.louisville.edu, to print a class roster and to submit individual student grades. GTAs should also be familiar with Blackboard, located at https://blackboard.louisville.edu/. Blackboard is a web-based course-management system designed to allow students and faculty to participate in classes delivered online or use online materials and activities to complement face-to-face teaching. Additionally, it is important to note that U of L students are expected to use their university e-mail accounts on a regular basis.

Whether you plan to utilize technology for your class or not, it's important that you consider the implications. At the bare minimum, even if you only plan to use Blackboard to keep your syllabus, you'll have to understand how it works and so will your students, so you may need to do some very basic instruction and provide support for students. If you plan to use PowerPoint or Keynote, you should use good presentation practices and feel comfortable with the technology set up in the classroom you will be using. If you are more interested in using technology, be thoughtful in your approach. Consider the implications of what technologies you'll use: will students need instruction? Will students have access? Does it require the creation of an account? Will it be private or public? Etc. Technology can certainly enrich a course if it's integrated well.

Another consideration is online communication. It is often valuable to instruct students about appropriate online communication with you via email or other online mechanisms. Moreover, if you are on social media, you'll want to consider and take action regarding privacy settings, lists, and setting guidelines for if and how you'll connect with your students or use various platforms.

Potential Student Problems

No one can prepare you for every situation you may encounter as you teach. However, there are certain problems that arise relatively frequently and hence deserve advance consideration.

1. When you have a student who is consistently late or absent, you should try to discuss the problem with the student privately. If he or she is late because the class immediately preceding is on the other side of campus, perhaps you can arrange for the student to sit near the door. If there is no legitimate reason for tardiness, sometimes simply explaining the difficulties a late arrival causes you, the class, and the student will be enough. Many UofL students work full time and feel that this is a legitimate reason for absence. In this case, you may need to explain that the student has to make a choice between career and education because learning cannot take place on a part-time basis. Any course work that has not been completed as a result of the student's absence is, of course, a legitimate component of the final grade. Policies regarding class attendance are established by academic units – please check with your department to determine the appropriate attendance policy for your courses.

2. When students appear to be bored, you have to look for the reason by asking why this is happening. It may be that the student cannot engage in the task because he or she is unprepared; it may be that you are covering material already known and hence not challenging the student; it may be that his or her social life is replacing sleep, and as a consequence, your classroom has become a substitute bedroom. Again, your questions should be asked privately.

3. Occasionally, a student will develop a real dependency on you for either academic or personal advice. In the latter case, listen more than you talk. If the problem seems serious, suggest that the Counseling Center is better prepared to give advice on these matters than you are and give them the number to the office (502-852-6585). A student who seems unable to cope with the coursework may need encouragement to leave the safety of your tutelage. Can he or she make use of collaborative peer tutoring? If the problems are more complex, the student may need outside tutoring, and you cannot be expected to provide a great deal of individualized instruction, nor are you allowed to tutor for pay your own students. The REACH (Resources for Academic Achievement) program offers tutoring, supplemental instruction, math support, a learning center, and student strategy workshops for undergraduate students. Located in Room 126 of Strickler Hall, REACH may be contacted at 502-852-6706. In addition, some departments keep files on experienced and competent tutors who can be hired by the individual student.

4. The bane of all teachers is the unprepared student. When your entire class is unprepared you will have to decide on the spot how best to handle the situation. If this is a first occurrence, you

might consider simply going over the material with them as a class or having them work on it in small groups. You can dismiss them with a reminder that through their own negligence they have wasted the money they paid to have a class that day and the opportunity to discuss that material. This usually works only once, but it can be effective. If the problem persists, however, some stronger measure is called for. Unannounced quizzes that count toward the final grade may help. Probably the best plan is to try to discover why this is happening before you decide on a solution. Are your assignments simply too heavy? Are your students having trouble understanding what you expect of them? Have they failed to see the relevance of the outside work? Do they assume that it does not matter whether they complete the work or not?

5. If a student threatens you with physical harm, if you receive threatening or obscene phone calls, or if a student's behavior is in some way outside the bounds of acceptability, report the incident to the Dean of Students Office (502-852-5787) and your supervisor immediately. Such a problem is exceedingly rare, and it may be that the student is simply testing your reaction; nevertheless, someone in authority needs to be aware of the situation. Do not try to deal with it entirely on your own.

Students in Distress

You might very well encounter a student in distress. Often a student in distress will show early and minimal signs and then progressively have more difficulty. Sometimes there will be a marked difference in a short amount of time. Some signs and symptoms of distress to look out for:

1. Persistent sad, anxious, or empty mood
2. Feelings of hopelessness, pessimism
3. Feelings of guilt, worthlessness, helplessness
4. Loss of interest or pleasure in hobbies and activities that were once enjoyed
5. Decreased energy, fatigue, being “slowed down”
6. Difficulty concentrating, remembering, making decisions
7. Insomnia, early-morning awakening, or oversleeping
8. Appetite and/or weight loss or overeating and weight gain
9. Thoughts of death or suicide; suicide attempts
10. Restlessness, irritability
11. Persistent physical symptoms that do not respond to treatment, such as headaches, digestive disorders, and chronic pain
12. Abnormal or excessive elation; grandiose notions; increased talking; racing thoughts
13. Panic attacks or excessive worrying
14. Markedly increased energy
15. Trauma in personal life or societal triggering events
16. Poor judgement
17. A marked difference in class performance or participation
18. Inappropriate social behavior
19. Excessive absence from class without justification
20. Marked and long-lasting difference in care of self/hygiene

You should note that you are not a counselor. While we encourage you to address your concerns with the student, be prepared to refer to the Counseling Center or Dean of Students Office. If there are every serious concerns, feel free to contact the Counseling Center, Dean of Students Office, or Campus Police immediately.

Disruptive Classroom Behavior
Consider:

- How do YOU feel about it?
- How do STUDENTS feel about it?

It is vital that you establish ground rules for appropriate behavior on the first day, and continue to revisit these rules as needed. If a student is disruptive, you should do your best to avoid becoming defensive. The behavior is most likely not about you, but you are an outlet.

You should be prepared to confront the dynamics:

- Refer to established ground rules. Subtly calling attention to behavior (standing next to students talking)
- Redirecting the interaction (do you have something to add, John?)
- Confronting the behavior in general (let's stop the interruptions, give her a chance to finish)
- Confronting an individual student outside of class

It will help if you can learn to "read" the class – non-verbals, movement, checking time, staring, etc. You can always talk about the behavior outside of class or talk about the behavior with others present if you feel uncomfortable. Use your Director of Graduate Studies or Chair as backup as needed. And always, if you feel in immediate danger, contact the Campus Police.

Legal and Ethical Considerations

Ethical Responsibilities
When you, as a teaching assistant, take on the role of teacher, you accept the ethical responsibilities that accompany that title. There are two major premises that undergird the academic community's ethical stance: first, no matter what you privately feel, every student's work must be evaluated solely on the basis of the classroom performance and scores; second, under no circumstances is cheating or deliberate plagiarism tolerated.

You are going to like some students better than others. Because the university has a widely divergent student population, you may encounter undergraduates with whom you would like to become friends. This is not an excuse for giving those students whom you find personally congenial more of your time and effort. Just as it is illegal to grade a student according to race, religion, sex, or sexual orientation, so it is unethical to play favorites in the classroom. Wait until the class is over and final grades have been submitted before you establish any connection outside the classroom. Otherwise, you leave yourself wide open for the filing of grievances by other students, a situation in which you do not want to find yourself.

Promoting Academic Integrity
There are many ways to discourage cheating on quizzes and exams. This is a pedagogical problem you want to anticipate and prevent rather than deal with after it happens. Your advisor can help you discover preventive strategies. One useful way is to reduce the pressure of grades by giving multiple opportunities to demonstrate learning. Additionally, develop group norms for honesty by talking about cheating openly and why it is not allowed. Plagiarism is more complex. First, you must know exactly what it is and how to explain it to your students. Unhappily, many of them honestly do not realize the constraints on using someone else's words, do not know what constitutes "common knowledge," and are not sure it is important anyway. In addition to what you say, you can provide a model for them by never giving them an undocumented hand-out, even if it is a study sheet you have borrowed from a friend. You should also know the copyright laws that pertain to the reproduction of teaching materials and obey those restrictions. Someone in your department office can clarify these rules for you if you are uncertain of their content or interpretation.

In addition to these general principles, you are partially responsible for introducing your students to the ethical considerations that guide the work in your discipline. Discovering and dealing with ethical problems of subject matter, lines of inquiry, and procedures are part of membership in the community. Your students need to know the nature of these considerations as they work toward an understanding of what it means to work in and belong to this community.

Legal Responsibilities
As a GTA, you are responsible for completing two sets of training before you teach:

FERPA Training
1. Go to http://blackboard.louisville.edu,
2. Go to (usually) the right side of your dashboard to access "My Organizations Plus",
3. Go to "Organizations in which you are participating",
4. Click on "PS Ferpa organization",
5. Complete the FERPA training components,
6. Complete the "FERPA Quiz".

Your information will be sent to your department and they will confirm that you have passed your quiz in order to teach at UofL.

Sexual Harassment and Discriminatory Practices Training
1. Go to http://louisville.edu/hr/employeerelations/discriminatory-harassment-training,
2. Review the Power Point,
3. Click on the link at the end of the slideshow to enter your information,
4. After you enter your information, submit.

Your information will be sent to your department and they will confirm that you have completed your training in order to teach at UofL.

Title IX
It is also important to know that as an university employee who works with students, you are a Title IX mandatory reporter. You can learn more about Title IX here: http://louisville.edu/titleix. Instructions for reporting can be found here: http://louisville.edu/hr/itemsofinterest/title-ix-and-clery-act-mandatory-reporting-guidelines-1

CHAPTER III: UNIVERSITY OF LOUISVILLE CAMPUS RESOURCES

Blackboard

Blackboard is the Learning Management System (LMS) that is used at UofL. To access your Blackboard page or shell, to troubleshoot, find resources and how-tos, go to http://blackboard.louisville.edu. Instructor help can be found at http://louisville.edu/delphi/blackboard/help/instructor-help or you can call the Delphi Center for Teaching and Learning Blackboard Support at (502) 852.8833. Students who need help can refer to http://louisville.edu/delphi/blackboard/help/student-help, or students can call (502) 852.7997.

Code of Student Conduct

For University of Louisville policies, guidelines, and expectations, you can use and refer to the Code of Student Conduct, found here: http://louisville.edu/dos/students/codeofconduct

Counseling Center

For some of you, the time may come when the pressures of your responsibilities threaten to become overwhelming. You may discover that you need help managing your time and stress or in developing effective study skills. If this happens, please contact the University Counseling Center at 502-852-6585 or at http://louisville.edu/counseling. Do not hesitate to seek help. Group and individual sessions are available at no charge to all enrolled University of Louisville students. For specialized help, you may be referred to a psychiatric or psychological service.

Cultural Center

The Cultural Center mission is to provide advocacy for our students, celebrate the diverse cultures of the campus community, engage students in social justice issues, and support the scholarship and retention of U of L students. You can reach the Cultural Center at (502) 852-6656 or via email at cultural@louisville.edu. Their website is http://louisville.edu/culturalcenter

Delphi Center for Teaching and Learning

The Delphi Center for Teaching and Learning has the goal of promoting excellence in teaching and learning in the university community and beyond. The Delphi Center provides programming and other resources to faculty members that encourage excellence in teaching and foster student learning. The Delphi Center can help faculty members: infuse critical thinking skills into curricula, implement new and innovative teaching practices, create new or revise existing curricula with instructional design services, integrate technology into courses, put a program or course online, and more. Access the Delphi Center website (http://louisville.edu/delphi/resources) to find information about technology tools, copyright information, instructional design FAQs, digital media services, syllabus guidelines, resources for preparing your course, creating accessible courses, and emerging and mobile technologies.

Department of Public Safety (Campus Police)

The Department of Public Safety provides support services for all students. An escort service to assure you arrive safely at your destination is available at no charge to all students. This operates from dusk until dawn, seven days a week by calling 502-852-6111. Public Safety also sponsors MAP (Motorist Assistance Program) to assist U of L students who experience minor difficulties (e.g. lock-out, dead battery) with their vehicles. MAP can be reached at 502-852-7275.

Digital Media Suite
The Digital Media Suite (DMS) began as a collaboration between Delphi Center, REACH and the University Libraries in order to offer students access to equipment and support for the creation and editing of images, sound and video. Using the latest tools, students can access, analyze, evaluate and create multimedia projects. Specially trained tutors are available to assist users with projects and to offer technical support. Encouraging and supporting media and visual literacy in students is a primary goal of the DMS. The ability to understand the power of images and sound is a skill needed for the 21st century. Visual and media literacy transcends disciplines and the DMS provides a multimedia work space for creating projects and assignments regardless of area of study.

Users can create videos, digital images, podcasts and DVD's using the latest equipment available. We have seven Mac computers and three PCs available by appointment or drop-in according to availability. In addition to built-in apps such as Movie Maker, iMovie, and GarageBand, we also provide access to Adobe's Creative Cloud Suite (production and design premium packages). Staff at the DMS can consult with you to design an assignment and/or educate students about their resources. You can access the DMS on the web at http://louisville.edu/digitalmediasuite, email at dmsuite@louisville.edu, or call at (502)852.3787.

Disability Resources Center
The Disability Resource Center (DRC) fosters an inclusive campus climate through education, service, collaboration, and outreach to the University of Louisville community. They provide support for students with documented disabilities by promoting equal access to all programs and services. Visit the DRC at http://louisville.edu/disability, email at askdrc@louisville.edu, or call at (502) 852-6938. Additionally, for more information about creating accessible courses, you can refer to this website: http://louisville.edu/delphi/resources/creating-accessible-courses

Graduate Student Council and Other Organizations
The major organization for graduate students is the Graduate Student Council (GSC), comprised of delegates from departments with graduate programs. The GSC provides honoraria for outside speakers, departmental-sponsored programs and for graduate student travel to conferences and seminars via funds provided through the Student Government Association (SGA). If you are interested in becoming a member of GSC, contact information is available at their website, http://louisville.edu/graduate/gsc/. There are also groups/organizations concerned with specific aspects of graduate student life in various academic departments. A complete listing can be found at http://uoflstudentinvolvement.orgsync.com/Search_Organizations Check with your department for additional information.

Human Resources
The School of Interdisciplinary and Graduate Studies has partnered with the Human Resources Department (HR) to create a centralized payroll orientation program for incoming graduate students who will receive a stipend through a graduate assistantship or fellowship. HR has created a web site to provide information about the new orientation process. The web site instructs students to complete an electronic I-9 and new graduate student hire packet prior to attending an orientation session. The site also provides a link for students to register for one of the orientation sessions that HR will hold. The link to register can be found at: http://louisville.edu/hr/employment/newemployees/gradhrorientation.html

International Center
The International Center sponsors a wide variety of programs and activities for international students. American students are welcomed at many of the social functions. If you are interested in becoming involved with these programs, call the International Center at 502-852-6602 or visit their website at http://louisville.edu/internationalcenter.

IT Help Desk
The HelpDesk provides support to the entire University of Louisville community: faculty, staff and students. If you need assistance with accessing your univesity accounts, unlocking your password, accessing wireless, computer repairs, or more, please let us know. You can access the website at http://louisville.edu/it/departments/consulting/helpdesk/, or call at 502) 852-7997.

LGBT Center
The LGBT Center at the University of Louisville is a resource for all students, faculty, staff, alumni and guests and aims to create a safe, inclusive community for everyone regardless of sexual orientation or gender identity/expression. The Belknap office is located in the historic Red Barn, right in the center of the Belknap campus just next door to the Student Activities Center. It's part of the Intersection, a space where LGBT and other students come together to explore social justice issues and work across their differences to support the university's broadest vision for a diverse campus. All are welcome at the Intersection* If you are looking for a place where you can be yourself and meet new friends, come see us. The HSC satellite office works with the schools of Medicine, Nursing, Dentistry, and Public Health and Information Sciences and provides expertise to train future health care providers while also supporting members of the LGBT community. A curriculum infusion project, training on health and wellness for LGBT patients, Pride Week events, and a vibrant student organization are pillars of the work we do at the HSC. The office is located in the A Building, Room 210J within the Student Affairs office suite. Visit the LGBT Center website at http://louisville.edu/lgbt, You can email the LGBT Center at lgbt@louisville.edu, or call them at (502) 852-5861.

Office of the Dean of Students
The Office of the Dean of Students has experienced staff members who are here to help you with any concerns you may have with students. Their main website is http://louisville.edu/dos. For information specific to your role as an instructor, visit http://louisville.edu/dos/facultystaff. On that site, you can find information about absence notification, classroom disruption policy, compassionate withdrawal policy, helping students in distress, various training, response guide for difficult student situations, and the student care team. You can also email the Dean of Students Office at dos@louisville.edu, or call at (502) 852-5787.

Office of Military and Veteran Services
The Office of Military and Veteran Services' mission is to smooth the transition from military life to student life by devoting individualized support to veteran students and their families in providing a broad range of services, coordinating with VA, university departments, and other community organizations. Staff can assist with the following: identifying federal and state education benefit options, advocating military transfer credit, withdrawals/re-admit due to deployments or call to Active Duty status, connecting veteran students with campus resources, veteran service providers, and other agencies encouraging academic success at the University of Louisville. You can visit the website at http://louisville.edu/admissions/apply/transfer/veterans/, email at veterans@louisville.edu, or call at (502)852-6442.

PEACC
PEACC works to end power-based personal violence by utilizing a prevention model that decreases victimization and builds capacity for positive relationships and social interactions. PEACC:

- ADVOCATES for anyone affected by sexual assault, dating violence, stalking, or sexual harassment.
- EMPOWERS students to develop ethical non-violence skills to negotiate relationships and sexual intimacy positively.
- EDUCATES on the impact of power-based personal violence.
- CHALLENGES norms that contribute to violence and hinder social justice.
- UTILIZES ARTS as ACTIVISM to inspire social change.
- Builds student CONNECTION and MENTORSHIP through peer education and Men of PEACC.
- MOBILIZES students to create their own safe & healthy community.

Visit the PEACC website at http://louisville.edu/peacc/, email at peacc@louisville.edu, or call at (502) 852-2663.

REACH
REACH is the centralized academic support for any undergraduate student at the University of Louisville. Their primary goals are to provide resources to assist students to enhance or improve their academic performance, to help students transition to college life, and to support the university's retention of undergraduate students. Since its creation in 2000, REACH has evolved into a large and complex academic support unit at the university. They offer study sessions and tutoring for 100, 200 and 300 level undergraduate courses, offer coaching for academic development, offer peer mentoring for first-year students, provide seminars on student success topics, provide seminars to instruct mathematics, computer science and digital media, and much more. You can visit their website at http://reach.louisville.edu, email them at http://reach.louisville.edu/feedback.htm, or call at (502) 852-6706.

University Libraries
The University Libraries not only have facilities on both the Belknap and Health Sciences Campus, but they have a myriad of resources available to you both as a current student and an instructor. Consider consulting with a librarian to construct an assignment and/or educate your class on the resources available to them to be successful. Learn more at: http://library.louisville.edu/home

Writing Center
The University Writing Center serves everyone in the UofL community, including undergraduates, graduate students, faculty, and staff. We can help you at any point in your writing process, from getting started with an idea, to working on a first draft, to revision and copyediting. We are not an editing service, but we can help you become a better writer. If it involves writing, we are happy to work with you on it. So bring it by* Similar to the University Libraries, you can talk with a Writing Center consultant to help craft an assignment and/or have them come to your class to talk to your class about how to best use their resources. You can make a Virtual Writing Center Appointment: Use your UofL username and password to log in to our online scheduling system. The first time you log in you will be asked to fill out a brief registration form. Once you've filled out the registration form, login and make your appointment. You can also call at 502-852-2173.

APPENDICES

Advice from Students

Perhaps the most useful advice on shaping your professional self comes from the students. Advice from past U of L students includes:

1. If you do not enjoy teaching, do not teach. All instructors have bad days when they would rather be at home sleeping, or off studying, or anywhere other than in the classroom. If these days begin to be the norm, you ought to ask yourself why you are here. Students are not easily fooled, if you do not want to teach, they will not want to learn.

2. Keep who you are in perspective. Most students are willing to accept that you know more than they do.

3. Don't ignore questions for which you don't have the answers. Admit you don't know and promise to find out. Honesty and follow-up will more than make up for any gaps in knowledge.

4. Actively encourage questions. Many of your students will be afraid to ask questions lest they appear stupid, inattentive, or un-cool. You will have to train them to believe the only dumb question is the one not asked.

5. Listen to your students; find out what they know and do not know, and plan your teaching accordingly. If you spend all your time giving them material they have already read or know, you will bore them into stupefaction - and they hate being read to from the text.

6. Beware of showing favoritism. It is a natural tendency to focus on those students who seem to understand and appreciate you or who show a burning desire to learn. However, not only will your other less demonstrative students resent this, you may also overlook the potential contributions of those who are simply shy.

7. Finally, do not be too quick to take absences, failures, etc. personally. If your whole class is failing or absent for days at a time, you have to question your effectiveness, but if most are present and succeeding, the problem is probably not with you. There are few teaching assistants who do not take their students' failures personally, wondering what else they might have done to motivate or get the concepts into the heads of those failing. But students have to take the responsibility for their own learning. No matter how good you are, you will not reach every student.

The Good Teacher

If you are still searching for the keys to being a good teacher, read the article "Seven Principles for Good Practice in Undergraduate Education" by Arthur Chickering and Zelda Gamson (1987). The authors have distilled the research into successful educational practices into seven basic practices:

1. Promote opportunities for interaction between students and faculty.
2. Encourage students to learn collaboratively.
3. Allow students to engage actively in their learning processes.
4. Provide immediate and constructive feedback on student performance.
5. Help students learn to use their time effectively.
6. Expect students to succeed.
7. Welcome and encourage different talents and styles of learning.

Watch the ways in which your own teachers put these principles into practice. One of the great advantages of being a GTA is the opportunity to alternate roles, to be player and audience, listener and lecturer, student and teacher all in the same day. Observe, and through this observation, create yourself as a teacher.

The Backward Design Template

<table>
<tr><th colspan="3">Stage 1 – Desired Results</th></tr>
<tr><td rowspan="6">ESTABLISHED GOALS

The enduring understandings and learning goals of the lesson, unit, or course.</td><td colspan="2">Transfer</td></tr>
<tr><td colspan="2">Students will be able to independently use their learning to…

Refers to how students will transfer the knowledge gained from the lesson, unit, or course and apply it outside of the context of the course.</td></tr>
<tr><td colspan="2">Meaning</td></tr>
<tr><td>UNDERSTANDINGS
Students will understand that…

Refers to the big ideas and specific understandings students will have when the complete the lesson, unit, or course.</td><td>ESSENTIAL QUESTIONS

Refers to the provocative questions that foster inquiry, understanding, and transfer of learning. These questions typically frame the lesson, unit, or course and are often revisited. If students attain the established goals, they should be able to answer the essential question(s).</td></tr>
<tr><td colspan="2">Acquisition</td></tr>
<tr><td>Students will know…

Refers to the key knowledge students will acquire from the lesson, unit, or course.</td><td>Students will be skilled at…

Refers to the key skills students will acquire from the lesson, unit, or course.</td></tr>
<tr><th colspan="3">Stage 2 – Evidence and Assessment</th></tr>
<tr><td>Evaluative Criteria</td><td colspan="2">Assessment Evidence</td></tr>
<tr><td rowspan="2">Refers to the various types of criteria that students will be evaluated on.</td><td colspan="2">PERFORMANCE TASK(S):
Refers to the authentic performance task(s) that students will complete to demonstrate the desired understandings or demonstrate they have attained the goals. The performance task(s) are typically larger assessments that coalesce various concepts and understandings like large projects or papers.</td></tr>
<tr><td colspan="2">OTHER EVIDENCE:
Refers to other types of evidence that will show if students have demonstrated achievement of the desired results. This includes quizzes, tests, homework, etc. This is also a good point to consider incorporating self-assessments and student reflections.</td></tr>
<tr><th colspan="3">Stage 3 – Learning Plan</th></tr>
<tr><td colspan="3">Summary of Key Learning Events and Instruction

This stage encompasses the individual learning activities and instructional strategies that will be employed. This includes lectures, discussions, problem-solving sessions, etc.

(from https://s3.amazonaws.com/vu-wp0/wp-content/uploads/sites/59/2017/05/03190455/Backward-Design-Template-with-Descriptions.docx)</td></tr>
</table>

Course Alignment Map Template

Course Objectives

1. Objective 1
2. Objective 2
3. Objective 3
4. Objective 4
5. Objective 5

Alignment

Unit or Section Concepts covered	Course Objectives Addressed with this Material	Instructional Materials (What resources, and materials you will use?)	Needed Resources	Learning Activities & Engagement (How am I asking students to use the content? What opportunities will students have to practice learning and receive feedback?)	Resources for Learning Activities (What needs to be created, managed, structured during learning activity?)	Assessments & Measurement (How will you determine the level of student performance based on stated objectives?)

(Adapted from LCKidder – Idaho State University – 8/2015)

Bloom's Taxonomy

LEVEL I - REMEMBERING

APPROPRIATE VERBS:

define, describe, find, highlight, identify, label, list, locate, match, name, observe, recall, recognize, relate, retell, select, state

QUESTION TYPES:

- List the ...
- How would you describe ...?
- How would you explain ...?
- When did _____happen?
- How would you show...?
- Select the ...
- Which one ...?
- Who was ...?
- Why did ...?

LEVEL II - UNDERSTANDING

APPROPRIATE VERBS:

cite, classify, compare, contrast, demonstrate, discuss, explain, extend, infer, illustrate, interpret, outline, paraphrase, predict, relate, summarize

QUESTION TYPES:

- Explain what is happening ...
- How would you classify ...?
- How would you summarize...?
- Which is the best answer?
- Which statements support?
- What is meant ...?
- How would you compare ...?
- How would you contrast ...?

LEVEL III - APPLYING

APPROPRIATE VERBS:

apply, build, calculate, categorize, classify, choose, develop, edit, interview, model, organize, plan, represent, translate, utilize

QUESTION TYPES:

- What examples can you find to ...?
- How would you organize ...?
- How would you apply what you have learned to develop ...?
- What other way would you plan to ...?
- What questions would you ask in an interview with ...?
- What elements would you choose to change ...?
- How would you classify ...?
- What would result if ...?

LEVEL IV - ANALYZING

APPROPRIATE VERBS:

analyze, appraise, arrange, categorize, discover, dissect, distinguish, divide, examine, investigate, order, prioritize, research, separate, simplify, survey

QUESTION TYPES:

- What inference can you make ...?
- What conclusions can you draw ...?
- How would you categorize...?
- What evidence can you find...?
- What is the relationship between ....?
- Can you make a distinction between ....?
- How would you prioritize ...?
- Why is it better that ...?

LEVEL V - EVALUATING

APPROPRIATE VERBS:

appraise, assess, compile, convert, critique, deduct, defend, disprove, dispute, estimate, evaluate, hypothesize, improve, influence, justify, predict, prioritize, recommend, revise, transform

QUESTION TYPES:

- How would you justify...?
- How would you prioritize ...?
- What information would you use to support the view ...?
- Why is it better that ....?

LEVEL VI - CREATING

APPROPRIATE VERBS:

adapt, improve, design, invent, propose, change, develop, solve, combine, elaborate, compile, estimate, modify, compose, create, formulate

QUESTION TYPES:

- How could you modify the ...?
- How would you adapt ____ to create different ...?
- What way would you design ...?
- What could be combined to improve ...?
- Suppose you could ... what would you do ...?
- Can you construct a model that would change ...?

http://citt.ufl.edu/wp-content/uploads/2015/07/BloomsTaxonomyGraph.jpg

UF UNIVERSITY of FLORIDA Information Technology

Lesson Plan Template

Course:		Date:
Unit/Topic:		
Learning Objectives: • • •		Assessment(s):
Bloom's Taxonomy Level of Learning ☐ Remembering ☐ Understanding ☐ Applying ☐ Analyzing ☐ Evaluating ☐ Creating		Background: [Homework due, class preparation]
Needed Materials:		
Bridge In:		
Lesson Outline:	Instructor Activity:	Student Activity:
Reminders for Student:		
Reflections:		

101 Things You Can Do the First Three Weeks of Class

* Taken from J. Povlacs, University of Nebraska Lincoln Teaching and Learning Center, August 1986

Beginnings are important. Whether it is a large introductory course for freshmen or an advanced course in the major field, it makes good sense to start the semester off well. Students will decide very early--some say the first day of class--whether they will like the course, its contents, the teacher, and their fellow students.

The following list of 101 Things You Can Do..." is offered in the spirit of starting off right. It is a catalog of suggestions for college teachers who are looking for fresh ways of creating the best possible environment for learning. Not just the first day, but the first three weeks of a course are especially important, studies say, in retaining capable students. Even if the syllabus is printed and lecture notes are ready to go in August, most college teachers can usually make adjustments in teaching methods as the course unfolds and the characteristics of their students become known.

These suggestions have been gathered from UNL professors and from college teachers elsewhere. The rationale for these methods is based on the following needs: 1) to help students make the transition from high school and summer activities to learning in college; 2) to direct students attention to the immediate situation for learning – the hour in the classroom; 3) to spark intellectual curiosity – to challenge students; 4) to support beginners and neophytes in the process of learning in the discipline; 5) to encourage the students' active involvement in learning; and 6) to build a sense of community in the classroom.

Here are some ideas for college teachers for use in their courses in the new academic year:

Helping Students Make Transitions

1. Hit the ground running on the first day of class with substantial content.
2. Take attendance: roll call, clipboard, sign in, seating chart.
3. Introduce teaching assistants by slide, short presentation, or self-introduction.
4. Hand out an informative, artistic, and user-friendly syllabus.
5. Give an assignment on the first day to be collected at the next meeting.
6. Start laboratory experiments and other exercises the first time lab meets.
7. Call attention (written and oral) to what makes lab practice: completing work to be done, procedures, equipment, clean up, maintenance, safety, conservation of supplies, full use of lab time.
8. Give a learning style inventory to help students find out about themselves.
9. Direct students to the Academic Success Center for help on basic skills.
10. Tell students how much time they will need to study for this course.
11. Hand out supplemental study aids: library use, study tips, supplemental readings and exercises.
12. Explain how to study for the kind of tests you give.
13. Put in writing a limited number of ground rules regarding absence, late work, testing procedures, grading, and general decorum, and maintain these.
14. Announce office hours frequently and hold them without fail.
15. Show students how to handle learning in large classes and impersonal situations.
16. Give sample test questions.
17. Give sample test question answers.
18. Explain the difference between legitimate collaboration and academic dishonesty: be clear when collaboration is wanted and when it is forbidden.
19. Seek out a different student each day and get to know something about him or her.
20. Ask students to write about what important things are currently going on in their lives.
21. Find out about students jobs: if they are working, how many hours a week, and what kinds of jobs they hold.

Directing Students' Attention

22. Greet students at the door when they enter the classroom.
23. Start the class on time.
24. Make a grand stage entrance to hush a large class and gain attention.
25. Give a pretest on the day's topic.
26. Start the lecture with a puzzle, question, paradox, picture, or cartoon on slide or transparency to focus on the day's topic.
27. Elicit student questions and concerns at the beginning of the class and list these on the chalkboard to be answered during the hour.
28. Have students write down what they think the important issues or key points of the day lecture will be.
29. Ask the person who is reading the student newspaper what is in the news today.

Challenging Students

30. Have students write out their expectations for the course and their own goals for learning.
31. Use variety in methods of presentation every class meeting.
32. Stage a figurative "coffee break" about twenty minutes into the hour, tell an anecdote, invite students to put down pens and pencils, refer to a current event, shift media.
33. Incorporate community resources, plays, concerts, the State Fair, government agencies, businesses, the outdoors.
34. Show a film in a novel way: stop it for discussion, show a few frames, anticipating ending, hand out a viewing or critique sheet, play and replay parts.
35. Share your philosophy of teaching with your students.
36. Form a student panel to present alternative views of the same concept.
37. Stage a change-your-mind debate, with students moving to different parts of the classroom to signal change in opinion during the discussion.
38. Conduct a "living" demographic survey by having students move to different parts of the classroom: site of high school, rural vs. urban, consumer preferences.
39. Tell about your current research interests and how you got there from your own beginnings in the discipline.
40. Conduct a role play to make a point or to lay out issues.
41. Let your students assume the role of a professional in the discipline: philosopher, literary critic, biologist, agronomist, political scientist, engineer.
42. Conduct idea-generating or brainstorming sessions to expand horizons.
43. Give student two passages of material containing alternative views to compare and contrast.
44. Distribute a list of the unsolved problems, dilemmas, or great questions in your discipline and invite students to claim one as their own to investigate.
45. Ask students what books did they read over the summer.
46. Ask students what is going on in the state legislature on this subject which may affect their future.
47. Let your students see the enthusiasm you have for your subject and your love of learning.
48. Take students with you to hear guest speakers or special programs on campus.
49. Plan a "scholar-gypsy" lesson or unit which shows students the excitement of discovery in your discipline.

Providing Support

50. Collect students' current telephone numbers and addresses and let them know that you may need to reach them.
51. Check out absentees. Call or write a personal note.
52. Diagnose the students' pre-requisite learning by a questionnaire or pretest and give them the feedback as soon as possible
53. Hand out study questions or study guides.
54. Be redundant. Students should hear, read, or see key material at least three times.
55. Allow students to demonstrate progress in learning: summary quiz over the day's work, a written

reaction to the day's material.

56. Use non-graded feedback to let students know how they are doing: post answers to ungraded quizzes and problem sets, exercises in class, oral feedback.
57. Reward behavior you want: praise, stars, honor roll, personal note.
58. Use a light touch: smile, tell a good joke, break test anxiety with a sympathetic comment.
59. Organize. Give visible structure by posting the day's "menu" on chalkboard or overhead.
60. Use multiple media: overhead, slides, film, videotape, audiotape, model, sample material.
61. Use multiple examples, in multiple media, to illustrate key points and important concepts.
62. Make appointments with all students (individually or in small groups).
63. Hand out wallet-sized telephone cards with all important telephone numbers listed: office, department, resource centers, teaching assistant, lab.
64. Print all important course dates on a card that can be handed out and taped to a mirror.
65. Eavesdrop on students before or after class and join their conversation about course topics.
66. Maintain an open lab grade book, with grades kept current during lab time so that students can check their progress.
67. Check to see if any students are having problems with any academic or campus matters and direct those who are to appropriate offices or resources.
68. Tell students what they need to do to receive an "A" in your course.
69. Stop the world to find out what your students are thinking, feeling, and doing in their everyday lives.

Encouraging Active Learning

70. Have students write something.
71. Have students keep three-week three-times-a-week journals in which they comment, ask questions, and answer questions about course topics.
72. Invite students to critique each other's essays or short answers on tests for readability or content.
73. Invite students to ask questions and wait for the response.
74. Probe student responses to questions and their comments.
75. Put students into pairs or "learning cells" to quiz each other over material for the day.
76. Give students an opportunity to voice opinions about the subject matter.
77. Have students apply subject matter to solve real problems.
78. Give students red, yellow, and green cards (made of posterboard) and periodically call for a vote on an issue by asking for a simultaneous show of cards.
79. Roam the aisles of a large classroom and carry on running conversations with students as they work on course problems (a portable microphone helps).
80. Ask a question directed to one student and wait for an answer.
81. Place a suggestion box in the rear of the room and encourage students to make written comments every time the class meets.
82. Do oral, show-of-hands, multiple choice tests for summary, review, and instant feedback.
83. Use task groups to accomplish specific objectives.
84. Grade quizzes and exercises *in class* as a learning tool.
85. Give students plenty of opportunity to practice before a major test.
86. Give a test early in the semester and return it graded in the next class meeting.
87. Have students write questions on index cards to be collected and answered the next class period.
88. Make collaborative assignments for several students to work on together.
89. Assign written paraphrases and summaries of difficult reading.
90. Give students a take-home problem relating to the day's lecture.
91. Encourage students to bring current news items to class which relate to the subject matter and post these on a bulletin board nearby.

Building Community

92. Learn names. Everyone makes an effort to learn at least a few names.
93. Set up a buddy system so students can contact each other about assignments and coursework.

94. Find out about your students via questions on an index card.
95. Take pictures of students (snapshots in small groups, mug shots) and post in classroom, office, or lab.
96. Arrange helping trios of students to assist each other in learning and growing.
97. Form small groups for getting acquainted; mix and form new groups several times.
98. Assign a team project early in the semester and provide time to assemble the team.
99. Help students form study groups to operate outside the classroom.
100. Solicit suggestions from students for outside resources and guest speakers on course topics.

Feedback on Teaching

101. Gather student feedback in the first three weeks of the semester to improve teaching and learning.

Classroom Assessment Techniques (CATs) Overview

Title	Purpose	Description	Pros/Cons	Turning the CAT into Data
One Minute Paper	To assess recall of important concepts and self-assess understanding.	Questions at end of class or before a break; students write brief responses; responses can be turned in anonymously, addressed next meeting, or online.	Handy to use to focus the class at the start or end; useful as a reflective "quiz".	Make note of any useful responses and respond to them in class.
Word Journal	To assess deep understanding and creativity in summarizing reading.	First students summarize a short text in a single word. Second the students write a paragraph or two explaining why he or she chose that particular word to summarize the text.	Requires students to read deeply and pull meaning; helps students make personal connections to material; encourages summarizing and communicating; Takes time, energy to prepare, analyze, & discuss. Needs discussion and comparison.	Come up with your own words; then keep track of the words the students used. Then, keep track of types of responses, and choose a few to share with the class.
Muddiest Point	To self-assess understanding.	Ask students to write a quick response to the question, "What was the muddiest point in _____?" The focus may be a lecture, a discussion a homework assignment, a play, a film, a reading, etc.	Quick & simple; minimal prep; "safe"; can promote self-reflection; can be difficult for students to explain.	Make note of any useful responses and respond to them in class.
One-sentence Summary	To assess skill at concisely summarizing information.	Have questions answer the questions: "who?", "does what?", "to what or whom?", "when?", "where?", "how?", "why?", and then write the answer in the form of one sentence.	Quick & easy to assess summarizing ability, technique for helping students grasp complex concept; not great for all information.	Draw slash marks between elements in the sentences, separating the responses into the original questions (i.e. "who?", "does what?", etc.). Place a check-plus, check, or check-minus above each element, then keep a tally of great, correct, and incorrect responses and patterns.
Directed Paraphrasing	To assess understanding of an important concept and ability to recall and restate it.	Give the students a question which asks them to paraphrase an important idea or concept from the course.	Builds on and builds up skills in comprehending and communicating information; can be used for direction of instruction; can take time and effort to assess; sometimes difficult to establish criteria.	Divide responses into "confused", "minimal", "adequate", and "excellent".
Student-Generated Test Questions	To assess what is considered as the most important material and expectations.	Ask students to make a quiz or test questions on material covered in the course.	Students can learn what they do and don't understand; serves as study tool; initial efforts might be quite poor; if not used, may seem useless.	Looks at the types of questions students pose and the range of topics. Look for relevance and clarity.

Instructor Mistake	To assess critical thinking, understanding.	Present a drawing or statement and ask, "What is wrong with what I just wrote?"	Effective once or twice a term. Can help you understand problems in process.	Check for patterns in misinterpretation, prior-knowledge interference.
Next Step	To assess understanding of process.	Ask for the next step in a procedure or derivation.	For students with limited understanding could confuse; could seem too linear; could put students on spot; helps identify problems in process.	Check for patterns in next step, limited understanding of certain steps. Ask for more detail.
Variations/ Applications/ Examples	To assess deep thinking of concept, transferability of knowledge.	Ask for real world examples, variations or applications of the material.	Works very well online, can help students transfer knowledge, understand more deeply.	Identify problems in comparison or application. Assess ease or difficulty by simplifying or complicating.
Problem Recognition Tasks	To assess recognition of problem types.	Give students a few examples of common problem types. The students' task is to recognize and identify the particular problem each example represents.	Quick and simply way to see if students can identify problems, real-life problems won't fit easily into single category, just because can identify doesn't mean can solve.	Tally correct and incorrect responses.
What's the Principle?	To assess ability to apply principles to solve problems.	Identify the principle used to solve the problem.	Simple, quick way to get useful information on complex skill; students get quick feedback on level of skill; encourages transfer and problem-solving skills.	Forms should be easy and quick to score. Tally number of right and wrong answers and note patterns in wrong answers.
Focused Listing	To assess prior knowledge or recall of a particular concept.	Select a word or phrase that is the focus of a particular lesson. Tell the students to make a list of related terms important to understanding the topic. Time limit or number of items.	Simple, quick, and flexible; Clear idea for concepts recalled; can "prime the pump"; lower level cognitive skills; doesn't get at understanding or connecting.	To tally the results, group the students' answers into "related" / "unrelated" OR "appropriate" / "inappropriate".
Double-entry Journal	To assess attitudes about a text.	Ask students to note several passages or some important points from a reading on the left side of the page; then on the right side, respond to the text.	Can help teacher understand how student reads, what is focused on and why; encourages personal connection and self-reflection; students may write for the teacher; can be difficult.	Look for commonalities among passages/ideas choses and responses.
Incomplete Table	To assess understanding of elements of concept or pieces of process.	Prepare a table that summarizes and organizes information, but leave some cells blank; have students collectively complete the table.	May give students more or less information than they need; can seem rigid; not all tables can fit into one place; can helps students "see" thinking.	Identify common areas of difficulty, readdress.
Memory Matrix	To assess recall and understanding.	Make a two-dimensional diagram in which row and column headings are general categories or concepts, and the cells within are left empty for the students to list particular examples.	Can show recall, categorization, and connections; can be assessed quickly, good for visual learners; best for basic information, lower order thinking.	Tally the correct and incorrect items, then look for patterns of correct and incorrect answers.

Categorizing Grid	To assess recall and understanding.	Come up with a few categories and some examples from the class. Then have students group examples in the categories. Make sure the examples clearly fit into one of the categories.	Quick and simple to assess analytic & organizing skill; good skill for students to use independently; may only assess rote memory.	Tally correct and incorrect answers and look for patterns among correct and incorrect answers.
Defining Features Matrix	To assess recall and understanding of important concepts.	Take two important concepts and list the defining features of these concepts. Then have the students use "+" or "-" notation to denote what characteristics the concepts have and don't have.	Quick way to assess areas of confusion among concepts; helps break down complex ideas; requires careful preparation; can be time consuming; not all info can be expressed with only plus or minus.	Tally correct and incorrect answers and look for patterns among correct and incorrect answers.
Pro-Con Grid	To assess skill at analyzing pros and cons, costs and benefits, or advantages and disadvantages of some issue.	Take a controversial issue from a reading or class discussion, and ask students to list the pros and cons of the issue. You might want to limit the number of pros and cons, and then ask them to make a decision.	Can assess whether students can see both sides of an issue; can help determine class focus; most appropriate for binary topics; may be difficult for ethical or moral issues.	List students' answers and do a frequency count. Which points are most often mentioned? Have they omitted some important points? Do you agree with their responses? Report to the class.
Content, Form, and Function Outlines	To assess skill at analyzing information.	Have students make a grid (or provide a grid) with column headings "content (what is it?)", "Form (How do you use it?", and "Function (Why would you use it?)"? Then have them analyze the content, form, function of concepts.	Can promote careful listening & note-taking, good scaffolding tool, helps organize, not best for all information, lower order thinking (students don't create their own).	Keep a running tally of trouble spots; alternatively, have students create their own and see where confusion exists.
Approximate Analogies	To assess understanding of relationship between two items.	A is to B as…..Can students "capture" the relationship? Provide students with an example, and ask them to provide part or the full analogy.	Encourages transfer, application, and creativity; connects new knowledge to old; can be fun; can be difficult; maybe more difficult in some fields,	Sort into piles of "good", "questionable", "poor or wrong". Pick out some as examples, explain to class reasoning.
Concept Maps	To assess conceptual schema.	Students construct drawings or diagrams showing mental connections they make between a major concept and other concepts. Can give students confidence that they are able to think complexly about ideas.	May not be helpful for all learning styles – but helpful for visual learners; can clarify for some students, complicate for others; can become too tangential; without closure some students can be distressed.	Look for patterns in comparing to other students; identify areas of difference to complicate understanding; look for areas of confusion.
Invented Dialogues	To assess skill in synthesis and creative thinking.	Students synthesize their knowledge of issues, personalities, and historical periods into the form of a carefully structured illustrative conversation. Can be written or enacted (live or recorded).	Forces students to internalize and process course material drawing on higher-order thinking skills; gives students choice; can be time demanding; may be difficult for some students.	Count number of important points that are adequately addressed; rate quality of reasoning on scale; grade literary qualities or presentation; creativity.

Background Knowledge Probe	To assess accumulation of knowledge into already established structures.	Collect specific and useful information on students' prior learning, focusing on specific information or concepts that must be known to succeed in subsequent assignments. This can be done in dialogue with the students or in writing.	Helps identify knowledge and skills in communicating, can "prime the pump" for recall, can be difficult for underprepared students.	Divide into 3-4 piles, according to degree of knowledge, count which piles have the most, prepare from those piles.
Misperceptions/ Preconceptions	To assess accumulation of knowledge into already established structures.	Learn students' prior knowledge or beliefs that may hinder or block further learning. Ask for the information in dialogue or in writing.	"Safe" because anonymous, quick and simple, not best for issues students find threatening.	Pile for quick knowledge about mis/preconceptions, look for patterns, put on scale to see where most students fall.
Annotated Portfolios	To assess skill in explaining their creative work in relation to course goals and content.	Have students choose a few examples of their work during the semester. Then, they write about how these examples show their development in applying class concepts, solving problems, and increasing their skill.	Allows students to express concepts; requires interpretation; gives students choice; can be difficult to present and structure, may be time consuming.	Try to come up with a rubric as to how you will rank the responses. Then, read the responses, rank them, and take notes about common problems/difficulties you found.
Punctuated Lectures	To assess on-the-spot learning, student attention, processing, distractions.	Intentionally stop the lecture; useful in classes where lecture or lecture-demonstrations are the primary methods of instruction/presentation; useful with introducing new concepts or complex theories/procedures.	This one requires some practice with your students, asking students to recall, at the moment, can be intimidating, may seem frustrating; improves listening skills and active learning; re-captures attention.	Analyze comments to identify if students compiled main points, look at specificity. Look for points in the listening process to identify attention.
Productive Study-Time Logs	To assess and let students assess how they spend their time and how much time is required to study.	Prepare a log form and ask students to use it for a few days. Let students know exactly what to include and what not to include in their study logs.	Students gain information on their study habits; instructors get picture of level and quality of investment; comparing to other students can encourage students to change behaviors; can be easy to forget or generalize; can be time consuming for student and instructor.	Calculate the averages—per category and total.
Self-Confidence Surveys	To assess attitudes about their own skills.	Come up with a survey that lists several skills important to the course; ask students to rate their self-confidence in accomplishing the tasks.	Provides information on self-confidence; can be a relief; can impact students' self-confidence.	Tally and average the answers to get an idea of students' self-confidence as a group.

Adapted from:

- Angelo, T., & Cross, P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Dolye, T. (2009). *Classroom assessment techniques*, GIFTS Workshop (tdoyle@shastacollege.edu)
- Office for Academic Excellence and Assessment (2005). *Classroom assessment techniques.*
- Gupta, N. (2011). *Classroom assessment techniques*. Provided for GTA Academy Workshop. University of Louisville, Louisville, KY

Active Learning Strategies

How can you incorporate active learning into your classroom?

The following list summarizes some of the many approaches.

- **Clarification Pauses:** This simple technique fosters "active listening." Throughout a lecture, particularly after stating an important point or defining a key concept, stop presenting and allow students time to think about the information. After waiting, ask if anyone needs to have anything clarified. Ask students to review their notes and ask questions about what they've written so far.
- **Writing Activities such as the "Minute Paper":** At an appropriate point in the lecture, ask the students to take out a blank sheet of paper. Then, state the topic or question you want students to address. For example, "Today, we discussed emancipation and equal rights. List as many key events and figures as you can remember. You have two minutes – go!"
- **Self-Assessment:** Students receive a quiz (typically ungraded) or a checklist of ideas to determine their understanding of the subject. Concept inventories or similar tools may be used at the beginning of a semester or the chapter to help students identify misconceptions.
- **Large-Group Discussion:** Students discuss a topic in class based on a reading, video, or problem. The instructor may prepare a list of questions to facilitate the discussion.
- **Think-Pair-Share:** Have students work individually on a problem or reflect on a passage. Students then compare their responses with a partner and synthesize a joint solution to share with the entire class.
- **Cooperative Groups in Class (Informal Groups, Triad Groups, etc.):** Pose a question for each cooperative group while you circulate around the room answering questions, asking further questions, and keeping the groups on task. After allowing time for group discussion, ask students to share their discussion points with the rest of the class.
- **Peer Review:** Students are asked to complete an individual homework assignment or short paper. On the day the assignment is due, students submit one copy to the instructor to be graded and one copy to their partner. Each student then takes their partner's work and, depending on the nature of the assignment, gives critical feedback, and corrects mistakes in content and/or grammar.
- **Group Evaluations**: Similar to peer review, students may evaluate group presentations or documents to assess the quality of the content and delivery of information.
- **Brainstorming:** Introduce a topic or problem and then ask for student input. Give students a minute to write down their ideas, and then record them on the board. An example for an introductory political science class would be, "As a member of the minority in Congress, what options are available to you to block a piece of legislation?"
- **Case Studies:** Use real-life stories that describe what happened to a community, family, school, industry, or individual to prompt students to integrate their classroom knowledge with their knowledge of real-world situations, actions, and consequences.
- **Hands-on Technology:** Students use technology such as simulation programs to get a deeper understanding of course concepts. For instance, students might use simulation software to design a simple device or use a statistical package for regression analysis.
- **Interactive Lecture**: Instructor breaks up the lecture at least once per class for an activity that lets all students work directly with the material. Students might observe and interpret features of images, interpret graphs, make calculation and estimates, etc.
- **Active Review Sessions (Games or Simulations):** The instructor poses questions and the students work on them in groups or individually. Students are asked to show their responses to the class and discuss any differences.
- the concepts and theories being discussed. Roleplaying exercises can range from the simple to the complex.
- **Jigsaw Discussion:** In this technique, a general topic is divided into smaller, interrelated pieces (e.g., a puzzle is divided into pieces). Each member of a team is assigned to read and become an

expert on a different topic. After each person has become an expert on their piece of the puzzle, they teach the other team members about that puzzle piece. Finally, after each person has finished teaching, the puzzle has been reassembled, and everyone on the team knows something important about every piece of the puzzle.

- **Inquiry Learning:** Students use an investigative process to discover concepts for themselves. After the instructor identifies an idea or concept for mastery, a question is posed that asks students to make observations, pose hypotheses, and speculate on conclusions. Then students share their thoughts and tie the activity back to the main idea/concept.
- **Forum Theater:** Use theater to depict a situation and then have students enter into the sketch to act out possible solutions. Students watching a sketch on dysfunctional teams, might brainstorm possible suggestions for how to improve the team environment. Ask for volunteers to act out the updated scene.
- **Experiential Learning:** Plan site visits that allow students to see and experience applications of theories and concepts discussed in the class.

Sources

Active learning. (n.d.). Retrieved September 1, 2005, from University of California at Davis, Teaching Resources Center Web site: http://trc.ucdavis.edu/trc/ta/tatips/activelearning.pdf

Bonwell, C.C. (1996). Enhancing the lecture: Revitalizing a traditional format. In T.E. Sutherland, C.C. & Bonwell (Eds.), Using active learning in college classes: A range of options for faulty. (pp.31-44). San Francisco: Jossey-Bass Publishers.

Felder, R.M., & Brent, R. (1994). Cooperative learning in technical courses: Procedures, pitfalls, and payoffs. (ERIC Document Reproduction Service, No. ED 377038).

McKeachie, W.J. (2005). How to make lectures more effective. In Teaching tips: Strategies, research, and theory for college and university teachers (11th ed.) (pp. 52-68). New York: Houghton Mifflin Co.

Paulson, D.R., & Faust, J.L. (n.d.). Active learning for the college classroom. Retrieved September 1, 2005, from California State University, L.A. Web site: http://www.calstatela.edu/dept/chem/chem2/Active/

http://www.crlt.umich.edu/sites/default/files/resource_files/Active%20Learning%20Continuum.pdf

BIBLIOGRAPHY

The following entries, gathered from a variety of sources, will provide you with both specialized materials to solve particular problems and more general and philosophical views of the process of higher education. Additionally, many departments have their own discipline-specific teaching handbooks for their GTAs, so check with your department to determine if they can provide you with additional resource material.

Academic Integrity

"Promoting Academic Integrity in the Classroom," Deborah Meizlich. (Occasional Paper #20, 2005, University of Michigan, Center for Research on Learning and Teaching). *http://www.crlt.umich.edu/publinks/CRLT_no20.pdf*

Assessment

Angelo, T. A., & Cross, P. K. (1993). *Classroom assessment techniques: A handbook for college teachers (2nd ed.)*. San Francisco, CA: Jossey Bass.

"Improving Multiple-Choice Tests" Victoria L. Clegg and William E. Cashin, Kansas State University. (IDEA Paper No. 16, Kansas State University, September 1986). *http://www.theideacenter.org/sites/default/files/Idea_Paper_16.pdf*

Active Learning

"Scenes from a Classroom: Making Active Learning Work" (University of Minnesota, Center for Teaching and Learning Services). http://www1.umn.edu/ohr/teachlearn/tutorials/active/index.html

Best Practices

Bain, K. (2004). *What the best college teachers do.* Cambridge, MA: Harvard University Press.

Chickering, A.W., & Gamson, Z.F. (1991). *Applying the seven principles for good practice in undergraduate education*. San Francisco: Jossey-Bass.

Classroom Management

Landis, K. (Ed.) (2008). *Start talking: A handbook for engaging difficult dialogues in higher education*. Anchorage, AK: University Press.

"Managing Classroom Conflict" (University of North Carolina, Center for Teaching and Learning). http://cfe.unc.edu/pdfs/FYC22.pdf

Course Design

"Course Design Tip-Sheet" (Harvard University, Derek Bok Center for Teaching and Learning). http://isites.harvard.edu/icb/icb.do?keyword=k1985&pageid=icb.page29721

"Achieving Excellence in Multicultural Instruction" (Michigan State University, College of Communication Arts and Sciences). http://www.diversity.cas.msu.edu/about.html

Critical Thinking

Kloss, R.J. (1994). *A nudge is best: Helping students though the Perry scheme of intellectual development*. William Paterson College, http://dhc.ucdavis.edu/fh/ct/kloss.html.

Nosich, G.M. (2008). *Learning to think things through: A guide to critical thinking across the curriculum (3rd ed.)*. Upper Saddle River, NJ: Prentice Hall.

Paul, R., & Elder, L. (2001a). *Critical thinking: Tools for taking charge of your learning and your life*. Upper Saddle River, NJ: Prentice Hall.

Paul, R., & Elder, L. (2006). *Miniature guide to critical thinking concepts & tools*. Dillon Beach, CA: Foundation for Critical Thinking.

Discussions

Brookfield, S. D., & Preskill, S. (1999). *Discussion as a way of teaching: Tools and techniques for democratic classrooms.* San Francisco, CA: Jossey Bass.

Christensen, C. R., Garvin, D.A., & Sweet, A. (1991). *Education for judgment: The artistry of discussion leadership.* Boston: Harvard Business School Press.

"Discussion in the Classroom" (Penn State, Schreyer Institute for Teaching Excellence). http://www.schreyerinstitute.psu.edu/Tools/Discuss/

Faculty Work-Life: Managing Teaching, Research, & Service

Barker, K. (2002). *At the helm: A laboratory navigator*. Cold Springs Harbor, NY: Cold Spring Harbor Laboratory Press.

Daniell, E. (2006). *Every other Thursday: Stories and strategies from successful women scientists*. New Haven, CT: Yale University Press.

Making the right moves: A practical guide to scientific management for postdocs and new faculty (2nd ed.) (2006). Burroughs Wellcome Fund. http://www.hhmi.org/labmanagement

Wankat, P. C. (2002). *The effective, efficient professor: Teaching, scholarship and service*. Boston, MA: Allyn & Bacon.

General Information on Teaching and Learning

Banner, J.M., & Cannon, H.C. (1997). *The elements of teaching*. New Haven, CT: Yale University Press.

Brookfield, S. (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass.

Gurung, R.A.R., & Schwartz, B.M. (2009). *Optimizing teaching and learning: Practicing pedagogical research*. Malden, MA: Wiley-Blackwell.

Lambert, L., Lane Tice, S. and Featherstone, P. (1996). *University teaching: A guide for graduate students*. Syracuse, N.Y.: Syracuse University Press.

Group Learning

Barkley, E.F., Cross, K.P., & Major, C.H. (2004). *Collaborative learning techniques: A handbook for college faculty*. San Francisco: Jossey-Bass.

Bouton, C., & Garth, R.Y. (1983). *Learning in groups*. San Francisco: Jossey-Bass.

Goodsell, A.S. (1992). *Collaborative learning: A sourcebook for higher education*. University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment.

Michaelsen, L. K., Knight, A. B., & Fink, L. D. (Eds.) (2004). *Team-based learning: A transformative use of small groups in college teaching.* Sterling, VA: Stylus Publishing.

Handbooks

"101 Things You Can Do the First Three Weeks of Class," Joyce T. Povlacs (University of Nebraska-Lincoln, Teaching and Learning Center).
http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/101thing.htm

Brinkley, A. (1999). *The Chicago handbook for teachers: A practical guide to the college classroom.* Chicago: University of Chicago Press.

Dominowski, R.L. (2002). *Teaching undergraduates.* Mahwah, NJ: Erlbaum Associates.

Erickson, B. L., Peters, C. B., Strommer, D. W. (2006). *Teaching first-year college students*. San Francisco, CA: Jossey Bass.

Knight, P. (2002). *Being a teacher in higher education.* Buckingham, PA: Society for Research into Higher Education & Open University Press.

Lieberg, C. (2008). *Teaching Your First College Class: A Practical Guide for New Faculty and Graduate Student Instructors*. Sterling, VA: Stylus Publishing.

McKeachie, W. J. & Svinicki, M. (Eds.) (2006). *McKeachie's teaching tips: Strategies, research and theory of college and university teachers (12th ed.)*. Boston, MA: Houghton Mifflin.

Miller, W. and Miller, M. (1997). *Handbook for college teaching.* Sautee-Nacoochee, GA: Pinecrest Publications.

Large Classes

Amundsen, M. (1994*). Engaging students in the large class: A presentation of Brigham Young University Faculty Center.* Santa Monica, CA: Pyramid Film and Video (Videotape). Ekstrom Library Media Center (2nd floor).

Stanley, C. A., & Porter, M. E. (Eds.) (2002). *Engaging large classes: Strategies and techniques for college faculty.* Bolton, MA: Anker Publishing.
"Teaching Large Classes" (University of Maryland, Center for Teaching Excellence).
http://www.cte.umd.edu/library/teachingLargeClass/index.html

Weimer, M. (1987). *Teaching large classes well*. San Francisco: Jossey-Bass.

Learners & Learning

"Is It Age or IT: First Steps Toward Understanding the Net Generation**,"** Diana Oblinger (EDUCAUSE) and James Oblinger (North Carolina State University).
http://www.educause.edu/content.asp?page_id=6058&bhcp=1

Donovan, S. M., Bransford, J. D., & Pellegrino, J.W. (Eds.) (2000). *How people learn: Brain, mind, experience, and school.* Washington D.C.: National Academy Press.

Grasha, A.F. (1996). *Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles*. Pittsburgh, PA: Alliance Publishers.

Magolda, M. B. (Ed.) (2000). *Teaching to promote intellectual and personal maturity: Incorporating students' worldviews and identities into the learning process*. San Francisco: Jossey-Bass.

Merriam, S.B., Caffarella, R.S., & Baumgartner, L.M. (2006). *Learning in adulthood: A comprehensive guide* (Jossey-Bass Higher & Adult Education Series) (3rd ed.). San Francisco: Jossey-Bass.

Weimer, M. (2002). *Learner-centered teaching: Five key changes to practice*. San Francisco: Jossey-Bass.

Multicultural Teaching & Learning

Adams, M., Bell, L. A., Griffin, P. (Eds.) (1997). *Teaching for diversity and social justice: A sourcebook*. New York: Routledge.

Kaplan, M., & Miller, A. T. (Eds.) (2007). Scholarship of Multicultural Teaching and Learning. *New Directions for Teaching and Learning, 111*.

Mayberry, K. J. (Ed.) (1996). *Teaching what you're not: Identity politics in higher education*. New York: University Press.

Morey, A. I., & Kitano, M. K. (Eds.) (1997). *Multicultural course transformation in higher education: A broader truth*. Boston, MA: Allyn & Bacon.

Teaching American students: A guide for international faculty and teaching assistants in colleges and universities (1997). Derek Bok Center for Teaching and Learning: Harvard University.

Scholarship of Teaching and Learning

McKinney, K. (2007). *Enhancing learning through the scholarship of teaching and learning: The challenges and joys of juggling.* San Francisco: Jossey Bass.

Technology

"100 Ways to Use Twitter in the Classroom, by Degree of Difficulty" (Edudemic) http://edudemic.com/2012/04/100-ways-to-use-twitter-in-education-by-degree-of-difficulty/

Ko, S., Rossen, S. (2008). *Teaching Online: A Practical Guide*. Boston, MA; New York, NY: Houghton Mifflin.

"Personal Learning Networks for Educators: 10 Tips" http://gettingsmart.com/news/personal-learning-networks-for-educators-10-tips/

"Teaching with Technology" (Module 5 of *Getting Results*, an online course for instructors on course development, funded by the National Science Foundation, produced by WGBH in Boston and The League for Innovation). http://www.league.org/gettingresults/web/module5/introduction/index.html

"Technology Introduction Matrix" (Built for K-12, but effective rubric for higher education instruction) http://edudemic.com/2012/04/100-ways-to-use-twitter-in-education-by-degree-of-difficulty/

White, K.W., & Weight, B.H. (2000). *The online teaching guide: A handbook of attitudes, strategies and techniques for the virtual classroom*. Boston: Allyn and Bacon.