# TABLE OF CONTENTS

1. INTRODUCTION ....................................................... 3

2. SUGGESTIONS FOR SUCCESSFUL TEACHING ................. 5

   **Course preparation**
   - Planning a course ........................................... 5
   - Developing content and course objectives .................. 5
   - Motivating students ........................................... 6
   - Creating a syllabus ........................................... 8
   - Working with teaching assistants ............................ 9

   **Classroom environment**
   - Professional conduct ....................................... 11
   - Dealing with cheating ....................................... 12
   - Discouraging and detecting plagiarism .................... 14
   - Harassment and discrimination ............................. 15
   - Diversity and creating an inclusive classroom .......... 16
   - Incivility ....................................................... 16

   **Instructional methods**
   - Planning an effective lecture ............................... 17
   - Leading discussions ......................................... 20
   - Problem-based learning .................................... 22
   - Using the case method of teaching ......................... 23
   - Using group learning ....................................... 24
   - Studio pedagogy .............................................. 27
   - Teaching laboratory classes ................................ 29
   - Community-based/community engagement learning .... 30

   **Using technology**
   - Putting class material on the Web ......................... 32
   - Using technology for just-in-time teaching ............... 33
   - Receiving educational technology support at UIUC ....... 34

   **Evaluating student achievement**
   - Suggestions for assigning course grades .................. 36
   - Capricious grading .......................................... 37
   - Writing classroom exams ................................... 38
   - Evaluating written work .................................... 39
   - Providing feedback on written work ....................... 41
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HANDBOOK PURPOSES AND USES

This handbook was designed primarily for use in improving and evaluating faculty teaching, although it may also be valuable for improving and evaluating the work of teaching assistants. As a resource handbook, it provides a number of research- and practice-based suggestions for effective teaching; information on selected campus codes relevant to teaching; a description of the UIUC promotion and tenure policies and procedures; and information on resources available to address a range of teaching contexts and problems.

The section on the evaluation of teaching is another type of resource that can be employed in the pursuit of good teaching. The usefulness of this information is not limited to faculty members involved in personnel decisions concerning promotion, tenure, and annual salary increases. The material on teaching evaluation can also be used by instructors to assess their own teaching for self-improvement purposes.

WITHIN A CONTEXT OF LEARNING AND GOOD PRACTICE

Before offering suggestions for improving and evaluating your teaching we begin by placing them in a context of our current understanding about student learning and by basing them on a set of guiding principles for good practice. We start with learning because:

1. Beliefs about learning inform teaching practice.
2. Theories of learning have changed significantly in recent years.
3. The paradigm is shifting from a focus on teaching to a focus on learning.

BELIEFS ABOUT LEARNING INFORM TEACHING PRACTICE

Each faculty member makes decisions when starting to teach—What approach to teaching should I use? What methods? What assignments? How will I know if they got it? Wilson and Peterson (1997) say that “integral to making such decisions is a solid understanding of the foundational beliefs and theories that should drive teaching, ideas about how students learn, what they should learn, and how teachers need to think and act to enable learning” (p. 1). Ken Bain, in What the Best College Teachers Do (2004), found that teachers identified by his study as outstanding enacted this idea.

He says they “have generally cobbled together from their own experiences working with students’ conceptions of human learning that are remarkably similar to some ideas that have emerged in the research and theoretical literature on cognition, motivation, and human learning” (p. 25–26). Our theories of learning, whether explicit or tacit, informed by study or intuition, or well-considered or not, play a role in the choices we make concerning our teaching.

THEORIES OF LEARNING HAVE CHANGED SIGNIFICANTLY IN RECENT YEARS

A detailed overview of the changes in our understanding of how learning happens is beyond the scope of this handbook. See Svinicki (1999) for an excellent synopsis. The major trend has been a movement away from the behaviorist model to a cognitive view of learning.

Behaviorists describe learning as a process of forming, or strengthening, connections between stimuli and responses. A behaviorist instructor breaks the content into small logically-sequenced parts, develops behavioral objectives, uses objective tests to measure learning, and provides frequent feedback. Repetition and feedback are major mechanisms of learning; learners are fairly passive in the process. The prevailing metaphor is “learning as response acquisition” (Mayer, 1992). While behaviorist theory explains behavioral change well, it says little about conceptual change and thinking (Fosnot, 1996; Svinicki, 1999).

Cognitive theories developed as a result of psychologists’ efforts to understand the cognitive processes of memory,
thinking, problem solving, and decision making, and to describe meaningful rather than rote learning (Bruning, 1994). Early theories describe learning as structuring and restructuring memory. The learner is seen as a processor of information and the teacher is a dispenser of information; the metaphor for learning is “learning as knowledge acquisition” (Mayer, 1992). Instructional strategies coming from these information processing theories include those for organizing content, highlighting key points, making content relevant, and understanding the learner’s prior knowledge (Svinicki, 1999).

Currently, our views of learning focus on metacognition (thinking about thinking) and constructivism/social constructivism. The dominant metaphor is “learning as knowledge construction” (Mayer, 1992). This viewpoint holds that:

Knowledge is personally and actively constructed by the learner through experience and language, and is highly dependent on what the learner already knows.

Learning is an inherently social phenomenon.

THERE IS A SHIFTING PARADIGM FROM A FOCUS ON TEACHING TO A FOCUS ON LEARNING

Barr and Tagg (1995) said that “the paradigm that has governed our colleges is this: A college is an institution that exists to provide instruction. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists to produce learning” (p. 13). An emphasis on the activity of the teacher suggests that the structure and methods of teaching (instruction) are a college’s purpose. As Barr and Tagg explain, this “is like saying that General Motors’ business is to operate assembly lines... We now see that our mission is not instruction, but rather that of producing learning with every student by whatever means work best” (p. 13). From this perspective, teaching decisions would be made based on answers to questions: “What do my students need to know? What does this (activity, reading, assignment, etc.) have to do with their learning?” This paradigm shift goes hand-in-hand with the movement away from the view that knowledge is transmitted toward the idea that knowledge is constructed by the learner. The focus is on what the learner is doing.

FOLLOWING GOOD TEACHING PRACTICE

While understanding learning enhances your ability to interpret what is happening in your classroom so does knowing and following a set of principles for good teaching practice. We base our teaching and evaluation suggestions in this handbook on our Center’s modified version of Chickering and Gamson’s (1987) seven principles for good practice in undergraduate education. We added three principles creating the following list of “seven plus three” principles:

1. Good Practice Encourages Student–Faculty Contact
2. Good Practice Encourages Active Learning
3. Good Practice Gives Prompt Feedback
4. Good Practice Emphasizes Time on Task
5. Good Practice Communicates High Expectations
6. Good Practice Respects Diverse Talents and Ways of Learning
7. Good Practice Encourages Cooperation Among Students
8. Good Practice Reflects Clear Organization and Smart Preparation
9. Good Practice Communicates Enthusiasm for Subject and Teaching
10. Good Practice Emphasizes Fairness

We encourage you to go to Appendix A on page 64 for more information about each of the ten principles because we believe that by both knowing these principles and having an understanding of student learning you will become a more effective teacher.
SUGGESTIONS FOR SUCCESSFUL TEACHING

PLANNING A COURSE

Your efforts before class begins will result in an organized, coherent, and academically responsible course. Keep in mind that course and syllabus planning are reiterative processes—you will always be revising and improving as you gain experience with the content and with the students who take the course.

When you plan a new course, a good first step is to gather as much background information as possible. The following information may be available from your department:

COURSE INFORMATION
- What are the course goals?
- Where does the course fit into the department’s curriculum?
- What is the typical class size?
- What prerequisites (if any) are there?
- Is the course a prerequisite to another course or major?
- Does this course have a particular reputation that you need to be aware of?
- How many contact hours is the course?

STUDENT INFORMATION
- Who takes this course (majors/non-majors, year in school, etc.)?
- Why do they take it?
- What do they already know about the material?
- What experience do they have with potential course methods (e.g., team projects, active learning, labs, technology)?

DEVELOPING COURSE CONTENT AND OBJECTIVES

Once you have the background information you need, you should be ready to develop an outline of your course. Three components of the outline should be considered simultaneously: the content and course objectives, how you can make the content relevant and interesting, and how you will assess student learning.

RESOURCE INFORMATION

Will you have teaching assistants available?
- What technology is available (and appropriate) for this class?
- Is a particular textbook required for this class? What other textbooks might be good resources?

Another useful information-gathering strategy is to talk to others who have taught the course. Get copies of their files, notes, exams, etc., if you can.

You can also search the Internet for parallel courses and syllabi from other campuses.

RESOURCES


A revision of Bloom’s well-known taxonomy of educational objectives (Anderson & Krathwohl, 2001) can be helpful in developing course objectives. This framework delineates six cognitive processes that increase in complexity as seen in the following six questions about your intended learning outcomes.

Do you want your students to
- remember the material taught?
- understand it? (to translate, interpret, put into own words)
- apply it? (to use content to solve problems)
- analyze it? (to break down material into parts, detect relationships)
- evaluate it? (for a particular purpose be able to make judgments about the value of ideas, solutions, methods, etc.)
- create something new from it?

Many instructors begin this process by generating a list of topics to be covered in the course. What is to be learned from each topic area can be identified through the development of course objectives. Objectives describe what students should be able to accomplish by the end of the course. You may want to think in terms of content objectives and non-content objectives (Davis, 1993).

For example, if you teach a course on statistics, a content objective might be, “Students will be able to distinguish between Type I and Type II errors in hypothesis testing.” A non-content objective might focus on students’ use of a statistical software package.

Another useful tool in the development of course objectives is a revision of Bloom’s well-known taxonomy of educational objectives (Anderson & Krathwohl, 2001). This framework delineates six cognitive processes that increase in complexity as seen in the following six questions about your intended learning outcomes.
BENEFITS OF WELL-WRITTEN OBJECTIVES (DAVIS, 1993)

- Allow you to determine what you want your students to accomplish in your course by stating the intended outcomes of student learning
- Guide you in selecting appropriate instructional methods, assignments, and materials
- Clarify for students what you expect from them
- Help colleagues in your department who teach courses for which yours may be a prerequisite

Your targeted levels of the taxonomy should be easily detected in your course objectives. See Appendix B on pages 65–66 for further reading on Bloom’s revised taxonomy of educational objectives.

PLANNING FOR ASSESSMENT

Planning for assessment when developing your syllabus will help shape your course, guide student behavior and learning, and enable you to communicate your expectations clearly. Students need to know the number and types of course assessment as well as their dates for completion. Stating your assessment procedures in the syllabus helps both you and your students map-out a strategy for the course. In essence, your syllabus serves as a contract between you and your students. Any deviation from your stated assessment plans should be carefully considered because it could be viewed as a breach of your written contract.

RESOURCES


Fink, L. D. Creating significant learning experiences (San Francisco: Jossey-Bass, 2003)

MOTIVATING STUDENTS

Few teachers would disagree with the view that motivated students are easier to teach and that they learn more. As teachers, we hope that all of our students come to the classroom excited to learn for the sake of learning and that our teaching will inspire them to great heights of achievement. We are then disappointed if our students seem more interested in knowing what is on the test or argue for an extra point or two. In reality, our students bring to the classroom a variety of motivational drives and a wide range of demands on their attention, commitment, and time. Our students today face the challenge of prioritizing and being self-disciplined when family, friends, extracurricular activities, and work all vie for their attention.

Effective teachers know their students come with a natural desire to learn. They also realize that students come with a belief that the teacher is responsible for tapping into that natural desire by providing a classroom environment that fosters a motivation to learn and an excitement that continues from the first day of the semester to the last.

Most motivational theorists would agree that the motivation to learn is influenced by both the student and the classroom environment. According to Jere Brophy (1987), the motivation to learn is a competence acquired through “general experience but stimulated most directly through modeling, communication of expectations, and direct instruction or socialization by significant others (especially parents and teachers).”

Many students believe that good teachers do “motivate” them (Svinicki, 2004) and these teachers tend to receive high student ratings on items such as: the instructor motivated me to do my best work; stimulated my intellectual curiosity; encouraged me to express my opinion or experience; and emphasized learning rather than tests or grades. The following are some strategies “good teachers” use to motivate their students.

PLANNING FACTORS

Determine course goals and learning objectives

Spend the time to identify course goals that will promote significant and enduring learning. Discuss these goals with your students so they understand them, appreciate their importance, and know ways in which to succeed.

Plan three important task dimensions

DIFFICULTY—more difficult tasks are achievable with specific short-term goals. Determine the range of what students can do independently vs. with help or guidance from their teacher or peers. It is important to provide scaffolding, i.e., breaking down the tasks into steps, modeling, coaching, and prompting.

RELEVANCE—help students find personal meaning and value in the material.

Find ways to help students put the material to use.

Capitalizing on students’ existing needs.

Find and use examples that are meaningful, interesting, and rele-
WHAT IMPACT DOES MOTIVATION HAVE UPON LEARNING?

- **MOTIVATION**—directs the learner’s attention to the task at hand
- **MOTIVATION**—changes what the learner pays attention to
- **MOTIVATION**—helps the learner to persist
- **MOTIVATION**—when viewed as achievement goals and benchmarks can help students monitor their learning and recognize when progress is being made and the task is completed

(Svinicki, 2004, 141-142)

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**CURIOSITY/INCONGRUITY/NOVELTY**—
What makes your field exciting?
How do experts in your field think and approach problems?
Discuss or demonstrate interesting “big problems” or current issues that specialists in your field find challenging.
Plan special field trips, guest speakers, and other events that promote a natural interest in the material.

**STUDENT INTERACTION FACTORS**

**Know your students**
In addition to their names and experiences, determine their skills and knowledge. One way is through the Classroom Assessment Technique (CAT) Background Knowledge Probe (Cross and Angelo, 1993). This strategy uses short simple pretests to determine students’ prior subject knowledge and their readiness to proceed to the next level.

**Create a positive learning environment**
Make students feel welcome and important. Identify specific ways to let your professional enthusiasm show through.

**Set and communicate expectations**
“Research has shown that a teacher’s expectations have a powerful effect on a student’s performance” (Davis, 1993). Be enthusiastic, set realistic and appropriate goals, provide adequate challenges, and inform your students of strategies for success in your course.

**Establish a learning-centered classroom**
This is a climate that is open, positive, and receptive to discussion and disagreements. Cooperative learning fosters intrinsic motivation and plays a role in developing critical thinking skills when students are required to explain and teach each other. In addition, students develop a sense of community and commitment to each other.

**STUDENT ASSESSMENT/FEEDBACK FACTORS**

**Provide feedback**
Feedback must be frequent, early, constructive, explicit, and tied to effort. The feedback must provide information about where students did well as well as ways to improve. Make comments about the task or performance, not about the individual learner. One business professor would send an e-mail to his students after each exam to provide praise to those who achieved high grades and encouragement and an invitation for assistance to those who were struggling.

**Increase the probability of success**
Reduce test anxiety by strategies such as dropping the lowest test score, providing practice exams, and aligning homework, assignments, and exams on difficulty and content levels. In addition, provide help through review sessions and study guides.

**Use appropriate grading**
Utilize an absolute or mastery standard of grading rather than a relative scale (“grading on the curve”), which tends to foster competition and low self-efficacy. Using grades to punish students reduces intrinsic motivation, such as taking away points for missed or late papers.

**Provide some choice and control**
Allow students the opportunity to make choices and experience the consequences of those choices. Let them have options on class projects and in choosing some topics for the course. Provide them with a sense of autonomy. Try to avoid statements such as “I require...” or “You should...” Instead say, “I would be interested in hearing...” Avoid telling students when you can ask.

**RESOURCES**
Biophy, J. Synthesis of research for motivating students to learn. (Educational Leadership, October 1987) pp. 40-48
Svinicki, M. D. Learning and motivation in the postsecondary classroom (Bolton, MA: Anker Publishing Co., 2004)
CREATING A SYLLABUS

A well-organized syllabus allows students to know what is expected of them from the beginning of the semester. It should provide a roadmap for the course that eliminates misunderstandings between students and instructors and clearly minimize concerns of capricious grading. The following are topics to include in your syllabus:

GENERAL COURSE INFORMATION

Logistics

Instructor information (name, title, office location, office phone number, e-mail)

Course information (course by number, section, title, semester, meeting times, days, place)

Required purchases for the course. You may also want to note where else texts will be available (e.g., the library, online, electronic reserves)

Content

Pre-requisites for the course

Description of the course

Course goals and objectives

Topics to be covered in sequence with dates

Important dates (e.g., assignment due dates, exam dates, and holidays)

FACULTY VOICES

“I teach FSHN 460 (Food Engineering) and FSHN 469/ABE482 (Package Engineering).

In these courses, the students are typically at or near the senior and first-year graduate level and have a strong general science or technical background, but often have no prior experience with the immediate subject or with engineering in general. To help students progress from novice-level to intermediate problems, I give them reality checks:

- Field trips to industry and industry meetings (processing and packaging operations within the metro Chicago area, and Pack Expo, the nation’s largest packaging trade show and technical conference, in Chicago).

- Real-world case studies (‘The price of energy triples in a year—how does this affect your choice of food processing and packaging methods?’) Most of the case studies are developed from situations or anecdotes supplied by the students themselves, particularly students who are involved in the Extramural Masters of Science Program and are working in industry.

- Immediate examples relevant to student life.

Using this approach helps students learn to

- See an immediate application and relevance to the course material.

- Analyze the complex dimensions of solving technical problems, including technical and management decisions they would face in their professional lives.

- Appreciate the broader context and application of their work.

- Go beyond rote technical knowledge to address the challenges of considering real-world issues related to the analysis and design that they are involved in.”

Professor Scott Morris, Food Science and Human Nutrition

8 TEACHING AND ITS EVALUATION
GRADES AND ASSIGNMENTS
Description of how the final grade will be computed with a breakdown of the ranges for each letter grade
Due dates for major assignments
Standards and criteria for graded assignments
Reading assignments and due dates
Whether plus/minuses will be used

COURSE POLICIES
This section should not be an outline of what students should not do, but rather, should reflect your values and expectations for classroom conduct. You may want to develop a statement on some or all of the following:

Late assignments
Academic integrity
http://www.uiuc.edu/admin_manual/code/rule_33.html
Attendance
http://www.uiuc.edu/admin_manual/code/rule_34.html
Students with special needs
http://www.disability.uiuc.edu

OTHER INFORMATION YOU MAY WISH TO INCLUDE
Further information about yourself
Perhaps a brief statement of your teaching philosophy or a little about your professional background.

Expectations for classroom interaction
For example, you may point out that you will be incorporating active learning strategies throughout the semester in the form of group work, in-class writing assignments, etc. Or if you address controversial topics, you may want to lay out some guidelines for discussion.

Suggestions for students on how to succeed in the course
You could also explain how to integrate readings and homework content with what happens during class lectures.

RESOURCES
CTE Illini Instructor Series #3: Preparing a course syllabus (http://www.cte.uiuc.edu/Did/Resources/Illini%20Instructor/syllabus.htm)

WORKING WITH TEACHING ASSISTANTS
Teaching a large class of undergraduates with the assistance of teaching assistants (TAs) requires extra managerial and organizational skills. TAs will continually look to you for guidance for conducting and teaching the course. The following are suggestions that may assist you in this task:

When possible, choose TAs who have expertise in the subject matter, want to teach, are good communicators, and are team players.

Think through the structure of the course early and discuss their role with the TAs, e.g., attend lectures, have responsibility for a portion of course grades, grade homework problems. Make your expectations explicit and tell the TAs how they will be evaluated.

Have a preliminary meeting with the TAs as soon as they are chosen. Have a syllabus ready that the TAs can review to ensure that they are able to follow and understand it.

Provide and require training sessions for the TAs with an instructional component before the semester begins. The Center for Teaching Excellence provides services for TAs: http://www.cte.uiuc.edu/Did/TAs/index.htm.

Select a head TA to act as a coordinator and liaison.

Meet with TAs regularly to go over content, teaching methods, grading issues, and special problems. Most faculty members require such a meeting weekly.

Monitor each TA’s progress throughout every semester they teach by visiting their classrooms, videotaping their teaching, and/or having them collect mid-semester student feedback about their teaching. Debrief with TAs after each of these teaching development experiences.
Support and assist your TAs in dealing with special problems they will encounter, e.g., academic integrity, classroom discipline, course management issues, harassment, pressures of being both teacher and student.

Avoid discussing other faculty members or TAs with your TAs.

Do not misuse TAs by requiring more of their time or duties outside of their responsibilities than their appointments dictate. Try to be objective and fair to all of your TAs.

Encourage TAs to enroll in the Graduate and Advanced Graduate Teacher Certificate program (http://www.cte.uiuc.edu/Did/TAs/gte.htm) to enhance their teaching abilities and assist them in getting a teaching position in the future.

RESOURCES

CTE Illini Instructor Series #1: Teaching in large classes (www.cte.uiuc.edu/Did/Resources/Illini%20Instructor/largeclasses.htm)

CTE Illini Instructor Series #2: Working with teaching assistants (www.cte.uiuc.edu/Did/Resources/Illini%20Instructor/workingwith-TAs.htm)

CTE Instructional Booklet: Handbook for teaching assistants


FACULTY VOICES

“Psychology 100 is one of the largest courses on campus and is primarily taught by 15-20 advanced graduate students. Our weekly meetings are vital for us to ensure that all students in our course receive a quality experience. Typically, each semester 50 percent of the TAs are new and 50 percent are ‘veteran’ instructors. At our weekly, two-hour meeting, one or two veterans volunteer to present the material as they teach it—pointing out areas with which students will have difficulty, sharing active learning techniques they have used, showing clips of relevant videos that illustrate key points, and providing student-relevant’ examples of important concepts. The rest of the group, including me, supplement what the presenters have provided.

We have a common office and whenever one of us finds relevant resources for the course, we have one prominent spot where we leave the materials for the other instructors. Communication, working as a team, sharing resources and ideas, developing collegiality—all of these ensure that our course is taught to the best of our collective abilities.”

Professor Sandra Goss Lucas, Psychology
PROFESSIONAL CONDUCT

Karl Hostetler, in *The Art and Politics of College Teaching*, says, “Many of the most important questions that you must face as a professor are ethical questions. At root, college teaching is an ethical enterprise” (2001, p. 323). At UIUC the Student Code is published each August and is available on-line at http://www.uiuc.edu/admin_manual/code/. The Code provides these basic guidelines for those acting on behalf of the University:

**INTEGRITY** by maintaining an ongoing dedication to honesty and responsibility.

**TRUSTWORTHINESS** by acting in a reliable and dependable manner.

**EVENHANDEDNESS** by treating others with impartiality.

**RESPECT** by treating others with civility and decency.

**STEWARDSHIP** by exercising custodial responsibility for University property and resources.

**COMPLIANCE** by following state and federal laws and regulations and University policies related to their duties and responsibilities.

**CONFIDENTIALITY** by protecting the integrity and security of University information such as student records, employee files, patient records, and contract negotiation documents.

In *The Ethics of Teaching: A Case Book*, Keith-Spiegel, Whitley, Balogh, Perkins and Wittig (2002) apply general ethical principles to academia. The eight points presented below are adapted from their text. These apply when interacting with students, staff, and peers.

**RESPECTING THE AUTONOMY OF OTHERS**

Allowing others to choose their own ways in life when it does not interfere with the rights and welfare of others.

Valuing free expression of ideas.

Reacting to ideas in appropriate, non-violent ways.

Encouraging appropriate level of student discovery as opposed to indoctrination.

Creating an environment conducive to learning.

**DOING NO PHYSICAL OR EMOTIONAL HARM FROM ACTS OF COMMISSION OR OMISSION**

Relating to students and colleagues in non-exploitative ways.

Seeking consultation when ethical or personal problems may hinder judgment.

Seeking to eliminate bias and injurious affects of bias in our work.

Refusing to tolerate unethical behavior in others.

**BENEFITING OTHERS**

Contributing to student welfare and development.

Maintaining our own competence.

Being a dependable teacher, advisor, and role model.

Establishing and keeping office hours.

**FAIRNESS AND EQUITY**

Treating others as we would like to be treated.

Evaluating others fairly.

Following privacy laws such as FERPA (http://www.oar.uiuc.edu/staff/records/ferpa.html). See Appendix C on page 67.

**FIDELITY AND HONESTY**

Keeping promises, being truthful and loyal.

Identifying our opinions as opinions.

Displaying openness in dealing with students.

Utilizing informed consent when applicable.

Following copyright laws.

**DIGNITY**

Treating others with dignity.

Avoiding arrogance and inappropriate displays of emotion.

Respecting diversity.

Not talking about or criticizing other faculty or students.

Avoiding teasing or making fun of students in a way which could be interpreted as a put-down.

**CARING**

Accomplishing duties with care.

Extending appropriate compassion to others.

Doing your best.

Pursuing excellence.
Tak ing pride in your work.
Spending adequate time preparing and grading assignments.

RESOURCES
Hostetler, K. *The art and practice of college teaching: A practical guide for the beginning professor* (NY: Peter Lang, 2001)

DEALING WITH CHEATING
Fair assessment of student work is a critical factor in creating an optimal learning environment. When students cheat, the environment becomes less than optimal. Faculty have the responsibility to discourage students from cheating and to appropriately deal with cheating when it is detected. At UIUC the *Student Code* (http://www.uiuc.edu/admin_manual/code/) contains the University’s definition of cheating, as well as policies and guidelines for dealing with its occurrence. Instructors should be familiar with the Code when designing a course and assessments, and students should be familiar with how the Code applies to their work.

PREVENTING CHEATING
Instructors can reduce the incidence of cheating by paying specific attention to how they communicate their expectations to students, how they prepare their exams, and how they administer their exams. The following sections provide guidelines on these three points.

Advance communication
Whatever decisions you make regarding academic integrity, it is imperative that these decisions be fully communicated to students, TAs, and exam proctors.
You can communicate expectations by making a clear statement on the first day of class, by including this statement in the course syllabus, and by repeating it on the class day before an exam and again as the exam begins.

Test preparation
Create a test that is fair to your students. Some students use an instructor’s reputation for giving “unfair” tests as an excuse to cheat. “Fair” means that the exam tests the material that you said it would cover, that students have enough time to complete the exam, and that there is a reasonable grade distribution.
Control anxiety by discussing the test procedures and outlining the material to be included. Handing out old tests or providing sample questions also reduces anxiety.
Write new tests each semester, whenever possible; at the least add new items.
Prepare more than one form of the exam. You can have the same questions on each form, or (2) vary the order of the response alternatives. Where calculations are involved, you can modify values within the same question on different forms so that responses are different.
Pre-code answer sheets and test booklets by using a numbering system so that the number on each test booklet matches the one on each student’s answer sheet.
To eliminate cheating after the exam has been returned to students, mark the answer sheets in such a way that answers cannot be altered (such as using a permanent felt-tip pen).

Test administration
Most cheating on tests in large classes occurs when students are allowed to sit wherever they choose. It should be no surprise that cheaters choose to sit near each other. Cheating may be greatly minimized by using the following procedures:
Number seats and tests and then assign students to sit in the seat with the same number as the number on their test.
Systematically hand out alternative forms, taking into account students sitting laterally as well as those sitting in front and in back of each other.
Have sufficient proctors for the exam. Exam situations vary, but, in general, the following guidelines are advisable:
Have one proctor per 40 students if the proctor does not know the students.
If the proctor does know the students (i.e., the proctor is a discussion instructor), have students sit together by section. This minimizes “ghost” exam takers by making it easier for proctors to recognize and account for their own students.

Proctors should stay alert and move around the exam room. They should not be reading or involved in unnecessary chatter with other proctors.

Proctors should never leave the students alone.

Require students to bring their student IDs and another form of identification to each exam. To implement this requirement:

Have proctors look carefully at each ID and student.

Have an enrollment list or card file of names and signatures to be matched against the IDs (or signatures on exam answer sheets) that is to be checked off as students enter (or leave) the exam room.

Immediately attend to any suspicious conduct by the students. If the conduct is suspicious (but not necessarily conclusive), you should move the students to other locations in the room. This is most successful when it is done immediately and with as little disturbance as possible. State ahead of time that you plan to follow this practice whenever something suspicious occurs, and that you do it as assistance to all students involved. A statement such as this frequently helps reduce the disturbance element.

FACULTY VOICES

Professor Feniosky Peña-Mora in the Department of Civil and Environmental Engineering encourages his students to adhere to the highest standards of academic integrity. The statement below is included in his syllabus.

Students currently taking this class can work together to conceptualize general approaches to assignments. However, unless otherwise specified for a particular assignment, the work that a student submits must be done completely on an individual basis. Work is defined as and includes text, numerical calculations, mathematical derivations, diagrams, graphs, computer programs and output. You are also expected to properly reference the source of any information used in a submission that is not your own. This includes any source from any book, article, web page, MS PowerPoint presentation, interview or personal correspondence from someone else that the student utilizes to create their work. Remember, someone else's material is considered as intellectual property and should be both respected and acknowledged. It is also inappropriate to use assignments, problem sets, examinations, or projects submitted in previous years as a source, unless otherwise indicated.

If questions or concerns arise about how these policies relate to a specific situation, please speak with a member of the teaching staff of this course for clarification.
HANDLING CHEATING
Charging students with cheating is never easy. However, the following suggestions should make it easier. If faculty members do not fulfill their responsibility for maintaining academic integrity, it makes it difficult to charge students with infractions of academic integrity. Here are some suggestions for handling cheating:

Be certain that you are acting fairly and objectively and that you have all of the facts.

Become familiar with Section 33 of the Code so you know the procedures to follow.

Keep written records of the description of the cheating incident and the actions you and others subsequently take.

Speak with (1) your department head or chair to learn about departmental or college practices, or (2) other faculty, especially those in your department, to see what they have done and what the results were when they charged students with cheating.

Become familiar with the sanction alternatives and at what level students’ appeals leave departmental jurisdiction.

Be able to justify the sanction chosen by attempting to match it with the level or type of cheating that has taken place.

When your proctors and teaching assistants wish to make a charge of cheating, learn the facts surrounding their charge, and support them in pursuing appropriate action.

Do not make threats to students that you or the University cannot back up. For example, do not tell students that you are going to “flunk them and kick them out of school.” Section 33 of the Code states that while UIUC faculty have the independent authority to give reduced or failing grades on assignments, exams, and in a course, they can only recommend a suspension or dismissal. By being knowledgeable about the Code, you can be better assured of commenting appropriately to students.

Remember that a system for appealing sanctions has been established for all students.

The UIUC Student Code states that once you are aware of infractions of academic integrity, you have the responsibility of enforcing the Code. Attending to this responsibility benefits your students, colleagues, and teaching assistants.

PROCEDURES FOR ENFORCING THE CODE
Once a student has been formally charged with cheating, the UIUC procedures for infractions of academic integrity are set in motion. When a student decides to appeal the charge, it is important to continually communicate with your department head as the appeal process moves through its stages. Knowing what is in the Code is essential. Listed below are some additional thoughts.

All students at UIUC (and most institutions of higher learning) have the opportunity to appeal charges of cheating.

Prepare yourself for moments of uneasy feelings. These are common and do not mean that you have made a mistake or are unreasonable. These moments may also occur well after the entire procedure is over.

Support your TAs/proctors in handling the pressures incurred. They will be looking to you for guidance more at this time than at any other.

RESOURCES
Cizek, G. Cheating on tests: How to do it, detect it, and prevent it (Mahwah, NJ: Lawrence Erlbaum, 1999)
CTE Illini Instructor Series #4: Practical approaches to dealing with cheating on exams, (http://www.cte.uiuc.edu/Dud/Resources/Illini%20Instructor/syllabus.htm)
UIUC Student Code (http://www.uiuc.edu/admin_manual/code/)
Wankat, P. The effective, efficient professor (Boston: Allyn Bacon, 2002)

DISCOURAGING AND DETECTING PLAGIARISM
The Student Code (http://www.uiuc.edu/admin_manual/code/rule_33.html) defines plagiarism as “representing the words or ideas of another’s as one’s own in any academic endeavor” (p.16). We offer a number of other resources and suggestions to help you deter, detect, and deal with plagiarism.

STRATEGIES FOR PREVENTING PLAGIARISM

Prepare yourself

Become familiar with the UIUC policy on academic integrity as presented in the Code cited above.

Be able to locate plagiarized material on the Web (from www.virtualsalt.com/antiplag.htm and other papermill Web sites).

Prepare students

Explain to students the concepts of plagiarism, intellectual property, copyright, collaboration, and fair dealing. Teach students how to quote, paraphrase, and cite correctly.

Inform students that you will randomly check their citations.

Encourage students by describing the benefits of writing a research paper beyond learning new content, such as research skills, analyzing and synthesizing various viewpoints, and attention to detail by following citation guidelines.
Remind students of available resources, such as consulting with the faculty member, TAs, librarians, and the writing center.

Exemplify academic integrity in class by citing sources on handouts and during lectures.

**Prepare assignments**

Assign unique, specific topics and change topics each semester.

Require a minimum number of various types of references, such as Internet sources, journal articles, books, magazines, etc., or require the use of a couple of specific sources. Additionally, you may want to limit the age of sources to some appropriate amount, such as the last five or ten years.

Require students to submit material related to the research process before the papers are due. Some examples of materials you might require include: topic, preliminary bibliography, abstract, annotated photocopies of some articles, outline, rough draft, final annotated bibliography, and final draft (www.virtualsalt.com/antiplag.htm).

Assign oral reports on the research papers.

On the day the research papers are due, ask students to write a reflective essay on what problems they encountered, the research strategy they used, what were the most useful resources, and in general, what they learned from the process. This way you are provided with a writing sample to compare to the research paper.

**POSSIBLE SIGNS OF PLAGIARISM**

*From www.virtualsalt.com/antiplag.htm*

- Mixed citation styles, such as ALA, APA, CBE, and Chicago.
- Lack of references or quotations.
- Unusual formatting, such as inconsistent margins, skewed tables, lines broken in half, mixed subheading styles (these clues may suggest a quick cut-and-paste paper).
- An off-topic paper.
- Reference to articles that are not readily available.
- An out-of-date paper may be indicated by an old topic that is treated as a current event, or when all the sources are old.
- Writing style changes throughout sections of the paper.
- Unmistakable clues, such as the name of the paper mill, the name of a different author, URLs at the bottom of the page, and strange phrases such as “click here” and “graphic”.

**RESOURCES**

- UIUC Student Code (http://www.provost.uiuc.edu/campusconduct/)

**HARASSMENT AND DISCRIMINATION**

UIUC is committed to providing faculty, staff, and students with a working and learning environment that is free from harassment and discrimination based on race, color, religion, sex, national origin, ancestry, age, marital status, disability, sexual orientation, unfavorable discharge from the military, or status as a disabled veteran or a veteran of the Vietnam era (http://www.provost.uiuc.edu/campusconduct/). Instructors must avoid the exploitation, harassment, or discrimination of their students to create a fair and optimum learning environment.

Marilla Svinicki states, “One of the variables that should be at the forefront of our thinking about the ethics of teaching is the great power discrepancy between teacher and students... Abuse of this power is at the base of many ethical traps that lie strewn across our paths as teachers” (2002, p. 314). Svinicki also suggests that sexual harassment may be the most egregious example of abuse.

**Sexual harassment takes many forms:**

- Unwanted sexual statements (sexual or “dirty” jokes, talking about one’s sexual activity in front of others, displaying or distributing sexually explicit material).
- Unwanted personal attention (letters, calls, visits and pressure for sexual favors, pressure for meetings or dates).
- Unwanted physical or sexual advances (touching, hugging, etc.).

Because of the power imbalance between faculty and students, faculty must be careful not to cause students to believe that educational decisions will be based on whether or not they submit to unwelcome sexual conduct. Needless to say, many ethical questions are raised when an instructor dates a student in their class or department.
Racially hostile environments are created through physical, verbal, graphic, or written harassment and interfere with the ability of people to participate or benefit from services, activities, or privileges at UIUC.

Disability discrimination occurs when those qualified with a disability are denied equal opportunities. Reasonable accommodations include: note taking services, text conversion, audio and video tapes, interpreter services, adjustment in time limits, facilities, and programs. Contact the Division of Rehabilitation-Education Services (DRES) at 333-1970, or www.disability.uiuc.edu for advice and assistance.

Discrimination and harassment are prohibited by state and federal laws, therefore these guidelines are important to remember:

Don’t engage in harassment or discrimination.

Don’t tolerate harassment or discrimination.

Both informal and formal resources and procedures exist to help resolve incidents of alleged harassment or discrimination.

RESOURCES


DIVERSITY AND CREATING AN INCLUSIVE CLASSROOM

INCLUSIVE TEACHING means teaching in ways that do not exclude students, accidentally or intentionally, from opportunities to learn. The following suggestions for inclusive teaching come from the University of Washington’s Web site on inclusive teaching (http://depts.washington.edu/cidrweb/inclusive/), and from “Diversity in the College Classroom,” an online resource from the Center for Teaching and Learning, University of North Carolina at Chapel Hill (http://ctl.unc.edu/fti2.html). These resources provide sound advice on ways to create an inclusive classroom.

Show interest in interacting with all students, and not just a particular group of students (for example, students from a particular social or ethnic group, or students who sit in the front row).

Make students feel that they belong in your class. Avoid suggesting that certain backgrounds and life experiences disqualify them from being taken seriously as learners.

Get to know your students as individuals rather than as representatives of particular groups or assuming they are all the same.

Never ask a student to speak for a whole group (e.g., for women, for Hispanics, for Muslims).

Accommodate different learning styles and promote collaboration among students.

Do not let injurious statements pass without comment.

Allow students to disagree with you or others, but within guidelines that promote a safe learning atmosphere in the classroom.

Reflect diverse backgrounds on your syllabus, in your readings, examples, and in other materials such as visual aids.

Depersonalize controversial topics and structure assignments to let students choose topics with which they are comfortable.

RESOURCES
Adams, J. Q. and Welsh, J.R. Cultural diversity: Curriculum, classroom, and climate (Illinois Staff and Curriculum Developers Association, 1999)


INCIVILITY

In an academic context incivility can be broadly defined as behaviors that negatively affect the learning environment. One faculty member describes the dilemma of how to determine whether specific behaviors lack civility:

Student unruliness is often in the eye (or ear) of the beholder. One senior professor commented that he thought wearing baseball caps turned
backward was an affront to the dignity of the classroom; such a barometer had never occurred to me. But I can't tolerate anyone openly reading non-class-related material, and I regularly confiscate it. Another faculty member hearing me rant on expressed amusement: “Why do that? At least they are reading something!” (Perlmutter, 2004).

Some instructors are reluctant to confront incivility perhaps being unsure of what to do or on what grounds they might enforce civility. Section 5.B. of the UIUC Student Code states:

It is expected that students enrolled in the university will conduct themselves at all times in accordance with accepted principles of responsible citizenship and with due regard for the rights of others.

Often, preventing disruptive behavior is easier than stopping it after it has begun. Sorcinelli (1994) suggests the following four strategies. These strategies, which have other instructional purposes as well, are developed elsewhere in this handbook.

1. Define (and model) expectations so students know how you expect them to behave.

2. Decrease anonymity by forming personal relationships with students so they don’t feel lost in the crowd. Some instructors take photos of their students to help connect faces with names. Student permission must be acquired prior to picture taking.

3. Seek feedback from students by asking for help in determining what is working and what merits some attention. This encourages communication, establishes a responsive tone, and demonstrates respect for and interest in student opinions.

4. Encourage active learning so students are more engaged with the material and with each other during class. They are less likely to be bored or discourteous. They feel more responsible for preparing and coming to class, for paying attention during class, and for taking active responsibility for their own learning.

Prompt attention to incivility is generally easier than trying to respond to a problem that has grown out of proportion. When incivility does occur, the rest of the class is generally expecting the instructor to handle the problem quickly. However, before responding, instructors should make sure they are familiar with all applicable UIUC policies and department practices. When in doubt, consult with others to determine what action, if any, you will take.

RESOURCES
Boice, R. Classroom incivilities (Research in Higher Education, 37, No. 4, 1996)
Sorcinelli, M. D. Dealing with troublesome behaviors in the classroom. In K.W. Prichard & R. M. Sawyer (Eds.), Handbook of college teaching (Westport, CT: Greenwood Press, 1994)

In the following eight sections, we discuss various instructional methods that are common on campus. There is no one ‘best’ teaching method; in fact your course may include a combination of methods, say, lecture, discussion, and laboratory experiences. The key is to select the method(s) that will make the most sense for the content, skills, and values you want your students to acquire in your class.

PLANNING AN EFFECTIVE LECTURE

The lecture, one of the oldest teaching methods, is still the most widely used method of instruction on college campuses. But, is it an effective method? The answer is, “Yes, but...”

Yes, lectures are particularly good for presenting up-to-date information, summarizing material, adapting material to the background and interests of a particular group of students, and focusing on key concepts, principles, or ideas (McKeachie and Svinicki, 2005). But, new advancements in understanding about memory, motivation, and learning indicate a need to rethink how to organize and deliver a lecture.

Research shows that information is more easily learned when it is linked to what one already knows. Thus the lecture needs to build a bridge between students’ knowledge base and the new material or subject matter of the lecture (McKeachie and Svinicki, 2005). The following are some suggestions as to how to do this:
Find out what your students already know by collecting information, asking questions, etc.

As you introduce new topics, start with a review of the material that came before and show how the new content is connected to or builds on it.

Use examples that are relevant to your students’ experiences.

Order the subtopics in a meaningful sequence, using good transitions and ample metaphors, examples, demonstrations, or other relevant illustrations.

Make the lecture structure transparent by planning a good introduction.

Use overheads or the board for key points.

Make sure your conclusion or summary ties the important information together.

One of the biggest barriers to an effective lecture is presenting too much material for a given class. An easy trap to fall into is overloading students’ information processing capacity to the extent that they become frustrated and give up. Students learn more and better if fewer points are presented. So it is essential to think carefully about what you can reasonably address in the time allotted.

**USING ACTIVE LEARNING IN LECTURING**

Students learn more effectively when they are actively engaged than when they passively receive information (McGlynn, 2001). Following are some ways to incorporate active learning into your lecture (Davis, 1993). For additional strategies, see the section on Using Group Learning.

**Beginning of class**

**USE GROUPS.** Have students form groups (pairs or trios) at the beginning of class and give them time to discuss material, solve a problem, or raise a question to be discussed during the class.

**BRAINSTORM.** Pose an open-ended question to the class at the beginning of a lecture and ask students to brainstorm. Write students’ ideas on the board or on an overhead. Refer to these ideas later in the lecture. You can combine or group related ideas and provide major conclusions, or allow students to do this.

**POST PROBLEMS.** Ask students to raise questions they may have at the start of the hour. Write these on the board or on an overhead. Refer to these ideas later in the lecture. You can combine or group related ideas and provide major conclusions, or allow students to do this.

**Middle of class**

**PAUSE.** Divide your lecture into two 20-minute (or three 15-minute) periods of lecturing followed by a two-minute pause where students can work in pairs to compare and rework their notes. Students might also use a pause to answer a question or solve a problem with a partner. This is a good time for students to address any questions posed earlier and posted on the board.

**STUDENT EXPERTS.** Have students become experts on key points throughout the semester. Students can be responsible for a small part of a lecture where their “key point” is featured.

**TAKE A VOTE.** Make a statement based on the lecture content and ask students for a show of hands if they agree, disagree, or don’t know. A discussion of why may follow.

**End of class**

**ASSIGN A ONE-MINUTE PAPER.** At the end of the lecture, students can be asked to write a one-minute paper summarizing the main points of the lecture, the most important point of the lecture, or perhaps the most unclear point. You can collect these and use them as a guide to how well information was presented and what information needs clarification.

**HOLD A DISCUSSION.** Periodically cut your lecture short. Use the last 20-25 minutes of class time for informal discussion.
In addition to introducing active learning, you can capture the attention of your students by becoming a more dynamic lecturer. Here are some techniques you might try (McGlynn, 2001, p. 76).

- Start your lecture with an interesting story, a personal anecdote, or a provocative visual.
- Ask a question or state a problem that is central to the material you will be talking about.
- Use real-life examples—ones that are relevant to your students’ experiences.
- Show enthusiasm.
- Use your voice effectively—speak with energy and inflection.
- Move around the class to better connect with all your students.

**RESOURCES**


**FACULTY VOICES**

“The classes I teach could be described as dealing with engineering theory, as opposed to practical engineering or design. The lectures resemble those in a math class; sometimes involving derivations that require almost the entire 50 minutes. It is a challenge to involve students in the lecture because the material, for example, optimization of dynamic systems, is not ordinarily something about which students have relevant experiences. Nor is much gained by student discussion; ‘opinions’ on this subject aren’t relevant.

One way in which I try to make the material relevant is through the choice of examples to use in the lectures. A case in point is the derivation of the optimal strategy for adding cream to coffee while cooling the coffee as little as possible. Using the calculus of variations we find the solution—which is not obvious, but which makes sense after a review of freshman physics. Another example I use is finding minimum distance paths to travel from one point to another on the circumference of a donut (torus). The answer is also not obvious and takes a good part of an entire lecture. I’ve been known to bring donuts for the entire class so everyone can see the solution is correct, if they don’t eat them before I’m done!”

*Professor Bruce Conway, Aerospace Engineering*
LEADING DISCUSSIONS

By engaging students in discussion, instructors can help them think about the subject matter in previously unexplored ways, learn to evaluate their own and others’ perspectives, articulate what they’ve learned or what needs to be clarified, and even provide motivation to study the topic further (McKeachie and Svinicki, 2005). The following are some suggestions for effective class discussions:

CREATE A CLASSROOM ENVIRONMENT THAT IS CONDUCIVE TO DISCUSSIONS

Students will participate more readily if they feel accepted by other students and experience a sense of belonging in the class (McGlynn, 2001). You can facilitate this by greeting students each day, helping students get to know each other by doing an icebreaker activity early in the semester, learning your students’ names, and calling on them in positive ways. If possible, be available to talk with them before and after class.

BE PREPARED WITH A VARIETY OF DISCUSSION STARTERS IN CASE THE INTERACTION STALLS

Here are some you may want to try (McKeachie and Svinicki, 2005):

START WITH A COMMON EXPERIENCE —something all your students can relate to. You can use a demonstration, a film clip, a cartoon, a story or anecdote, a personal experience, or an excerpt from a reading that has been assigned.

START WITH A CONTROVERSY. Choose an issue that fits with the material you are teaching. Try to use a controversy that will elicit discussion from both viewpoints; when everyone agrees on one position, there is little room for discussion.

OPEN WITH A QUESTION. This is probably the most common technique, but to be effective it needs careful planning.

FACULTY VOICES

“My course on the History of Twentieth Century Black Women’s Activism is a small seminar that includes undergraduate and graduate students. Although most students have some background in Black and Women’s Studies, few have prior experience in taking courses focused specifically on black women’s involvement in Black Freedom Movements. In this setting, I rarely lecture. Rather, I facilitate class discussions by asking questions about the main arguments, themes, and methodological approaches of a particular text. When students are challenged by the material, I often reframe the question, allowing students to discover the answers for themselves. I also:

- Assign one student to lead a 10- to 15-minute discussion of the readings for that day. This approach encourages students to take “ownership” of their learning and to work on their own pedagogical skills.
- Create small break-out groups to encourage students to discuss critically the subject at hand.

Most of all, it is important for instructors ‘not to fear silence’ in the classroom. Silence can often mean that you have raised a cogent question that requires time for students to think about. However, if students seem confused by the question, it can be useful to ask them to note that the question is pivotal for that day’s conversation and that you will come back to it later in the hour.”

Professor Erik S. McDuffie, African American Studies and Research Program/Gender and Women’s Studies Program
KEEP YOUR DISCUSSION MOVING BY USING GOOD QUESTIONING STRATEGIES

Here are some to consider:

**BEFORE CLASS, WRITE OUT KEY QUESTIONS** (often called scripting) that you are going to ask students so that the inquiries are not vague. Be prepared to repeat and/or rephrase them. It might be useful to ask yourself, “What kinds of responses am I likely to get from this question?”

**BE SURE YOUR SILENT (OR WAIT) TIME EXCEEDS THREE TO SIX SECONDS.** Research indicates that interaction increases significantly when silent times are frequent and lengthy.

**BE PREPARED TO BREAK YOUR QUESTION DOWN** into more simple questions in the event that students do not answer the first time. This way you can frequently “bring the students back up” to the complex question you originally asked. It also helps you to build a contextual framework for the students so they can better understand your questions.

**HAVE A PLAN TO INCORPORATE THE NON-PARTICIPATORS.** There will always be students who tend to be passive recipients. This may be due to boredom, lack of preparation, general habits of passivity, cultural norms, or a fear of being embarrassed in front of their peers (McKeachie and Svinicki, 2005). You can help students become participants by establishing an expectation of participation during the first class meeting and creating an atmosphere of familiarity and acceptance. One technique to encourage participation is to use sub-groups: let students discuss a question in pairs or small groups. They often feel freer to answer a question if they know others share their view.

**HAVE STUDENTS WRITE OUT AN ANSWER TO A PROBLEM OR QUESTION.** Give them a set time to respond (one to two minutes is usually enough). This technique takes three important learning principles into account: it forces a wait time on your part; it gives the students time to think; and as a result, they feel more comfortable sharing an answer.

**BECOME AWARE OF AND MONITOR YOUR FACIAL AND BODY GESTURES** as you ask and answer questions. Nonverbal gestures such as establishing eye contact, listening attentively, smiling, nodding approval, and moving around the room (toward students with whom you want to interact) help you appear more approachable and inviting.

**FIND A REASONABLE WAY TO DISAGREE AND CORRECT STUDENTS** so that you do not alienate them. Students often do not understand cynicism or irony. It may appear that you are having a joke at their expense. By developing a way of asking and answering questions that is encouraging and respectful, you establish a safe environment which is essential for interaction.

**BE PREPARED TO CUT OFF A DISCUSSION IF IT GOES TOO LONG OR GETS OFF TRACK**

At the same time, don’t be afraid to let your students go off topic if you feel it is a “teaching moment.” Use good transitions to bring the discussion back on course.

**EXPECT THAT SOME STUDENTS WILL NOT HAVE READ THE ASSIGNMENT**

Plan out a way to prevent this common situation from becoming a problem. Some strategies include:

**GIVING STUDENTS QUESTIONS AT THE END** of one class period and asking them to look for answers in the reading for the next class.

**HAVING STUDENTS READ THE MATERIAL and write one or two questions about it** (perhaps something they would like clarified). These can be turned in at the beginning of the next class.

**USING THE ONE-MINUTE PAPER technique** at the beginning of class. Have students write or summarize (in one or two minutes) the main point of the reading, or what one or two points struck them the most.

**STARTING THE CLASS WITH A STORY, anecdote, or general question that is relevant to and interesting to all students.** Then you can segue into the reading or material to be covered in class.

A final word about discussions: With lecturing, you are in full control—you know where you are going and just how much you can cover in the time allowed. But with discussions, you are on less solid ground. This lack of control may make you anxious at first, but with practice you can learn to relax, feel comfortable with your ability to guide the discussion, and enjoy the challenges and opportunities this type of class provides.

**SOME CHARACTERISTICS OF EFFECTIVE QUESTIONS IN THE DISCUSSION SETTING**

- Open-ended, with more than one possible answer, or more than one component to the answer.
- Simple and clearly worded, with just one idea in the question.
- Challenging enough to make students think, but not so difficult that no one wants to attempt to answer.
- Conducive to follow-up, e.g., “Why do you think that?” or “Kristen, do you agree?”
Problem-Based Learning (PBL) is a teaching method in which complex real-world problems are used as the vehicle to promote student learning of concepts and principles as opposed to direct presentation of facts and concepts. In addition to course content, PBL can promote the development of critical thinking skills, problem-solving abilities, and communication skills. It can also provide opportunities for working in groups, finding and evaluating research materials, and life-long learning (Duch et al, 2001).

PBL can be incorporated into any learning situation. In the strictest definition of PBL, the approach is used over the entire semester as the primary method of teaching. However, broader definitions and uses range from including PBL in lab and design classes, to using it simply to start a single discussion. PBL can also be used to create assessment items. The main thread connecting these various uses is the real-world problems.

Any subject area can be adapted to PBL with a little creativity. While the core problem will vary among disciplines, there are some characteristics of good PBL problems that transcend fields (Duch, Groh, and Allen, 2001).

The problem must motivate students to seek out a deeper understanding of concepts.

The problem should require students to make reasoned decisions and to defend them.

The problem should incorporate the content objectives in such a way as to connect it to previous courses/knowledge.

If a group project, the problem needs a level of complexity to ensure that the students must work together to solve it.

If a multistage project, the initial steps of the problem should be open-ended and engaging to draw students into the problem.

The problems can come from a variety of sources: newspapers, magazines, journals, books, textbooks, and television/movies. Some are in such form that they can be used with little editing; however, others need to be rewritten to be of use. The following guidelines from The Power of Problem-Based Learning (Duch et al, 2001) are written for creating PBL problems for a class centered around the method; however, the general ideas can be applied in simpler uses of PBL.

**Step 1.**

Choose a central idea, concept, or principle that is always taught in a given course, and then think of a typical end-of-chapter problem, assignment, or homework that is usually assigned to students to help them learn that concept. List the learning objectives that students should meet when they work through the problem.

**Step 2.**

Think of a real-world context for the concept under consideration. Develop a storytelling aspect to an end-of-chapter problem, or research an actual case that can be adapted, adding some motivation for students to solve the problem. More complex problems will challenge students to go beyond simple plug-and-chug to solve it. Look at magazines, newspapers, and articles for ideas on the storyline. Some PBL practitioners talk to professionals in the field, searching for ideas of realistic applications of the concept being taught.

**Step 3.**

The problem needs to be introduced in stages so that students will be able to identify learning issues that will lead them to research the targeted concepts. The following are some questions that may help guide this process:

- What will the first page (or stage) look like? What open-ended questions can be asked? What learning issues will be identified?
- How will the problem be structured?
- How long will the problem be?
- How many class periods will it take to complete?
- Will students be given information in subsequent pages (or stages) as they work through the problem?
- What resources will the students need?
- What end product will the students produce at the completion of the problem?

**Step 4.**

Write a teacher’s guide detailing the instructional plans on using the problem in the course. If the course is a medium- to large-size class, a combination of mini-lectures, whole-class discussions, and small group work with groups regularly reporting may be necessary. The teacher’s guide can indicate plans or options of cycling through the pages of the problem interspersing the various modes of learning.

**Step 5.**

The final step is to identify key resources for students. Students need to learn to identify and utilize learning resources on their own, but it can be helpful if the instructor indicates...
a few good sources to get them started. Many students will want to limit their research to the Internet, so it will be important to guide them toward the library as well.

The method for distributing a PBL problem falls under three closely related teaching techniques: case studies, role-plays, and simulations. Case studies (covered in the following handbook section) are presented to students in written form. Role-plays have students improvise scenes based on character descriptions given. Today, simulations often involve computer-based programs. Regardless of which technique is used, the heart of the method remains the same—the real-world problem.

RESOURCES
Duch, B. J., Groh, S. E, and Allen, D. E. (Eds.) The power of problem-based learning (Sterling, VA: Stylus, 2001)

USING THE CASE METHOD OF TEACHING
WHAT IS THE CASE METHOD OF TEACHING?
Cases are narratives, situations, select data samplings, or statements that present unresolved and provocative issues, situations, or questions (Indiana University Teaching Handbook, 2005). The case method is a participatory, discussion-based way of learning where students gain skills in critical thinking, communication, and group dynamics. It is a type of problem-based learning. Often seen in the professional schools of medicine, law, and business, the case method is now used successfully in disciplines such as engineering, chemistry, education, and journalism. Students can work through a case during class as a whole or in small groups.

In addition to the definition above, the case method of teaching (or learning)
Is a partnership between students and teacher and among students.
Promotes more effective contextual learning and long-term retention.
Involves a trust that students will find the answers.
Answers questions not only of ‘how’ but ‘why.’
Provides students the opportunity to “walk around the problem” and to see varied perspectives.
(Bruner, 2002, and Christensen, Garvin, and Swet, 1991)

WHAT IS THE VALUE OF THE CASE METHOD?
Bruner (1991) states that the case method:
IS EFFECTIVE: It employs active learning, involves self-discovery where the teacher serves as facilitator.
BUILD THE CAPACITY FOR CRITICAL THINKING: It uses questioning skills as modeled by the teacher and employs discussion and debates.
EXERCISES AN ADMINISTRATIVE POINT OF VIEW: Students must develop a framework for making decisions.
MODELS A LEARNING ENVIRONMENT: It offers an exchange and flow of ideas from one person to another and achieves trust, respect, and risk-taking.
MODELS THE PROCESS OF INDUCTIVE LEARNING-FROM-EXPERIENCE: It is valuable in promoting life-long learning. It also promotes more effective contextual learning and long-term retention.
MIMICS THE REAL WORLD: Decisions are sometimes based not on absolute values of right and wrong, but on relative values and uncertainty.

WHAT ARE SOME WAYS TO USE THE CASE METHOD SUCCESSFULLY?
Choose an appropriate case
Cases can be any of the following (Indiana University Teaching Handbook, 2005):
FINISHED cases based on facts—these are useful for purposes of analysis.
UNFINISHED open-ended cases—where the results are not clear yet, as such, the student must predict, make suggestions, and conclusions.
FICTIONAL cases that the teacher writes—the difficulty is in writing these cases so they reflect a real-world situation.
ORIGINAL documents, such as the use of news articles, reports, data sets, ethnographies—an interesting case would be to provide two sides of a scenario.

Develop effective questions
Think about ways to start the discussion such as using a hypothetical example or employing the background knowledge of your students.

Get students prepared
To prepare for the next class ask students to think about the following questions:
What is the problem or decision?
Who is the key decision-maker?
Who are the other people?
What caused the problem?
What are some underlying assumptions or objectives?
What decision needs to be made?
Are there alternative responses?

Set ground rules with your students
For effective class discussion suggest the following to your students:
Carefully listen to the discussion, but do not wait too long to participate.

Collaboration and respect should always be present.

Provide value-added comments, suggestions, or questions. Strive to think of the class objective by keeping the discussion moving toward constructive inquiry and solutions.

Other suggestions

Try to refrain from being the “sage on the stage” or a monopolizer.

Make sure the students have finished presenting their perspective before interjecting. Wait and check their body language before adding or changing the discussion.

Take note of the progress and the content in the discussion. One way is by using the blackboard or computer to structure the comments. Another way, particularly useful where there is a conflict or multiple alternative, is the two-column method. In this method, the teacher makes two columns: “For and Against” or “Alternative A and Alternative B.” All arguments/comments are listed in the respective column before discussions or evaluations occur. Don’t forget to note supportive evidence.

In addition to the discussion method, you can also try debates, role-plays, and simulations as ways to uncover the lesson from the case.

If you decide to grade participation, make sure that your grading system is an accurate and defensible portrayal of the contributions.

In conclusion, cases are a valuable way for learning to occur. It takes a fair amount of preparation by both the teacher and the students, but don’t forget these benefits (Bruner, 2002):

The teacher is learning as well as the students. Because of the interactive nature of this method, the teacher constantly “encounters fresh perspective on old problems or tests classic solutions to new problems.”

The students are having fun, are motivated and engaged. If done well, the students are working collaboratively to support each other.

RESOURCES


Bochner, J. & Linsky, M. “Teaching with cases: Learning to question.” In M. D. Svinicki (Ed.), The changing face of college teaching, New Directions for Teaching and Learning, No. 42 (San Francisco: Jossey-Bass, 1990)


Indiana University Teaching Handbook, 2005: http://www.indiana.edu/~teaching

Journalism.org, Background and tips for case study teaching: http://www.journalism.org/resources/education/case_studies/intro.asp

TWO DIMENSIONS TO CONSIDER WHEN PLANNING GROUP WORK

- Types of learning process: collaborative and cooperative
- Types of group structure: short-term and long-term

We can think of ‘collaborative–cooperative’ and ‘short-term–long-term’ as endpoints on a continuum on which to place the group activities we develop.

USING GROUP LEARNING

Two widely accepted principles about learning—learners construct their own knowledge and learning is an inherently social phenomenon—support the use of group learning. Working in small groups provides learners with opportunities to articulate ideas and understandings, uncover assumptions and misconceptions, and negotiate with others to create products or reach consensus. Group activities enable students to discover deeper meaning in the content and improve thinking skills. The most effective use of group work is that which engages students with higher-level content that is thought-provoking, difficult to understand, or has multiple interpretations.

LEARNING PROCESS

The terms collaborative learning and cooperative learning are often used interchangeably, but a distinction is helpful. Collaborative learning highlights the contributions of individual group members, stresses the sharing of authority, and leads to dialog and consensus building on topics without a clear right and wrong answer. Group governance and group processing remain in the hands of the students (Panitz, 1997). Cooperative learning is often thought of as a subset of collaborative learning that involves more teacher intervention. The instructor designs the task and a group structure for accomplishing the task, including the assignment of roles to group members. Students then interact under specific conditions set up by the teacher: positive interdependence, face-to-face interaction, individual account-
ability, collaborative skills, and group processing (Johnson, Johnson, & Smith, 1998). Both collaborative and cooperative learning can take place with informal and formal groups.

GROUP STRUCTURE

Short-term groups

These are temporary groups, with little or no time spent on assigning people to groups, getting into groups, or assigning roles. They last one session or less and are used to ensure cognitive processing and engagement in learning. Some informal short-term group activities include the following:

THINK-PAIR-SHARE: Students are given a prompt (a question, problem, visual, etc.), and asked to think about the prompt individually and jot down ideas. Students then form pairs, talk about their responses, and formulate a joint response. Some pairs are called on to summarize their discussion for the class.

THINK-PAIR-SQUARE: Same as above, but two pairs of students join together to share and compare the results, rather than moving to a whole group discussion.

TURN-TO-YOUR-NEIGHBOR DISCUSSIONS: Students “turn to a neighbor” and brainstorm answers to a question or discuss a solution to a problem. Call on students for answers. Ask the class for a show of hands of who agrees or disagrees with an answer.

PAIR-AND-COMPARE: During a two to three minute break in lecture, students form pairs and compare notes.

FACULTY VOICES

“Collaborative learning has been a great teaching tool in my classes. I turn some of the issues or arguments that I want to teach in each meeting into questions and give them to the students as open discussion and open book quizzes that carry one percent of their grades. The students form groups, discuss the issue among themselves, and ask me about any aspect of the quiz that is unclear to them. After several minutes of lively debate, each student submits his/her own answer to the question and I discuss the answer with the class by first asking the student to offer their answers.”

Professor Hadi Esfahani, Economics
remaking the notes by adding information or correcting as needed.

**Small-Group Homework Check:** Have students do their homework individually outside of class. During class on the day the assignment is due, have students form groups and then compare their answers to the assignment. The students in each group must agree on answers and turn in a group solution along with their individual work.

Some short-term group activities require a bit more structure and planning. These include the following:

**Jigsaw:** This structure is useful when a topic or problem is complex and involves multiple perspectives. Each group member takes responsibility for one part of the problem, meets with students from other groups who have the same responsibility (expert group), and then teaches his or her part to the members of the original group.

**Roundtable:** Each group member records a response to the prompt on a single page that is quickly passed from one member to the next for a specified amount of time.

**Send-A-Problem:** Each group proposes solutions to problems or issues identified by another group or by the instructor.

**Dyadic Essay Confrontation:** In response to an assigned reading, each student writes an essay question and model response to the question. During class, students exchange questions with another student and write a spontaneous response to that question. The pairs compare the spontaneous response with the model response for the two questions.

**Long-term Groups**

These groups are formed by the instructor and may stay together for an extended period of time (weeks or even the entire semester) to work on a broader task or project. One type of formal group is the student team—a stable group that works on major course projects and often involves peer evaluation. Some specific suggestions for getting started with organizing long-term group projects include:

- Developing a clear description of the project and what you expect.
- Deciding what kinds of groups are relevant for the project.
- Breaking the project down into smaller pieces, establishing a timeline, and having the groups submit progress reports on their learning and how they are working as a team.
- Providing students with a rationale for the group project. Include an explanation of the value and purpose of working as a team, and establish guidelines for how the groups should work together.
- Establishing clear and fair guidelines for how the group project will be graded.

**Group Formation**

This depends on your purpose for using groups. Groups usually have three to five students who are assigned to the group randomly or purposefully by you. Student-selected groups are not generally recommended.

**Random Group Selection**

You can form random groups by any of the following methods:

- Simply having students “turn-to-your-neighbor” or “form teams of three.”
- Counting off—24 students would form groups of four by counting off from one to six. All of the ones would become a group and so on.
- Using color-coded cards or playing cards—students pick up cards as they enter class and all students with the same color (or same number) work together.

**Instructor-selected Groups**

For longer projects, instructors may want to create heterogeneous teams that distribute students into different groups based on ability, strengths, experience, gender, ethnicity, or some other characteristic. Instructors first learn about the students and then form groups according to the plan. You can learn about your students in one or more of the following ways:

- Collecting student data sheets that include the following:
  - Course-related information—major, courses taken in the discipline
  - Experience—work, travel
Personal information—where they live, phone number, email address, interests

Administering questionnaires with questions relevant to the project:
Strengths—self-rating on ability with computers, writing, organization
Learning styles
Having students prepare a resume.

RESOURCES
CTE Illini Instructor Series #9: Students learning together: Collaborative or cooperative learning (www.cte.uiuc.edu/Did/Resources/Illini%20Instructor/collaborative.htm)
Cuseo, J. B. Igniting student involvement, peer interaction, and teamwork: A taxonomy of specific cooperative learning structures and collaborative learning strategies (Stillwater, OK: New Forums Press, 2002)
Johnson, D. W., Johnson, R. T., & Smith, K. A. Cooperative learning returns to college: What evidence is there that it works (Change, 30, No. 4, 1998) pp. 27-35
Panitz, T. Collaborative versus cooperative learning—A comparison of the two concepts which will help us understand the underlying nature of interactive learning (Cooperative Learning and College Teaching, No. 8, 1997)

STUDIO PEDAGOGY

While a tool kit of basic teaching techniques can translate into effective teaching in any classroom situation, the studio class, by its very nature, involves additional pedagogical considerations. A characteristic central to the studio class is teaching through example, then “letting go.” Often the studio professor will give demonstrations, show slides, or give examples. Then (s)he will work with students one-on-one and talk individuals through problems. Professor Robin C. Douglas from the Department of Art and Design at UIUC, shares these additional guidelines:

BE OPEN TO A VARIETY OF IDEAS
Be versatile. The studio class is not like some classes where there is one right answer. Be prepared to see “many right answers.”

ENCOURAGE EXPERIMENTATION
Instructors bring a different discourse to the studio class. It is a discourse designed to encourage experimentation, to allow students to learn from mistakes, and to apply what they learn in one session to the next.

HAVE A WEALTH OF KNOWLEDGE
Not only do instructors teach, explain, and demonstrate, but they must also be able to critique, advise, and guide students so that their creativity can lead to success. Instructors need to see possible problems where students may not and be able to guide students to find their own solutions rather then giving them the solutions.

RELATE WHAT YOU DO IN THE CLASSROOM TO SOCIETY
Learning and creating is not done in a vacuum but relates directly to the world outside the classroom.

GAIN RESPECT AND TRUST
An indispensable feature of a studio class is student participation. One of the most successful ways to encourage and achieve participation is to create an environment of trust. Here are some proven ways to accomplish this:

Know your students Go beyond knowing their names. Inquire about their interests. Try to get a handle on their personalities—who is shy, who is insecure, who is outgoing, etc.

Make conversation Arrive early or stay late so you can engage your students in conversation.

Show you care You do this with body language, eye contact, as well as by being available to answer questions.

Be consistent and fair
Admit when you are wrong

MAKE CRITIQUING A VALUABLE AND ACCEPTED PART OF THE CLASS
Another key aspect of most studio classes is the critique. Often projects are evaluated in group settings so students can learn from each other. There is an art to constructive feedback. The following factors are essential:

Be positive Start with successful aspects of the project, and be careful to critique the project, not the student.
Give positive suggestions framed in the affirmative, not the negative.

Do not compare students

Do not be sarcastic, mean, or funny

Remember, students have to trust you. Be thoughtful, insightful, and kind with your suggestions.

Guide your students to come up with solutions and/or changes on their own. You might prompt a student by asking, “If you were going to do it over, what would you change?” Listen to your student’s response; continue to prompt with questions that make him/her think. Refrain from solving their problems yourself by encouraging your students to think along the right path.

Studio classes challenge students to be creative. In fact they sometimes challenge students to work beyond their knowledge base when the instructor guides them through the process in such a way as to expand on that base. When this happens, students learn simultaneously how to learn and how to apply their knowledge (Thompson, 2002). Studio classes also challenge instructors to think of ways to contribute to the development of skills and creativity in their students. By honing the special tools needed to teach effectively in the studio environment, instructors may find this type of class one of the most rewarding.

RESOURCES


FACULTY VOICES

“General Chemistry seeks to actively engage the chemistry student in meaningful, self-guided activities while preserving a traditional, technique-oriented teaching style.

Maintaining a balance between expository and inquiry allows this department not only to train students in safe practices but also access their higher-level thinking. Students are initiated into good laboratory technique and safety by performing expository experiments. They then use their skills to solve problems in more self-guided activities.

Chemistry 203 and Chemistry 205 exemplify this philosophy. This two-semester sequence gradually allows the students more and more independence in the laboratory. During the first experiments in Chemistry 203, the students learn how to manipulate equipment and handle materials. By the last experiments in Chemistry 205, they are synthesizing and characterizing inorganic compounds via the methods and instrumentation they’ve previously learned. We recognize that fluency in the language of chemistry and competency in the laboratory environment must be constructed by the learner. Our goal is to guide the student in climbing this learning curve through practice and instructor collaboration.”

Lab Coordinator Lauren Denofrio, General Chemistry
One common method for getting students actively involved in the learning process is through laboratory classes. Though most often associated with the sciences and engineering, laboratory classes can be used by any instructor who wishes to create an environment where students are physically engaged with concepts in the field through active experimentation or exploration. Many learning objectives can be taught through laboratory classes. For example, through the laboratory experience students can do the following:

- Develop deeper understanding of concepts.
- Experience phenomena directly.
- Connect book knowledge to real-world applications.
- Apply concepts to new situations and solve authentic problems.
- Develop thinking skills (critical, quantitative, qualitative).
- Develop data analysis skills.

Develop experimental skills (e.g., design, observation, and use of equipment).

Develop communication skills, including those involved in working in groups.

Develop an appreciation for research in the field.

Laboratory classes are designed for many purposes, and details of what students do in the lab will vary between disciplines. However, three general styles of laboratory instruction can be described—Expository, Inquiry, and Discovery.

**EXPOSITORY INSTRUCTION**
Also called traditional or verification instruction, the student follows directions from the instructor or a manual to investigate a given topic or conduct an experiment. In these experiments, students verify results, which are typically compared with an expected outcome. The detailed instructions given to students have earned these experiments the nickname “cookbook labs.” These labs are designed for large-scale implementation with little variation across instructors or students. Expository labs engage students at the lower levels of cognitive processes (remembering, understanding, and applying).

**INQUIRY INSTRUCTION**
Also called open-inquiry, this is the opposite of expository instruction. Students are given a general topic, decide what problem to examine, and design the procedures to follow. While this style has been shown to promote improved attitudes toward science instruction, it can be overwhelming for students who have limited experience in the field. Students are expected to think like an expert. It can also be difficult to implement in typical university settings.

**DISCOVERY INSTRUCTION**
Also called guided-inquiry, this style combines the control of expository with the inductive search in inquiry instruction. Following instructions, the students generate results from which they can inductively develop the general principle. While easier for novices to perform, these labs still take longer than expository labs and allow for the possibility that students will not be able to discover the general principle.

**QUESTIONS TO GUIDE YOUR LABORATORY INSTRUCTION**

<table>
<thead>
<tr>
<th>What kind of lab instruction?</th>
<th>How will you run the labs?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the learning objectives for the lab?</td>
<td>1. Will students work in groups or individually?</td>
</tr>
<tr>
<td>2. What are the expectations of the department?</td>
<td>2. What preparation do you expect from students before the lab?</td>
</tr>
<tr>
<td>3. What does the lab room look like and what other classes use the lab?</td>
<td>3. What records will they make during the lab?</td>
</tr>
<tr>
<td>4. What equipment will the students have access to?</td>
<td>4. What will students produce after lab?</td>
</tr>
<tr>
<td>5. Are open lab times available to the students?</td>
<td>5. How will students be debriefed after lab?</td>
</tr>
<tr>
<td>6. How much time is allotted to the lab section?</td>
<td>6. How will students be graded?</td>
</tr>
<tr>
<td>7. How many teaching assistants will help with the course?</td>
<td>7. What role will the teaching assistants play in instruction?</td>
</tr>
</tbody>
</table>

Well-thought-out labs can create a positive learning experience for students. However, poorly designed labs (either too simplistic or too advanced), broken equipment, nebulous goals, and overwhelming expectations, can ruin a student’s motivation and sabotage the learning process.
A note on demonstrations

While demonstrations are not lab classes in and of themselves, demonstrations can be viewed as bringing the lab into the lecture. Demonstrations in which the students predict the results of the demonstration and discuss the observations can increase students’ learning of a concept. On the other hand, simply observing a demonstration has little impact on learning.

RESOURCES


COMMUNITY-BASED LEARNING ENABLES STUDENTS TO:

- Connect community-based work with academic study.
- Increase their community involvement.
- Strengthen their leadership skills through direct service.
- Build meaningful relationships between members of the university and the community.

MODELS OF COMMUNITY-BASED LEARNING

Service-learning course

Students relate community-based service experience to course objectives using structured reflection and learning activities in a regular academic course.

Emphasis on technical assistance

An entire class of students address a community need or problem using their combined academic and technical expertise.

University-community partnership

These partnerships are ongoing relationships between the university (department or faculty) and community partners in which students are involved in service.

Internship, practicum, or field experience

Students are placed in selected service sites where they work individually. They apply their knowledge and skills to complete their hours of service.

THE THREE MAJOR COMPONENTS OF COMMUNITY-BASED LEARNING

Planning

The more clearly the activity is framed, the more the student will get from the experience. It is particularly important to allow student involvement in developing learning objectives during the planning stage. The following are some basic steps to get started:

- Develop strong contacts with relevant local community organizations.

Community-based learning represents a holistic approach that reinvigorates the linkages between young people and the institutions that serve the broader community (Wade, 2000). When administered appropriately, a community-based learning course provides the following:

- Opportunities for students to make valuable contributions to communities through active participation in organized service experiences coordinated with the school and community.
- Structured time for students to think, talk, or write about their experiences with the service activity.
- Opportunities for students to use newly acquired academic skills and knowledge in real-life situations in their communities.
- Enhancement to what is taught in the school by extending student learning beyond the classroom and into the community—helping to foster the development of a sense of caring for others.

(Alliance for Service-Learning in Education Reform, 1993)

In many college courses the goals for student learning are changing. Students are still expected to learn important facts, but there is a growing emphasis on the application of facts to solve problems and the relation of facts to real-life contexts outside the university setting. Students are expected to be familiar with more than just the traditional subject areas. It is important for them to think critically, collaborate with others, fit into an increasingly diverse community, and make a smooth transition from school to work. The content of what is to be learned is changing, and thus the methodologies of teaching and learning must change as well (Blum, 1995).

Planning

The more clearly the activity is framed, the more the student will get from the experience. It is particularly important to allow student involvement in developing learning objectives during the planning stage. The following are some basic steps to get started:

- Develop strong contacts with relevant local community organizations.
During the first week of the semester, introduce students to community-based learning and what it entails.

Bring students and community organizations together to develop a project outline, set specific goals, produce a timeline, and set intermediate and final deadlines.

Schedule periodic reviews of progress and timelines with students and community organizations.

Arrange a time for students and their organizations to come together to discuss the results of their project and reflect on the outcomes.

**Activity**

The activities themselves may be simple or complex.

Teachers often find the most difficult aspect of activities is coordinating the schedules of busy students for group meetings and participation in the activities. Further complications stem from scheduling problems between student groups and their community organizations. One way to address scheduling issues is to set deadlines for each group to meet with their organization.

Periodically, organization staffers will need to be reminded of the time constraints the students face in completing their goals during a semester.

To help students stay on task with their activities, their groups should present progress reports to the class at regular intervals.

Sometimes it is necessary to alter the goals, objectives, or timelines depending on circumstances (Crump, 2002). Flexibility is an important part of the process of community-based learning.

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**Faculty Voices**

Professors Ann Abbott and Darcy Lear in the Department of Spanish, Italian, and Portuguese incorporate community-based learning into their courses. Instead of four hours each week in the classroom, students spend two hours each week of their own time working at the Refugee Center in Urbana and two days a week in the classroom doing traditional activities.

At the center, students may translate documents, file, or do other routine office tasks such as answering phones. Or they may help Spanish-speaking people with their English skills in preparation for their citizenship tests.

Interacting with Spanish-speaking people in the community not only gives students opportunities to practice their language skills in natural conversations, it also dispels stereotypes that some of the students may have about people from other cultures.

*Excerpted from an article in Inside Illinois*
Reflection

Careful reflection on the activities should include an analysis of what went wrong/right, and what was unexpected in the activity. Reflection on an activity leads to framing the next activity (Owens & Wang, 1996).

Instructors need to relax their preoccupation with measurable outputs and move toward a more process-oriented approach. It is important to focus on the process and what is learned via the interaction of course materials and the projects at hand.

An example of a more process-based evaluation is to have students outline what they have accomplished, as well as reflect on challenges they encountered and what they learned.

RESOURCES


Blum, R.E. Learning and teaching: Our work together (Portland, OR: NW Regional Educational Laboratory, 1995)


PUTTING CLASS MATERIAL ON THE WEB

While there are a growing number of interactive features and communication tools available to teach with on the Web, basic file sharing of static content remains an easy and effective way to enhance the educational value of any course. Many instructors now post their syllabus and other class information on the Web via a course management system or a simple Web site. Other instructors post supplemental readings and lecture notes on class course sites. Oftentimes, students are driving this action by demanding that their instructors place informational material and class notes on the Web where they can access them 24/7.

While most instructors do not consider placing such material online to have much value other than convenience, a recent study published by the Educause Center for Applied Research (Morgan, 2003) considers the posting of material online to result in an “accidental pedagogy.” The authors claim that by simply posting informational material, instructors are unintentionally creating an effective learning environment by making the course more transparent and by making the connection between different aspects of the class clearer. With some thought to the types of material distributed, the educational value of a course Web site can be greatly enhanced well beyond this merely accidental effect.

ORGANIZING AND LINKING CLASS RESOURCES

For even a simple course site with only a few informational items, paying close attention to the organization and linking of the class resources will transform the course site into a more effective learning space. The best organized sites allow students to quickly link between all related material. For example, an instructor might have a particular theme in the syllabus. This theme would be reflected on the Web site by having that day’s class schedule linked to PDF versions of the PowerPoint notes displayed in class, a link to a short paper assignment and discussion questions, and links to the reserve readings on the library Web site. While this may seem to be a basic use of the Web, the virtual positioning of notes, readings, and assignments via simple links provides a map for the students to see how the instructor views the relationship between class, assignments, and readings without any other explanation than a hyperlink.

USING THE WEB AS A PLATFORM

A more advanced use of linear material on the Web is to use the Web as a platform to deliver core course content. Some instructors move much of the lecture content online using a combination of Web pages and audio files. Placing this content on the Web has two major benefits:

First, because students generally have some control over the presentation of Web-based material, they will have the opportunity to focus on those areas that they feel they do not fully understand and skip over or skim content that they have already mastered.

Second, placing lecture material on the Web can free up class time to conduct instructor-led activities and discussion that would otherwise be spent explaining the content areas of the course. This full integration of online content into the teaching of a course allows instructors to experiment with and adopt different active and communicative exercises without students losing exposure to key lecture material. It should be noted, however, some professors warn against placing so much material on the Web that students stop attending class.

MAKING YOUR WEB PAGES ACCESSIBLE

Even the best designed Web site can be disastrous if students cannot read or access the content. CITES Educational Technologies (CITES EdTech) staff recommend that instructors consider the type of material they are placing on the Web and to take steps to make sure all their students can access the material. There are several different ways you can take these steps:

Create HTML formatted Web pages that all students with an Internet connection and a Web browser can
access. These types of pages can be made using Web-page editors such as Dreamweaver or FrontPage or a free Web-page editor such as Netscape Composer.

Another option is to convert different documents to common Web formats before placing them on the Web. For example, all Microsoft Office documents can be saved as Web pages—albeit with sometimes unpredictable results (for best results, consult with CITES EdTech or an experienced fellow instructor). Instructors can also save files in PDF format—this can be done natively in Mac OSX or with software such as Adobe Acrobat for Windows.

If instructors wish to place Microsoft Office documents on the Web, there are free readers for these documents available from Microsoft to which instructors should link their page so that students who do not have Microsoft Office can access the documents.

Making your Web pages available to “ALL” students includes those who are visually challenged. You can contact the Division of Rehabilitation-Education Services (DRES) at www.disability.uiuc.edu for assistance.

Regardless of the direction that an online course takes, spending the time to make the class material “Web friendly” will save many questions and headaches as the course progresses.

Creating and delivering Web content is not always easy, and instructors developing online content for the first time may wish to consult with someone while creating their class site. Some departments and colleges have dedicated staff to help with creating Web-based class material and there are faculty who are experienced in teaching and learning with technology in every department who can provide guidance and suggestions for instructors new to putting material online. All instructors can also consult with CITES Educational Technologies and use their services. The office provides consultation and guidance in all areas of Web development for teaching; from designing a site to the technical problems that an instructor might encounter. The time and effort put into a well-designed site will be rewarded by better informed students and a more effective course.

**RESOURCES**


### USING TECHNOLOGY FOR JUST-IN-TIME TEACHING

Just-in-time teaching actively involves students in the learning process through a two-step series of learning activities. In the first step, students complete a focused set of activities outside of class (usually via interactive Web documents) and submit their work to the instructor. In the second step, the instructor (often just hours before the next lecture) collects the students’ responses and identifies areas of understanding and misunderstanding to adjust the next lesson so that students can receive specific “just-in-time” feedback on those particular areas.

The purposes of just-in-time teaching are to encourage more student responsibility for learning the content outside of class, maximize the efficiency of class-time to allow for more focused and more meaningful explication of the content, and have more time for interaction and discussion. Instructors who use just-in-time teaching also find that their students are more active and more interested than they would be in a more traditional lecture (Novak, Patterson, Gavrin, and Christian, 1999).

For example, suppose that each week, after your students have finished their readings but before your lecture, you wanted to know exactly what topics were giving students the most trouble. You could then focus the class on these areas that require special attention. David Brown of Wake Forest University suggests using the “muddiest point” technique before a lecture. He uses simple e-mail to gather student responses but there are other ways to accomplish it as well.

Some instructors have been using Illinois Compass (UIUC’s installation of WebCT Vista) but you can achieve the same effects with any course management system.

Create an assignment drop box. Give it a title (say, “Week 4’s Muddiest Point”) and type a question (for example, “As you worked through this week’s readings, what point did you understand the least?”). Set both the due date and the cutoff date to around four hours before your class meets.

Next, around two hours before the class meets, collect all the responses. Every student has turned in a paragraph or so thinking “out loud” about the readings. WebCT allows you to create a “Printable View.” This gives you a concise list of what your students are most concerned with, which you can easily skim.

Professor Brown explains how he uses the student responses: “My use of the ‘muddiest point’ responses varies. If half the students focus upon one particular page, the whole class period might be devoted to clarifying that problem. If a passage is mentioned by only one student, I may prepare a response specifically for that student and avoid using class time” (2005). You can imagine other possibilities as well.

Should you grade this? Perhaps, if your students complete it in earnest. Perhaps you need only offer extra credit for originality or strong critical thinking. Many instructors who use just-in-time teaching give “completion points” rather than points for accuracy or content. If you are teaching a class with too many students to easily read and respond to before
your lecture, you may want to divide the class into groups and rotate which group is charged with the responsibility each week.

This use of a course-management system is an improvement over e-mail because it allows the course-management system to do most of the administrative work of tracking who has turned in the assignments and gathering all the responses into one readable document so that you can concentrate on teaching. Could you use a survey in Illinois Compass to do this? Sure, except this would be anonymous so you couldn’t easily respond to individual students if you wanted to. Could you use a quiz? Yes, but you would have to grade the responses before you could display them all. Could this happen in a discussion board? Certainly, if you intend to have students’ postings to be responded to by you or their peers.

You might use the discussion tool to create a weekly “muddiest point” topic and have the students collaboratively contribute, debate, and then nominate their top three muddiest points (particularly if you’re teaching a small class with advanced students). The instructor need only log in and review the last posts in the series, which typically summarize and confirm the class consensus—if consensus is what you’re after. This requires more lead time on the part of students, but it might pay off with greater engagement.

You might also ask your students other kinds of questions. What was the most provocative point? What chapter from this week’s readings is most important to the history of political science? What scene from this week’s film should we be sure to focus on in class?

New technologies offer many options to structure precisely how you and your students communicate. They also invite us to rethink old pedagogical questions in new ways.

RESOURCES


RECEIVING EDUCATIONAL TECHNOLOGY SUPPORT AT UIUC

The educational technology resources, services, and support staff at Illinois are diversely positioned and widely scattered. Historically, the campus has allowed a great deal of freedom for colleges, departments, and units to explore and develop their own software, services, and programs. Innovation has been high, with many firsts in the world and bests in the nation (PLATO, Mosaic, the Beckman Institute, and the National Center for Super Computing Applications), but campus-wide coordination is not always in place. If you come from a smaller campus, or one that was highly centralized, the diversity on the Illinois campus may seem a daunting maze. Our main advice, then, is to accept the decentralized reality of the Illinois campus and to work toward developing your own personalized educational technology support/resources “map,” one that matches your technology needs and desires.

Here at Illinois nearly all instructors and staff rely on various departmental, college-level, campus-level, and national resources for their educational technology resources and support. The list of technology resources and units described below should help you get the technology help you need.

CAMPUS AND COLLEGE-WIDE TECHNOLOGY RESOURCES

People: Consulting, support, and training centers

CAMPUS-WIDE

- CITES EdTech
  http://www.cites.uiuc.edu/edtech/217-333-1078 edtech@uiuc.edu

CITES Educational Technologies (CITES EdTech) supports educators who are teaching with technology by helping them choose and implement the technologies that will best complement their teaching styles and achieve their pedagogical goals. CITES EdTech provides free training, workshops, brown bags, online resources, and consultation sessions to assist instructors in the planning and implementation of online and in-class course content. Besides supporting Illinois Compass, the campus-designated course management system,
CITES EdTech also supports training workshops in other software and skills useful to teaching and learning goals; for example, using online discussions, managing online assessments, desktop software such as Microsoft Office, the production and distribution of digital multimedia, streaming media, and so forth.

- CITES Help Desk
  http://www.cites.uiuc.edu/help/
  217-244-7000
  800-531-2531
  consult@uiuc.edu
  This is the primary phone and walk-in support center for the entire campus for general questions regarding email, desktop software, viruses, and computing technology. If they don’t know the answer to your question, they will point you to someone who does.

- FAST3 (Faculty and Staff Technology Training)
  http://www.cte.uiuc.edu/fast3/
  217-333-6285
  FAST3 offers training on particular software programs such as Microsoft PowerPoint, Adobe Photoshop, Macromedia Dreamweaver, and so forth. Fee-based classes are well attended by a mix of faculty, staff, and students. Fast3 also offers more general sessions on basic computing, databases, and Web authoring.

**CAMPUS SERVICES**

**CITES Help Desk**
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**CITES Classroom Technologies**
http://classtech.cites.uiuc.edu/
CITES Classroom Technologies (ClassTech) installs, maintains, and supports the Integrated Teaching Systems (ITS) classrooms, which are fixed media equipment systems in the general assignment classrooms on campus. They serve the campus by providing consultation and support of other campus media environments as well. They provide equipment training through group and individualized sessions, hold user groups and workshops to provide guidance in effective audiovisual presentations, conduct thorough preventative main-

**COLLEGES & DEPARTMENTS**

- Liberal Arts & Sciences—ATLAS (Applied Technologies for Learning in the Arts & Sciences)
  http://www.atlas.uiuc.edu/atlas@uiuc.edu
  ATLAS provides faculty with technical computer support, technology classrooms and computer labs, course Web-site design and hosting advice and services, digital audio and video production, data and statistical services, and training.

- Engineering—Anderson Lab for Global Education in Engineering supports engineering faculty in the development of interactive online course modules.

- Life Sciences—Life Sciences Educational Technology Center (164 Burrill Hall) develops course Web sites for integrative biology, labs and symposia, and provides technology training for life sciences faculty.

- This is an incomplete list. Your own investigations may turn up other technology support staff and units.

**SOFTWARE**

- Departmental: Check your local department office manager or computer support for departmentally available software.

- Campus-wide software licenses and negotiated reduced rates for faculty and students are available. Please check the following:

**HARDWARE**

- Departmental: Check your local department office manager or computer support for departmentally available hardware.

- Campus Stores, Mail, and Receiving (Computer Center)
  http://www.cstores.uiuc.edu/

**SMART CLASSROOMS & COMPUTER LABS**

- Departmental: Check your local department office manager or computer support for departmentally available computer labs and classrooms.

- CITES Classroom Technologies
  http://classtech.cites.uiuc.edu/
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tenance in all ITS classrooms, and respond to calls when a technical need or crisis arises. CITES EdTech is also available on a fee basis to campus departments for the same type of services offered in the ITS classrooms. ClassTech serves as a knowledge resource for presentation technologies, counseling departments and individuals with their special audiovisual needs, as well as providing presentation system design and installation expertise.

- CITES Instructional Computing Sites
  http://www.cites.uiuc.edu/ics/

CITES currently provides student computer labs and computer labs that can be reserved by teachers for class work requiring computers and room projection for class. Instructors should reserve classroom labs as early as possible. These labs are typically used by instructors whose regular classroom provides no projection or computers, but who need to introduce or review software programs, Web pages, online course materials, or multimedia presentations at some point during the semester.

DEPARTMENTAL SUPPORT

Lastly, some of your best assistance will come from within your own department and from your new colleagues. Informally, every department has at least one or two teaching assistants or instructors who are seen as valuable local resources who are willing to consult with colleagues regarding technology. More formally, many departments will designate and compensate undergraduates, graduate assistants, or instructors to be part-time or full-time technology assistants. We suggest that you build a relationship with both campus-wide and local technology experts to provide the best and broadest network of support (and will help you from wearing out any one support person if you happen to be especially needy).

SUGGESTIONS FOR ASSIGNING COURSE GRADES

The end-of-course grades assigned by instructors are intended to convey each student’s level of achievement. These grades are used by the students, other faculty members, University administrators, and prospective employers to make a multitude of different decisions. Unless instructors use generally accepted policies and practices when assigning grades, these grades are apt to convey misinformation and lead the decision-maker astray. When grading policies and practices are carefully formulated and periodically reviewed, they can successfully serve the many purposes for which they are used. Below are six basic guidelines that should be considered when establishing sound grading policies and practices.

GRADES SHOULD CONFORM TO THE PRACTICE IN THE DEPARTMENT AND THE INSTITUTION IN WHICH THE GRADING OCCURS.

The grading policies of the department, college, or campus may limit the grading procedures that an individual instructor can use and force a core grading philosophy on each instructor in that administrative unit. Departments often have written statements that specify a method of assigning grades and the meanings of grades. If such grading policies are not explicitly stated or written for faculty use, the percentages of A’s, B’s, C’s, D’s and F’s given by departments and colleges in their 100-level, 200-level, 300-level, and graduate courses may be indicative of implicit grading policies. In addition, all faculty are required to announce in advance whether or not they will use the plus/minus grading system. This and other useful information can be found at http://www.provost.uiuc.edu/provost/announce/inst-policy.html#grades.

GRADING COMPONENTS SHOULD YIELD ACCURATE INFORMATION.

Carefully written tests and/or graded assignments (homework, labs, projects) are keys to accurate grading. Because it is not customary at the university level to accumulate many grades per student, each grade carries much weight and should be as accurate as possible. Poorly planned tests and assignments increase the likelihood that grades will be based primarily on factors of chance. In addition, it is critical to develop graded assignments that reflect course objectives. “Establishing a clear connection among course objectives, lectures, reading, assignments, and tests increases student
learning and helps prevent charges of unfairness. This connection also helps motivate students to pay attention in lectures and do the readings and assignments” (Wankat, 2002, p. 81). Also see http://www.cte.uiuc.edu/dme/exams/ACG.html for guidelines on assigning course grades.

GRADING PLANS SHOULD BE COMMUNICATED TO THE CLASS AT THE BEGINNING OF EACH SEMESTER.

By stating the grading procedures at the beginning of a course, the instructor is essentially making a “contract” with the class about how each student is going to be evaluated. The contract should provide the students with a clear understanding of the instructor’s expectations so that the students can structure their work efforts. Students should be informed about which course activities will be considered in their final grade; how much weight will be given to exams, quizzes, homework sets, papers, and projects; and which topics are more important than others. Students also need to know what method will be used to calculate their course grades and what kind of comparison the course grades will represent. All of this information can be communicated effectively as part of the course outline or syllabus.

GRADING PLANS STATED AT THE BEGINNING OF THE COURSE SHOULD NOT BE CHANGED WITHOUT THOUGHTFUL CONSIDERATION AND A COMPLETE EXPLANATION TO THE STUDENTS.

Two common complaints found on students’ post-course evaluations are that grading procedures stated at the beginning of the course were inconsistently followed and that grading procedures were changed without explanation or even advance notice. Altering or inconsistently following a grading plan is analogous to playing a game whose rules arbitrarily change, sometimes without the players’ knowledge. The ability to participate to the best of one’s ability becomes extremely difficult and frustrating. When you change your grading plan, students are placed in the unreasonable position of never knowing for sure what you consider important or how they can demonstrate what they have learned. When the rules must be changed, you need to inform all of the players of the how and the why.

THE NUMBER OF COMPONENTS OR ELEMENTS USED TO ASSIGN COURSE GRADES SHOULD BE LARGE ENOUGH TO ACHIEVE HIGH ACCURACY IN GRADING.

From a decision-making point of view, the more pieces of information available to the decision-maker, the more confidence one can have that the decision is accurate and appropriate. This same principle applies to the process of assigning grades. If only a final exam score is used to assign a course grade, the adequacy of that grade will depend on how well the test covered all the relevant aspects of course content and on how characteristic the performance of the student on that one specific day during a two- to three-hour period was of the student’s learning and achievement throughout the term.

THE TIMING OF EVALUATIONS SHOULD BE PLANNED TO PROVIDE ADEQUATE FEEDBACK TO GUIDE STUDENT LEARNING THROUGHOUT THE SEMESTER.

It is very important that students receive feedback before the drop date so that they can make an informed decision about staying in your course. A considerable amount of feedback, both graded and ungraded, should be provided at the beginning of the term. The more feedback given throughout the semester, the greater the opportunity for students to focus their learning.

RESOURCES
CTE Instructional Booklet: Assigning course grades
Wankat, P. The effective, efficient professor (Boston: Allyn and Bacon, 2002)

CAPRICIOUS GRADING

Grading is a significant task for any instructor and calls for the highest levels of ethical behavior. Grading that deviates from fair practices is called capricious. The UIUC Student Code defines three types of capricious grading as follows:

Consider using Illinois Compass, UIUC’s electronic grading system, to facilitate the grading process. This system also allows for online assessment. http://www.cites.uiuc.edu/edtech/projects/compass/
1. The assignment of a grade to a particular student on some basis other than performance in the course.

2. The assignment of a grade to a particular student by resort to more exacting or demanding standards than were applied to other students registered for the same credit in that course.

3. The assignment of a grade representing a substantial departure from the instructor’s previously announced standards.

Here are some grading practices you may consider to avoid capricious grading concerns:

During the first week of class, inform students both orally and in writing of the grading policy. Clearly explain the weighting of exams, quizzes, make-up procedures, etc.

Be consistent with the grading policies you establish with your students. This grading contract with students should only be changed in unusual circumstances and after reaching consensus with the students to avoid charges of capricious grading. Changes should be placed in writing (e.g., addendum to syllabus, course Web site, class e-mail, etc.).

Grade and return exams, quizzes, homework assignments, projects, and papers as soon as possible. Students tend to take grades more seriously when assignments are consistently and quickly returned.

Take time to talk about grades with students. Develop and share criteria and standards for grading. Provide examples of excellent work as models for students.

Keep accurate and complete records of all grades. It is important to keep books for several semesters in case questions about student transcripts arise or you are asked to write a recommendation for a student.

University students have legal rights to privacy, so social security numbers or student names may not be used when posting grades. Likewise, do not leave graded work outside your office for students to pick up. For more information on student privacy, see the FERPA guidelines in Appendix C on page 67.

Consider using a course management system that allows students to track their graded assignments throughout the semester.

**RESOURCES**

UIUC Student Code: http://www2.uiuc.edu/admin_manual/code/

**WRITING CLASSROOM EXAMS**

Experienced faculty members know that it takes a considerable amount of time and effort to write classroom exams that provide reliable and valid assessment. “Reliable” means that your exam consistently measures what it is supposed to measure. “Valid” means your assessment results provide appropriate information for making a fair conclusion about what your students know and can do. Here are some suggestions for improving both the validity and the reliability of your classroom assessments.

**DECIDING THE TYPE OF EXAM**

If you are teaching a large number of students, if you need to test more content than could be covered in a couple of short-essay questions, or if you have more time to prepare the questions (pre-test time) than you do to score them (post-test time), you may prefer to give a multiple-choice exam than an essay/problem-solving exam. But remember that some students perform better by writing our essays or solutions than by taking multiple-choice exams and vice-versa. It's important that you provide an opportunity for all students to do their best by giving a variety of types of exams during the semester or by including both types of questions on the same exam.

**PLANNING THE NUMBER OF EXAMS**

The more exams administered during the term, the more reliable and valid the final course grades. This is because students have had more opportunities to demonstrate what they have learned. Besides, frequent quizzes early in the semester may facilitate students’ learning, especially in introductory-level courses.

**DETERMINING LENGTH**

The more items on an exam, the greater the reliability and validity of its intended use. With more items, students are asked about more material and have more chances to communicate their learning to you. However, if you have too many items you are doing more to assess the quickness of student response than the extent of student knowledge. To help you judge the length of your exams, you can respond to your own test and then multiply the time it took you to respond by two and one half.

**CHOOSING CONTENT**

Avoid testing trivial information, an uneven amount of content in one or two particular topics, and material that was not covered in lectures or required readings. Exams should reflect course material in approximately the same proportions that you covered it. Students should not encounter surprises.

**TYING THE EXAM**

Students consider testing to be a serious exercise. Demonstrate your respect for the process by producing a professional-looking, easy-to-read, and error-free test.

Carefully proofread the exam for typographical errors, especially numbers.

Include a complete set of directions; tell students, if feasible, to write comments on the exam about how
they interpreted your instructions or test questions.

Group together similar items (e.g., the items covering Chapters 1-3, the multiple-choice items, the items relating to a particular graph or image).

Provide point values for each item or set of items as well as for the test. Make alternate forms of a multiple-choice exam by scrambling the order of the items and/or the response alternatives; this helps to reduce cheating.

If possible, have someone such as a TA, colleague, or student who previously took the course, take the exam to catch areas of confusion.

ADMINISTERING THE EXAM

You can provide a setting that enhances performance and discourages distraction by minimizing interruptions and by communicating announcements or corrections on a blackboard. Reduce the temptation to cheat by asking students to sit at least one seat apart from each other and by having a sufficient number of proctors to help distribute and collect exams quickly.

HANDING BACK RESULTS

Make testing a learning experience by grading and returning the exams as soon as possible when student knowledge is still “fresh.” Take class time to go over the exam, item by item, once it is returned. If you are concerned about exam security, review each item and its answer using overheads or PowerPoint. Allow sufficient time for discussion, but terminate lengthy dialogues by inviting those students to see you after class or during your office hours.

REVISING THE EXAM

Use comments written on the exam or made during discussion to modify exam items for future use. Statistical analyses of student responses to each item and to each response alternative (an “item analysis”) can be obtained by using machine-scorable answer sheets in cooperation with CTE’s Measurement and Evaluation area.

WRITING MULTIPLE-CHOICE ITEMS

Use student responses to essays or short answers in previous semesters as a source of material for items or alternatives.

Present an explicit, singular problem in the question stem that can be understood without reading the alternatives. Use only as many alternatives as necessary to make meaningful discriminations. There’s no reason to list five options if students can immediately discard two.

Make all alternatives plausible and attractive.

Be sure there is only one correct or best response to the item.

Randomly distribute the correct response among the alternative positions.

WRITING ESSAY QUESTIONS

Include at least three essay items to avoid too little coverage of content.

Phrase each question so that the student’s task is clearly indicated.

Avoid giving the student a choice among essay questions, as this greatly reduces the reliability of the test.

Prepare the correct response that you will use for scoring before giving the test.

Choose a scoring model. Two common models are analytic (points are assigned for the inclusion of necessary elements) and holistic (score is based on the overall quality of the response relative to an ideal response).

WRITING PROBLEM ITEMS

Word the item so that the problem is clearly stated and the student’s task is clearly defined.

If you are willing to review it, tell students to show their work.

If the problem has multiple steps, decide ahead of time whether you will:

assign different point totals to the different steps or to the final answer only.

award partial credit for correctly completed steps when provided an incorrect final answer.

use incorrect results from earlier steps to determine the “correctness” of the final answer for partial credit only.

RESOURCES

CTE Instructional Booklet: Improving your test questions


EVALUATING WRITTEN WORK

Students need to know how instructors assign grades on essay exams, term papers, or lab write-ups for the assessment exercises to be useful learning experiences. So, instructors must be able to explain how they grade written work to avoid concerns about capricious grading. The use of a grading rubric by instructors addresses both of these requirements. A grading rubric is nothing more than an instructor’s understanding of his or her expectations for student responses at various levels of achievement. What should an “A” lab report look like compared to a “B” or a “C” report? When developing grading rubrics you must think through each expectation and identify clear and observable elements of content, style, and quality that can be searched for in student responses. Instructors can also distribute the grading rubric along with the written assignment to reveal their expectations, to inform students of the grading process, and, hopefully, to shape responses.
HOLISTIC AND ANALYTIC RUBRICS

The two types of grading rubrics, *holistic* and *analytic*, both require you to specify those elements that are expected to be present in a response of superior quality. Using a holistic rubric, you can assign a single grade or score based on your overall impression of the quality of the student response in meeting those predetermined criteria. Using an analytic rubric, instructors assign a score for each element and then compile these scores into a single grade.

*Holistic rubric*

One familiar holistic rubric is the five-point scale of A, B, C, D, and F. Most holistic scales do not have more than 10 points because it becomes difficult to differentiate among the levels. If you have never created a holistic scale before, try beginning with only five levels where the lowest score (e.g., a zero or a F) indicates a lack of achievement and the highest score (e.g., a 4 or an A) indicates exceptional achievement. To create a holistic scoring rubric you need to do the following:

- Decide your range of grades or scores (e.g., A-F, 1-5).
- List all of the elements on which the written responses will be evaluated.
- Write a description of each element for each score level. Each score range indicates varying levels of expertise.

For example, if you decide to grade essay questions on the basis of organization, use of transition markers, effectiveness in conveying one’s meaning, use of vocabulary, and mechanics (spelling, grammar) you will need a description of each of these elements. The grading of the organization element may look something like the following:

A Contains clear introduction, development of ideas, and conclusion.
B There is some logic but parts are not fully developed.
C It is extremely simple or disorganized.
D It is disjointed, rambling.
F It is unclear.

Descriptions need to be developed for all elements so grades can be calculated for each. Note that the student’s overall grade will be the “eyeball average” of ALL element grades. Thus, the overall grade best describes the student’s work as a whole. It becomes a bit of a juggling act when a student is strong on one element but weak on another. For example, if a student is great with ideas but poor in organizing them, you still must choose just one grade that best reflects your evaluation of the response as a whole. The decision is somewhat subjective, and in this case you will most likely choose a middle rating.

*Analytic rubric*

When you create an analytic rubric to grade written work, you can vary the maximum number of points for each element. This is helpful when you are grading for several features but you don’t want, for example, grammar to count as much as content. To create an analytic rubric you need to do the following:

- List all of the elements on which the written responses will be evaluated.
- Decide the maximum number of points to give each element.
- Write descriptions for each point range for each element of the writing.
- Determine the number of total points for different grades (e.g., 45 out of a total of 50 points represents an “A” response, 40-44 points is a “B” response, etc.).

For example, you decide to grade essay responses on the following elements and assign differing point totals for each (in parentheses):

a) Clearly stated thesis sentence (5 points)
b) Expression and organization of ideas (15)
c) Use of appropriate supporting examples (12)
d) Grammar (5)
e) Spelling (3)
f) Effective closing paragraph (5)

You then write a description for each point range for each element of the writing. For example, to define a “clearly stated thesis statement,” perhaps you decide to assign the following:
5 points—clearly stated thesis sentence, point of view is maintained throughout essay

4 points—stated thesis sentence but it is not maintained throughout essay

3 points—the main idea is implicit in the writing but never made explicit

2 points—the main idea needs to be guessed at

1 point—there is no thesis sentence to guide reader; student jumps into topic

0 points—student made no effort to complete task

If you cannot figure out enough appropriate descriptors, you may need to change your point scale. For an element with very few points, like (e), you might assign two points if 75 percent or more of the words are spelled correctly, one point if between 50 and 74 percent of the words are spelled correctly, and zero points if less than half of the words are spelled correctly.

For a category with many points, like (b), you can create a range like this:

15 points—unambiguous expression of ideas, smooth-flowing organization and coherence

12 points—clear expression of ideas, basically good organization and coherence

9 points—good expression of ideas, occasional lack of organization and coherence interrupt essay

6 points—broadly stated ideas, poor organization and some incoherence leave reader confused and struggling but still with a sense of the gist of the essay

3 points—ideas are not clear, organization is muddled, coherence is lacking throughout

0 points—student made no effort to complete task

Obviously, when using the above scoring method you cannot give a score of 11 or a score of 5. If a student achieves a 9, it means the student has not demonstrated enough ability to achieve a 12. To finish this example, a student would be given a total essay score of 45 (out of 50 points) if they received: 5 points for (a), 12 for (b), 4 for (c), 15 for (d), 4 for (e), and 5 for (f).

CHOOSING BETWEEN HOLISTIC AND ANALYTIC RUBRICS

Choose to use a holistic rubric if your time for grading is quite limited, if students will not receive back their papers (e.g., a final term paper) and thus detailed feedback is unnecessary, or if the written assignment is intended to assess creativity. Choose to use an analytic rubric if the purpose of the assignment is to assess specific aspects of the content that you have been teaching, to elicit specific features of an approach to writing or solving problems, or to give students diagnostic feedback on their performance. You can read more about using grading rubrics, or what Walvoord and Johnson call “Primary Trait Analyses” in their book *Effective Grading* (1998, Chapter 5).

RESOURCES


PROVIDING FEEDBACK ON WRITTEN WORK

There are many ways to respond to students’ written work, and no one method is appropriate for every assignment, every student, or every instructor.

There are two extremes—completely covering an essay with comments or placing only a few scattered notations in a paper. Both are equally frustrating to most students, no matter what grade they receive. All students want to know what you thought of their main points. In addition, students receiving A’s and B’s know that their work is not perfect and will appreciate constructive criticism; students who receive C’s or below need to be told how to bring their work up to par.

RESPONDING TO PAPERS

*Limit your comments*

Students benefit most from a mix of marginal notations and a longer comment at the end of the assignment. Resist the temptation to mark each instance of a repeated error. In general, overmarking frustrates students and hinders them from focusing on the two or three areas most in need of improvement.
Avoid extensive rewriting

You might want to heavily mark, edit, or rewrite one troublesome paragraph as an example for a student, but rewriting has several drawbacks. First, the student is liable to say something like, “Of course your version’s better than mine—you’re the professor.” Second, the student may feel that you simply have not understood the paper. Third, the student may not be able to deduce from your revision the reasons why you made the particular changes you did.

Explain the grade

Your comments at the end of the paper should include an explanation of why you gave the paper a particular grade. The following, for example, are possible comments on a B paper:

While the sections in which you discuss X and Y are well reasoned, your discussion of Z is rather hasty. The sketchiness of that section, more than anything else, keeps this from being an A paper.

It is unwise, however, to mention that had Z been improved, the paper certainly would have received an A, since a revised version of the paper might present other weaknesses.

Comment on the quality of the writing

In your final comments make some reference to grammar, usage, and style. To reinforce good habits and point out weak ones, you could write:

The variety in sentence length and structure makes for lively reading, but your over-reliance on the passive voice produces some wordy and confusing patches.

Marking symbols

Some instructors mark grammar mistakes with symbols (for example, FRAG for a sentence fragment). They feel that their students can then refer to a master list of symbols and learn to correct their mistakes.

Other instructors believe that marking symbols intimidate or mystify those students whose language skills are the weakest. These instructors prefer to write in a revision or a brief explanation of the error.

Unless you have strong preferences, some combination of marking symbols and writing revisions is probably best. Use symbols for certain errors such as subject-verb agreement, and show the student how to rewrite more troublesome mistakes (such as misplaced modifiers or faulty parallel structure). For example:

Tiepolo glorifies Flora in her court which is set in Nature. She reclines in a chariot undaunted but proud of her nakedness. She float weightlessly in the air above her head. Maidens dance to extreme exaggeration. Tiepolo’s action on the right, 2 soldiers crawl to Flora but hesitate in awe. Strings of flowers are offered to her by them all. It is as though she enhances the merriment and disguises the cold, insensitive lewdness beyond a horizontal stone wall.

Reprinted from “Encouraging Student Writing,” Office of Educational Development, University of California at Berkeley.

RESOURCES
UIUC Student Code: http://www2.uiuc.edu/admin_manual/code/
Eble, K. The craft of teaching (San Francisco: Jossey-Bass, 1976) Chapter 12
Gronlund, N. E. Assessment of student achievement, 6th ed. (Boston: Allyn and Bacon, 1998) Chapter 9
UIUC Writer’s Workshop: (http://www.english.uiuc.edu/cws/wworkshop/)
Wankat, P. The effective, efficient professor (Boston: Allyn and Bacon, 2002)
EVALUATION
OF TEACHING

This portion of the handbook is organized to correspond with two current Office of the Provost communications: No. 9 Promotion and Tenure (www.provost.uiuc.edu/provost/communications/comm9/comm9.htm) and No. 13 Review of Faculty in Year Three of the Probationary Period (www.provost.uiuc.edu/provost/communications/comm13/comm13.htm). Communication #9 states the following on the importance of teaching in promotion and tenure procedures:

For most faculty members, the primary bases for promotion and tenure will be evidence of high quality both of teaching and research* with consideration also being given to evidence of valuable public service or service to the University and professional communities. This University is committed to excellence in all of these areas, but also recognizes that equal excellence in each of them is rare. Promotion and tenure will generally be awarded only if the evidence shows that a candidate’s research accomplishments are excellent and the candidate’s teaching is also strong, or if a candidate’s teaching accomplishments are excellent and the candidate’s research accomplishments are also sufficiently strong to meet the requirements for promotion. It could in fact be judged unethical to require or encourage a faculty member to provide such “self-incriminating” information to those making personnel decisions.

Similarly, faculty members who request specific Instructor and Course Evaluation System (ICES) survey items to be evaluated by students often do so to identify and improve their own weaknesses, and student evaluations of those items are likely to be lower than if the faculty members selected only items reflecting their strengths. For this reason, student responses to instructor-selected items on ICES are unavailable to anyone other than the instructor.

If the evaluative data collected for the purposes of improvement of teaching are not always the same as those collected for personnel decisions, it is important for faculty members involved in the peer-evaluation process to be sensitive to the uses of the data being sought. Further, it must be emphasized that any evaluation procedures are only tools, and they can be used with skill and insight or they can be used clumsily and inappropriately.

The intent of this section of the Handbook is to help faculty learn ways to evaluate their teaching and the teaching of their peers. Eight “Dimensions to Teaching Evaluation” are described in the following pages. The eight dimensions do not constitute a foolproof evaluation system. Instead, they provide an approach for gathering the various kinds of data that make it possible for faculty members to make careful judgments about their work and the work of their peers. Used and modified appropriately, these dimensions can be valuable also in the process of teaching improvement.

* The term “research” is interpreted to include not only research and scholarship as normally understood, but also creative artistry.

DIMENSIONS TO EVALUATION OF TEACHING

The campus “Promotion and Tenure Criteria and Guidelines” indicate that four measures or indicators of teaching performance are required and four are encouraged, as part of the application for tenure and promotion.

THE FOUR REQUIRED ELEMENTS
AS DESCRIBED IN THE DOCUMENT

Descriptive data

For each semester under review a list of all undergraduate and graduate courses taught and the number of students enrolled in the course must be provided. The Division of
Management Information posts a complete history of faculty teaching by the end of October each year on its Web site at www.dmi.uiuc.edu.

Course document review by peers
The departmental evaluation must include a review of course documents, including instructional materials such as syllabi, bibliographies, textbooks, test questions, grading policies, and procedures.

Instructional self-review
The candidate must provide a personal statement of teaching philosophy, methods, strengths, problems, goals, and other material in a manner that will present colleagues with a context for interpreting other evaluative information.

ICES: Student ratings of instruction
ICES results (or a summary developed through use of a departmental instrument) must be provided for every semester and every course under review. The ICES data must be presented in summary form and departmental norms given when possible. Raw data alone is not acceptable. It is most convenient to use the summary table of ICES data available from the Center for Teaching Excellence.

THE FOUR ENCOURAGED ELEMENTS
NOT REQUIRED

Information from students, alumni, and others
Surveys or interviews with seniors, alumni, and others can provide a perspective different from that of students currently enrolled, and this can be a valuable part of an evaluation. However, anecdotal comments from one or two people are generally not perceived as useful by review committees, because there is no basis for gauging the quality of the views. If information in this category is to be developed, it should be based on a method that can give a legitimate sample of views.

Classroom observations by peers
Visits to the candidate’s classroom can be valuable, but they should be made by at least two faculty observers for each of several courses. Visits should be made on more than one occasion in each course. This method is valuable for it entails considerable communication among faculty being evaluated and their colleagues involved in evaluation. The campus is encouraging more extensive use of this approach, including the involvement of peers from other institutions, not only in the period when a promotion is being considered, but over the entire period of a faculty member’s career at UIUC. When a candidate’s teaching or curricular contributions have achieved recognition by peers beyond the campus, the ability to comment on the instructional contributions as well as the candidate’s other scholarship should be considered in the selection of external evaluators.

Evidence of student learning
Provision of measures of student learning is encouraged. They might include measures included in the unit’s outcomes assessment program that can be linked clearly to the work of the candidate; exceptional awards or recognition earned by the candidate’s students; evidence of student success in later coursework in a sequence; and the evaluation of student work products such as exams, papers, artwork, performances, etc.

The text above and on the previous page describes eight dimensions to the evaluation of teaching. The order in which they appear should not be interpreted as indicating differential weighting or any hierarchical order of importance. The following is a more thorough description of the eight dimensions. Presented for each dimension are suggestions for collecting and documenting information, examples of data collection instruments, and a presentation of research findings on the usefulness and limitations of the information.
Promotion and tenure procedures at UIUC require faculty members to list all courses taught in each semester under review and the number of students enrolled per course. Faculty (especially new instructors) should get in the habit of consistently collecting these and other descriptive data both to help them evaluate their teaching as well as document their instructional activities. Descriptive information can include any of the following:

- Course materials such as syllabi, assignments, readings, and examinations.
- The number of students dropping the course and their reasons for doing so.
- A description of any instructional improvement projects or activities developed or carried out (e.g., leadership in a significant curricular change, new courses developed).
- Information on the number of thesis committees chaired and student research projects supervised.
- A list of faculty-development activities participated in, including workshops, reading groups, and teaching seminars.
- A description of how computer technology was used for instruction (e.g., development of course Web sites, or use of course management computer programs).
- A summary of the activities, career placement, and performance of graduate students for whom the individual faculty member had special responsibility (e.g., chair of thesis committee or major research advisor).

Information on extra-departmental teaching such as activities in residence hall programs or interdepartmental programs.

**SUGGESTIONS FOR USING DESCRIPTIVE DATA**

A record of teaching workload over a number of years (i.e., three or more) provides a better portrayal of a professor’s efforts and contributions than a record of the latest year. A long-range perspective helps in interpreting the contributions of a professor with an unusual teaching load.

Identification of withdrawals can be helpful in pointing out unusually large decreases in the number of students throughout the semester (perhaps compared to the rates of others teaching the same course). This information can serve as a flag in interpreting end-of-course student ratings as well as a topic of discussion with the instructor regarding the reasons for dramatic enrollment shifts. Interpretation should be made cautiously, however, since students drop courses for several reasons and some may have little relevance to the instructor or course.

When useful, descriptive data should be compared to departmental norms (e.g., average class size, average course load).

The development of computer technology materials, such as homework assignments, quizzes, or Web pages can often be used in other courses by other instructors, thus influencing/enhancing their teaching contribution.
What is the overall quality of the course materials?

What kinds of intellectual tasks were set by the instructor and how thoughtfully engaged were the students?

Do the course materials reflect current scholarship in the field? Do they reflect an adequate breadth and depth of coverage? Are they too advanced for a majority of enrollees?

As demonstrated by course materials, to what extent is this instructor providing an optimum environment for student learning?

Given the level of the course, do testing and grading practices seem appropriate?

Was the computer technology used in the course integrated with course content and class activities? Is there documentation of student participation in technology activities?

**SUGGESTIONS FOR CONDUCTING DOCUMENT REVIEWS BY PEERS**

The department may ask instructors to prepare detailed course descriptions for colleague review. The materials submitted might include a statement of the instructor’s educational objectives, teaching methods, grading policy, and grade distribution; tests; required and recommended reading lists; and a detailed outline or syllabus.

An instructor may also be asked to write a brief description of the course’s role in the department’s curriculum, the typical enrollment patterns (lower vs. upper division, majors vs. non-majors), and any special problems associated with teaching the course. Instructors may also want to supply a set of class handouts or a copy of the course reader. Chism (1999) offers many useful suggestions for conducting peer reviews of teaching including a number of checklists and rating scales for reviewing course materials.

Instructors can provide examples of how they used computer technology in their teaching (e.g., documentation of course Web sites or use of course management programs). They can also document if and how other instructors are using their technology enhancements. The department may want to ask the following questions regarding the development of computer resources or materials:

- Has the faculty member received support to develop the materials?
- Has the faculty member won any awards or received national or local recognition for the quality of the materials?
- Have the materials been reviewed or critiqued by any external agency, e.g., professional journal or organizational newsletter?
- Have the materials been used at other colleges or universities, or elsewhere?

Instructors may be asked to submit copies of homework assignments and problem sets, directions to students concerning term papers and term projects, and blank copies and answer keys for tests. Instructors may also be asked to provide a set of graded assignments or exams.

Appendix E on page 69 provides an example of an evaluation form that can be used for colleague review of instructional materials.

**TEACHING PORTFOLIOS**

A teaching portfolio is “a coherent set of materials including work samples and reflective commentary on them, compiled by a faculty member to represent his/her teaching practice as related to student learning and development” (Cerbin and Hutchings, 1993, p. 1). Thus, the aim of a teaching portfolio is to display both the “work-output” (e.g., syllabi, handouts, Web sites, assignments, and exams) of teaching as well as the pedagogical reasoning or the “thinking behind” the teaching.

**Use of portfolios**

The two most common uses of teaching portfolios are for self-reflection and for personnel assessment. The former—referred to as a formative portfolio—is typically used for personal and professional development, i.e., to help professors reflect on and improve their teaching. The latter—known as a summative portfolio—is used for personnel decisions such as promotion and tenure or the granting of teaching awards. Similar procedures can be followed to develop either type of portfolio.

**Building portfolios**

A teaching portfolio is based on the instructor’s teaching philosophy. Given its centrality, the teaching philosophy is usually at the beginning of the portfolio and includes one’s teaching goals and ideals. The materials (evidence) included in the portfolio should reveal the instructor’s attempts to achieve his/her goals while addressing the stated ideals. For example, if the instructor’s philosophy statement includes the belief that active learning motivates students or
Living documents

It is helpful to think of a teaching portfolio as a living document that evolves with time. As with many evaluation activities, the thoughtful and systematic collection of evaluative information is as important as its contents. During the process of deciding how to describe and demonstrate their teaching most effectively, instructors often review their strengths and weaknesses. At this time, instructors often rethink, and even redevelop, their teaching philosophy and their plans for future change. These are healthy activities in the life of an evolving document.

Putting together a teaching portfolio can be a time-consuming and daunting task, but is well worth the time invested. A carefully designed portfolio can be the best means to document one’s teaching effectiveness for promotion and tenure decisions. At the same time, the self-reflection of teaching that takes place during the building of a portfolio can lead to a better understanding of oneself as a teacher. Whether developing a formative or summative portfolio, the instructor would do well to remember that it should be selective, cohesive, and structured to be easy to navigate. Eight to ten pages plus supporting appendix materials is considered to be an appropriate length. A good resource for in-depth information on building a teaching portfolio is Perer Seldin’s book The Teaching Portfolio (2004).

SUGGESTIONS FOR USING SELF-REVIEWS

Faculty themselves are the most important assessment source because only they can provide descriptions of their work and the thinking behind it. For both improvement and personnel decision purposes, faculty members are well served by including statements of personal philosophy or interpretations of student ratings in promotion and tenure papers as a way to provide a context for interpreting their teaching activities and competence. Self-reviews can also provide a useful framework for understanding other information such as teaching load or drop-add patterns. However, for personnel decisions, faculty members are poorly served by self-reviews if they include a self-critique or self-evaluation of their teaching competence and thus draw attention to their weaknesses. It is not ethical to ask faculty to include a self-critique in a self-review or teaching portfolio if it is to be used for personnel decisions.

For improvement purposes, faculty can use the self-evaluation form presented in Appendix G on page 71 to help them review their instructional activities. They can also increase the utility of a self-review by discussing their materials with faculty colleagues or a staff member responsible for faculty development. Many assistant professors have been helped by more experienced professors, either in or outside of their department, who volunteer to serve as mentors.

ICES: STUDENT RATINGS OF INSTRUCTION

All assistant and associate professors at UIUC are required to submit Instructor and Course Evaluation System (ICES) results (or a summary developed through use of a departmental instrument) for every semester and every course under review in promotion and tenure decisions. ICES is a cafeteria-style approach to collecting student evaluations of instructors and courses. ICES consists of a pool of items from which instructors have the opportunity to select those they consider most relevant for evaluation of their courses. For those teaching on-line courses, CTE’s Web-based evaluation on-line system (EON) can be utilized in place of ICES. Go to www.cte.uiuc.edu/dme/index.htm for more about ICES and EON.

Items included in the ICES item pool are classified under the following categories:

- Course Management
- Student Outcomes of Instruction
- Instructor Characteristics and Style
- Instructional Environment
- Student Preferences for Instructor Learning Style
- Specific Instructional Settings
- Cheating

In addition to the instructor-selected items from the pool, each ICES rating form includes two global items: “Rate the instructor’s overall teaching effectiveness” and “Rate the overall quality of this course.” Global items require students to make general judgments about their experience in the course. Additionally, many departments have created a “core” set of items that are included on the forms of all faculty within the department. The core allows for an intra-departmental comparison of rating results. Consequently, most ICES ratings forms include all three types of...
ICES is designed to take into account three major purposes for student ratings: personnel decisions, course improvement, and student course selection. The first purpose is addressed by the inclusion of the two global items on every ICES survey form and the possible inclusion of departmental core items. When a faculty member releases ICES results to a departmental chair or head, student responses to the two global items as well as to the departmental core items are provided. The second purpose is addressed by a catalog or pool of more than 600 items from which instructors have the opportunity to select items they believe best meet their information needs. The third purpose is addressed each semester by the publication of the “List of Excellent Teachers as Rated by Their Students” in the student newspaper, the Daily Illini. The list is also provided on CTE’s Web page at www.cte.uiuc.edu/dme/ices/incldir.html. Students can use the list of highly rated faculty and teaching assistants to select courses and instructors. The instructor’s mean responses on the two global items are used for inclusion on the list.

**USE OF NORMS WITH ICES**

Norms are needed for some purposes, but they also can be overused and misinterpreted. It should be recognized that the norm group—UIUC faculty—is a strong one; the mean response to “Rate the Instructor’s Overall Teaching Effectiveness” is approximately 4.0 on a 5-point rating scale each semester. While half of the norm group must necessarily be “below average,” it obviously does not follow that half are “poor instructors.” It is probably the case that ICES best serves to identify those instructors at the very top, who are regarded exceptionally highly by their students, and those at the very bottom, who may be having some real difficulty with their classes.

**OVERALL CAMPUS COMPARISON**

An overall campus comparison for the two global items compares an instructor’s ratings with one of six campus-wide norm groups based upon two factors: instructor rank (teaching assistant versus faculty member) and the required/elective nature of the course (three categories: mostly required, mostly elective, and those in between). The six norm groups are illustrated in Figure 1. Normative comparisons are always open to criticism due to the difficulty in establishing comparable norm groups. Each professor could argue uniqueness for his or her course content and students. Campus research on ICES has identified consistently the above two factors. There may be other factors that should be used to develop different norm groups but their appropriateness has been difficult to determine. For example, professors teaching large classes may often receive lower ratings than do professors teaching small seminars. However, how do we define large? Seventy-five students? One thousand students? Research on ICES has failed to consistently identify a “critical” class size.

**DEPARTMENTAL COMPARISON**

A second comparison is provided based on the academic discipline of the faculty user. For both global and departmental core items, comparisons are made among faculty members and among teaching assistants in a department, disregarding the elective/required nature of the course, e.g., a history faculty member teaching an elective course is compared to all other history faculty members combined. For specific items, no norms are provided. Instead, a descriptive interpretation of the mean (weakness, average, or strength) and a descriptive interpretation of the standard deviation (low, average, or high agreement) is printed on the report.

**TECHNICAL QUALITY**

The technical quality of student ratings encompasses both the reliability and validity of ratings.

**Reliability**

Reliability refers to the extent that the employed measurement procedures provide information that is free from biases due to sampling of students, courses, and time of administration. There are two different types of reliability that are relevant to examining the trustworthiness of student ratings.

1. Agreement: The extent of agreement among students within a class rating the instructor and course.
2. Stability: The extent to which the same students using the same rating form would rate the instructor and course similarly at two different times.
Validity

The other major aspect of technical quality is validity. Validity of ratings takes into account several issues:

1. To what extent do factors not under the control of the instructor bias student ratings?

2. Do student ratings correlate with other measures considered to be superior indicators of effective instruction?

3. Do student ratings reflect the major dimensions of good teaching?

Over the years, both the reliability and validity of student ratings has been supported by the results of numerous studies (See table above). To improve the validity of student ratings it is prudent to interpret ratings of the instructor and course with an understanding of the contextual factors that may influence the ratings. For example, students may tend to give low ratings to some courses in a department regardless of the instructor, e.g., particularly difficult required courses. In addition, several factors can be confounded to interfere with any clear interpretation of the influence of any one factor. For example, teaching assistants may be teaching more required and larger classes than senior faculty members, and thus teaching assistants receive lower ratings because of the confounding effects of at least three factors: required/elective status of the course, rank of instructor, and class size.

SUGGESTIONS FOR USING STUDENT RATINGS

The purpose (use) of the evaluation needs first to be determined, since the purpose influences the type of student rating items to be selected. Although the dual purposes of self-improvement and personnel decisions can lead to conflicts, a strategy can be designed whereby many of the potential conflicts can be alleviated, if not eliminated.

For improvement

WHAT TO COLLECT

Specific and diagnostic items are the most appropriate for improvement purposes because they attempt to measure specific teacher behaviors or course characteristics.

The variability of responses to each item (as denoted by the frequency of responses to each alternative and the standard deviation) can be as informative as the central tendency of responses (as denoted by the mean or median). By looking at the variability of responses to each of the rating items one can identify aspects of the course or the instruction where there was agreement or disagreement among the students.

Items can be written to address a specific weakness or problem area. However, if students are asked to rate only weaknesses, they may be more negative about the instructor or the course than if a more balanced set of items is included.

HOW AND WHEN TO COLLECT

Instructors can informally and periodically distribute short rating forms or present a few rating items on the chalkboard throughout the semester. Go to www.cte.uiuc.edu/Did/TAs/IEF/overview.htm for example items and forms that can be used for collecting informal early-semester feedback.

If instructors collect student feedback during the course, they can make improvements that benefit
the currently enrolled students. It is strongly recommended that instructors make some changes based on the feedback and inform the students of the reason for the change. In this manner, students will know that their comments were taken seriously. At no time should student criticism collected during the semester be used against any individual or the class as a whole.

During-the-course feedback should not be collected using ICES rating forms so as to emphasize the summative importance of the end-of-course ICES ratings.

**HOW TO REPORT AND INTERPRET INFORMATION**

The integrity of the rating process is enhanced only if the instructors receive the student responses to specific and diagnostic items.

Whether faculty collect ratings during or at the end of a course, they are more likely to improve their teaching if they share the ratings with a colleague or a professional staff member responsible for faculty development. (One may contact CTE’s Instructional Development staff for assistance.) Instructors can become aware of possible ways to change and improve as they discuss the results in a supportive atmosphere. However, if the colleagues are also responsible for making personnel decisions, this conflict of roles diminishes the effectiveness of the exchanges and dialogue. Openness and trust are essential for serious examination of strengths and weaknesses.

*For personnel decisions*

**WHAT TO COLLECT**

Student ratings should be only one piece of evidence collected as part of a comprehensive assessment of instructor competence. Global ratings are most appropriate for comparisons of faculty ratings on a departmental, college-wide, or campus-wide basis.

**HOW TO COLLECT**

Students should be informed if the ratings are to be used for personnel purposes.

Student rating forms should be administered in the classroom during regular class hours and under “normal” circumstances (that is, not during informal get-togethers or during final exams) in order to ensure their fairness and trustworthiness.

(When distributing ICES forms instructors should follow the set of UIUC directions provided in Appendix H on page 72.)

**WHEN TO COLLECT**

It is preferable to administer rating forms during the last two weeks of the semester.

Instructors may wish to delay administration until at least 60-70 percent (and possibly more for small classes) of the students are available on the day the rating forms are completed.

**HOW TO REPORT AND INTERPRET INFORMATION**

Student evaluation forms that are formally collected and submitted for personnel purposes should not be returned to the instructor until after the final grades have been submitted to minimize the possibility of “retaliation” or “favoritism” by the instructor.

Some departments establish a departmental core (i.e., a set of items used by all departmental faculty members) to make additional comparisons among the faculty members in a department. Since core items are normed for each department, comparisons within a department can be obtained for these items as well as for the global items.

At least five sets of evaluations, each based on at least five enrolled students, are recommended before student ratings are used for major personnel decisions. If the average number of students is ten or less, the number of evaluations should be at least eight.

A profile of student ratings, which includes item statistics such as means, standard deviations, and normative comparisons, can serve as a cumulative record. Differences in student ratings due to such factors as class size and type of course can be noted by such a listing. Faculty members can obtain a profile of all UIUC courses in which they administered ICES forms by contacting CTE’s Measurement and Evaluation staff. Department heads may also obtain a “Course Profile” providing a longitudinal view of ICES data collected in a single course.

Interpretation of normative (i.e., comparative) results still requires human judgment, since other factors not included in the norms may be important. Other faculty members who have firsthand experience with a course can generally provide additional information that can increase the accuracy of the interpretation of student ratings. Administrators can allow instructors an opportunity to explain abhorrent results due to extenuating circumstances, such as agreeing to teach a course which has a negative reputation.
Information about an instructor can be collected from a number of different sources by a variety of different methods. This section discusses two methods—written appraisals and interviews—that can be used with different sources. Suggestions are also presented for collecting retrospective assessments from graduating seniors and alumni.

WRITTEN APPRAISALS FROM STUDENTS

Anonymous student-written comments are inappropriate for use in personnel decisions as are solicited student letters of recommendation. However, many UIUC faculty members attempt to improve their instruction by reading the student comments to the open-ended items printed on the back of the ICES questionnaires. They primarily are used by faculty members to examine the strengths and weaknesses of their courses and their teaching. Students can be asked to comment about specific components of a course or about the course in general. The questions can involve assessments of current practices or suggestions for improvement. Written comments are considered one of the most useful types of information to faculty members in revising their courses and their teaching styles.

Developing a set of open-ended questions is a relatively easy task. They can be written on chalkboard or plain sheets of paper, or included as part of the student rating form. Open-ended questions are often included as part of a student rating survey. Questions that are narrow in scope obtain the most useful information. A question such as, “When do you find the instructor to be most helpful in your learning?” solicits more useful student responses than a general question, “What do you like about the course?”

Suggestions for using written appraisals

Student-written comments are best used for improvement purposes. Written comments about specific aspects of a course or teaching strategy are especially helpful to gain a flavor of the course from the student’s perspective. Some suggestions are listed below.

- Students are better at writing what they liked or disliked and considered to be worthwhile/worthless than at analyzing why or making suggestions for improving the course structure or teaching style.
- Instructors must provide sufficient time for students to respond to open-ended questions.
- Student comments can be requested at any time during the semester and can be done frequently, but anonymity is necessary.
- It is not recommended that students be asked to include their names on the evaluation. Students may be reluctant to be candid if they think their identity can be determined by their handwriting.
- An instructor needs to view written appraisals as constructive criticism and consider the potential impact of negative comments on the student-instructor relationship if comments are collected during the semester.
- An instructor can prevent unnecessary bias by reading the final student evaluations after he or she submits the course grades.
- Discussion of the student comments with another faculty member or a staff member responsible for faculty development can be very helpful in isolating problems and making suggestions for improvement.

STUDENT INTERVIEWS

An interview with students enrolled in a course can be used to provide information about the course and the instructor’s teaching. Interviews can be conducted individually or in groups, and the interviewer can be a faculty colleague or a professional staff member.

The interview can be highly structured, semi-structured, or unstructured, and the purpose can be for a personnel decision or improvement. A group interview is recommended if the instructor wishes to learn how students react to a specific aspect of the course. If the interview is properly handled, students have considerable freedom to express their views, and the interviewer has the opportunity to pursue topics and concerns brought up in the interview. Thus an interviewer can uncover unusual strengths and weaknesses as well as contrast student verbal comments with evaluations obtained by other methods, such as rating scales and written comments.
Although the interview has several advantages, the cost of interviewing is substantial relative to student ratings or written appraisals. Individual interviews are especially expensive because they are so labor intensive. Therefore, interviewing is seldom a routine way to gain information from students about each individual class taught by an instructor.

Classroom group interviews

Group interviews conducted with classes of students can provide both descriptive and judgmental information about the quality of a course and the effectiveness of an instructor. Colleagues or professional staff members (CTE staff are available) conduct these interviews, which are used for personnel decisions or faculty improvement. A semi-structured interview made up of a small set of predetermined questions often is used. Interviews focus on perceived areas of strength and weakness. If the interview is properly handled, students are given considerable freedom to pursue the topics and concerns introduced. The group process allows students to add new information while reacting to the comments of others. Skilled interviewers are able to obtain input from all members rather than let the group be influenced by a small, vocal minority.

SUGGESTIONS FOR USING CLASSROOM GROUP INTERVIEWS

There are several ways that group interviews can be conducted. Two of the most common interview methods both involve someone other than the instructor being in charge of a 20- to 30-minute interview conducted during the class time. In one approach, the interviewer organizes students into small groups of five or six and asks each group of students to decide on strengths and weaknesses of the course and to make suggestions. This can be done in approximately ten minutes. In the latter part of the session, the evaluator collects information from each group to help form a consensus. The evaluator writes a summary and shares the written report with the instructor. In the second group interview approach, all students in a class are interviewed as one group. One person conducts the interviews, while another person records the comments.

WHAT TO COLLECT

Interview questions should focus on the concerns of the instructor and of the students. By meeting with the instructor before the interview, the interviewer can learn about the course and areas of concern to the instructor. This meeting is an excellent time to decide on the organization of the interview (structured, semi-structured, open-ended) as well as the questions to be asked.

If several classes are to be interviewed for personnel decisions, a standard interview schedule helps ensure uniformity of procedures. Questions on the interview schedule reflect aspects of teaching that the department considers important and of which students are appropriate judges.

HOW TO COLLECT

Trusted and respected colleagues or professional staff responsible for faculty development are the most credible interviewers. Interviewers need good interpersonal skills because they must be able to both ask questions and explain the results to the instructor.

The instructor can introduce the interviewer, inform the students of the purpose of the interview, and then leave. The interviewer can further clarify and explain the procedures to be used.

The interviewer is encouraged to obtain comments from as many students as possible and not to allow vocal students to dominate input or the tone of the interview. By getting a show of hands, the interviewer can obtain the degree of agreement or disagreement to an expressed opinion.
Professor Andreas Polycarpou in the Department of Mechanical and Industrial Engineering collects informal early feedback from his students every semester to help him with his uncertainty about whether his students are understanding the material, learning from his class, and liking his class. Questions he asks his students during the semester include the following:

What pace does the instructor set in presenting material?  
Too fast □ □ □ □ □ □ Too slow

What idea/theory discussed so far has been the  
(a) most difficult, and  
(b) least difficult for you to learn? Why?

Dr. Polycarpou also emphasizes the importance of following up on students’ feedback:

Report back to the students so they can  
(a) see where they fit in  
(b) show that you care about and consider their opinions  
(c) know what actions will be taken to address their input

Arranging students in a semicircle or around a table often makes the interview more informal and conversational. Students should be encouraged to voice their agreement or disagreement with classmates’ remarks.

The interviewer must inform students that their comments will not be attributed individually in the report and that they should refrain from calling each other by name during the interview.

Having a second person record the comments increases the accuracy of the report. The use of tape recorders, while extremely useful, can be obtrusive and inhibit student comments because they may fear their voices will be identified. Instructors must not have access to interview notes.

WHEN TO COLLECT

Midterm interviews can be very informative and allow currently enrolled students to benefit from course changes. However, midterm interviews can also upset instructors if negative comments are collected. Instructors should be prepared to handle adverse comments and refrain from taking out their feelings on the class. End-of-semester interviews can provide valuable supplemental feedback and context for traditional student ratings of instruction.

HOW TO REPORT AND INTERPRET INFORMATION

The intended use of the interview determines the channel of communication. If the results will be used for personnel decisions, a one- or two-page summary is appropriate. We recommend that instructors be given a copy of the report and an opportunity to respond to its contents. The interviewer can meet with the department administrator or faculty peer committee member to further discuss the report. If faculty will use the results to assess their own
teaching, no one else should have access to the report.

The interviewer can prepare a brief summary of the interview to focus on the major points raised. Diagnostic and descriptive evidence is often the most appropriate type of comment. The interviewer’s impressions should be clearly identified as such.

The instructor and the interviewer can benefit by examining the interview results in combination with other evidence, such as colleague observations and student ratings.

An example of a classroom group interview and summary report can be found in Appendix I on page 73.

QUALITY CIRCLES

These have been used by instructors to collect student opinions about their teaching. Quality circles are based on a management technique used in industry. Instructors form a quality circle of student volunteers and meet with them regularly (weekly or bi-weekly) to identify problems and solicit suggestions for improving a course. Instructors can seek feedback about the pace of the course, difficulty of the assignments, clarity of class lectures, etc. Instructors can share the contents of the meetings with the entire class and encourage students to communicate their opinions to the members of the quality circle. Instructors who make an effort to improve their instruction based on the student feedback are likely to increase serious student participation in this type of process.

RESEARCH GENERALIZATIONS: STUDENT INTERVIEWS

Global overall ratings of the instructor and course based on student responses to scaled items, written comments, and student interviews are similar. Thus the method of collecting information does not significantly influence student evaluations of the overall teaching competence of an instructor or the quality of the course. (27)

Student interview summaries are rated by faculty members as somewhat more trustworthy for promotion purposes than are student responses to global items and student written comments. (26)

Representation of student comments in the interview can be suspect if not all students participate in an interview and/or if individual students in a group dominate the interview and try to persuade others to go along with their views. (15)

RESEARCH GENERALIZATIONS: ALUMNI RATINGS

Individuals rating the same instructor twice (first during the course and then one year after graduation) are moderately consistent. (29)

Alumni ratings tend to be somewhat lower than ratings of enrolled students. (29)

Numbers in parentheses refer to references on page 62 of this handbook.

Alumni and graduating seniors are in a unique position to evaluate individual faculty, courses in their field of study, and curricular offerings. Graduating seniors can finally (one hopes) see the “big picture” of their course sequence and graduation requirements, while alumni have the additional advantage of being able to assess the quality of their education and preparation given their current responsibilities. After being employed or enrolled at other colleges, alumni are often surprised at how much they appreciate particular classes and instructors. The perspectives of both graduating seniors and alumni can be used to assess the perceived impact of teaching on the students’ job preparation or job performance.

Surveys can be effectively used to assess the opinions and attitudes of graduating seniors and alumni. Additionally, exit interviews can be conducted with graduating seniors before they leave the university. Following are some suggestions for conducting both types of evaluation activities.

Senior exit interviews

Interviews with graduating seniors can be completed either individually or in groups. Exit interviews can yield valuable information, but they often require considerable expenditure of time. Who conducts the interviews, how students are selected for interview, whether the interviews are to focus on particular faculty members or courses, and how the interviews are to be recorded and summarized are important issues to raise in planning exit interviews.

Departmental exit interviews have focused on the following questions that address instructors and courses:

1. Which courses were most useful or valuable? Why?
2. Which courses were least useful? Why?
3. Whom do you consider to be the best teachers?
4. Looking back on the courses you have taken, what important topics were not addressed?
5. How would you rate the quality of advising you received from your advisor? From others?
Alumni and Senior Surveys

Because of the lapse of time between a course and the evaluation, assessments of highly specific aspects of a course or teaching style are generally not advocated for alumni or senior surveys. Instead, evaluations about the sequence and depth of course material and the support and advice faculty members gave to the students during their college careers are valuable kinds of information to a department in its examination of its curriculum offerings and the role of its faculty in instruction.

For many years UIUC has surveyed its alumni one, five, and ten years after graduation. In 1990 the University also began administering the Senior Survey to all graduating seniors (see www.cte.uiuc.edu/assessment/senior-surveys.html). The survey asks about student satisfaction in four broad categories: teaching and educational environment, campus environment, self-assessment of entering and exiting abilities, and overall satisfaction with the undergraduate experience. The following are some suggestions for developing and using senior and alumni surveys.

SUGGESTIONS FOR USING SENIOR AND ALUMNI SURVEYS

Alumni and graduating seniors can be asked questions that take advantage of their perspective, such as relevance of the course to their current positions or job demands, and asked for suggestions for topics to be covered or about the relevance of the topic to their roles in society. Alumni with varying years of work experience can often provide some interesting insights into the role of their collegiate education in their professional and personal lives. If information about long-term comprehension and relevance of the content, personal development, technical skills, and motivation to learn is desired, this needs to be made clear in the directions.

For improvement and personnel decisions

WHAT TO COLLECT

Institutions can use alumni or senior surveys to collect assessment information about instructors, programs, or the students’ total educational experience.

General items about an instructor, program, or institutional quality are preferred over detailed, specific items. Some of these items can also be included on the rating forms administered to current students if faculty want such comparisons.

Open-ended items about the long-term impact of an instructor or course may elicit thoughtful reflection because time has passed and new experiences have been gained.

HOW TO COLLECT

The purposes for which the alumni responses will be used should be made explicit to the respondents in the cover letter or in the directions on the survey.

Alumni can be asked questions that take advantage of their perspective, including questions on the relevance of their courses to past and current job demands.

It is preferable to provide names of instructors and their courses if information is being collected about more than one instructor and course.

To encourage completion of the survey, prizes could be awarded to randomly selected respondents. At UIUC, two airline tickets valued at $500 each are given to a lucky respondent. (The UIUC return rate is over 50 percent.)

Surveys can be Web-based and administered online using pre-administration and follow-up e-mails to solicit response. Online surveying is very cost-efficient with closed and open-ended responses recorded and summarized.

SENIOR EXIT SURVEY

UIUC DEPARTMENT OF CROP SCIENCES

Do you plan to do graduate work? If yes, in what field? Where?

What is your immediate career objective?

Employer’s name and address, if you have accepted a job offer:

What is your ultimate career objective?

Advisor(s) in the Department of Crop Sciences:

Internships held: include employer, location and dates

Please list any applicable items in the following categories:

Graduate scholarship(s) and fellowship(s) received

Awards and honors received, e.g., Field and Furrow, ASA, Bronze Tablet

Research projects completed and funding obtained, e.g., JBT Research Project

Publications:

Extracurricular activities:

What were the “high points” of your undergraduate experience?

What were the “low points” of your undergraduate experience?

Give two ideas to improve your undergraduate experience in Crop Sciences
saved in electronic form. It is essential, however, for some unit, department, college, or university, to keep an up-to-date list of alumni names and e-mail addresses for on-line surveying.

WHEN TO COLLECT

Graduating senior surveys are more likely to be returned if they are contacted prior to leaving campus.

Alumni with varying years of post-graduate work experience can provide different opinions.

HOW TO REPORT AND INTERPRET INFORMATION

Open-ended comments can be summarized or typed verbatim.

Survey results may be misleading if the response rate is low (under 30 percent), or if particular subpopulations are underrepresented. Follow-up efforts, such as telephone interviews with non-respondents, can be made to determine if the mix of respondents is not representative of the targeted population.

Identifying a small sample of the population and administering a more detailed questionnaire, or conducting telephone or focus-group interviews can be a useful follow-up activity in order to pursue an issue or problem identified in the initial survey.

It has been found that negative comments are more frequent for instructors of large classes than for those of small classes.

CLASSROOM OBSERVATIONS BY PEERS

UIUC faculty being considered for promotion and tenure must have a review conducted of their teaching by a peer or colleague designated by the department or college. While many of these reviews include classroom peer observation, the procedure is not required by the University. Peer observations are not required primarily because of the amount of time and effort required to conduct valid and reliable observation assessments. However, the lack of a campus requirement and the effort required to conduct peer observations should not take away from their value. They can be extremely useful for helping a colleague improve his/her teaching, as well as provide an additional assessment of teaching ability for personnel decisions. When used for the latter purpose, the procedures for peer observation must be thoroughly discussed with the faculty, systematically constructed, and carried out by carefully selected and properly trained peer observers.

SUGGESTIONS FOR USING CLASSROOM OBSERVATIONS

The trustworthiness of evidence based on observation, particularly for use in personnel decisions, is influenced by who observes, what is observed, when observers are observing, and why the activity is being observed. The most trustworthy are peer reviewers who know the discipline content of the faculty member being reviewed and who are trained in observation techniques or have experience in observing and offering feedback to faculty generally are more competent. However, such training is not often provided because of lack of faculty time and interest, and lack of institutional support. Without training experience, many faculty do not feel comfortable judging the teaching of their colleagues.

The following are some suggestions for conducting peer observations.

For both improvement and personnel decisions

Faculty members with considerable teaching experience and competence are generally the best observers-consultants. It is helpful if observers are familiar with the instructor’s content area, departmental curriculum, and student population. Training in both observing and communicating results is highly recommended. CTE staff are available for training assistance.

The instructor and peer observer meet before the initial visitation. During this meeting the colleague can receive copies of the course materials, learn the overall goals of the course (for the class or classes to be observed), discuss a method of observation, and arrange for post-observation meetings. Observed instructors can suggest concerns and course dimensions on which they would like feedback.

Peer judgments about student motivation or satisfaction are difficult to obtain because of the inferential nature of these judgments. Judgments about classroom teaching style and relationships with students can only be based on observable evidence from the class visit. Substantive issues, such as sequence of topics, recency and accuracy of content presented, and ethical and professional conduct are more useful to focus on.

During class visits, peers cannot simultaneously observe and record every interaction or behavior. Thus they are encouraged to focus on specific areas, such as importance and suitability of content; organization of content; clarity of presentation; questioning ability; and establishing and maintaining contact with students.

A meeting after the observation(s) is especially valuable for discussing the evaluation.
For improvement

Faculty must trust and respect each other for an open and honest exchange about strengths and weaknesses and discussions of ways to improve. Senior faculty who have been trained in conducting observations generally are the most appropriate and credible colleague reviewers. A professional staff member responsible for faculty development also can be helpful by emphasizing strengths and weaknesses and suggesting ways to organize the course and improve teaching skills. Faculty observers from outside the department may also be used if there are concerns about revealing one’s weaknesses within a department or to individuals who may be involved in personnel decisions such as salary or promotion.

Peer observers should select a method for recording classroom observations. Checklists, rating scales, or written appraisals may be used to assess another’s classroom behavior. An example is presented in Appendix J on page 74.

A greater number of observers and observations is not as important for improvement purposes as it is for personnel decisions; however, more than one classroom visit is always desirable. Peer appraisal based on classroom observation is especially useful in a continuous program of instructor and course improvement.

Instructors may want to pair up with a colleague and visit each other’s classroom as currently practiced by several of the college Teaching Academies.

The issues of confidentiality, authenticity of the behavior observed, obtrusiveness of the observers, and subjectivity in assessing classroom behavior can more easily be dealt with if the faculty member has the opportunity to respond to the assessment. Colleagues can share either written or oral summary reports with the instructor. Providers of feedback should be sensitive to the confidentiality of the information and the instructor’s feelings.

For personnel decisions

A set of explicit criteria against which observers are asked to judge the quality of the work is desirable. The criteria should reflect aspects of the work on which departmental faculty agree and for which the observers are appropriate judges. For example, observers can comment on organization of the material covered but seldom can adequately judge the amount of student learning occurring during class.

CTE staff can help assist faculty and/or departments in developing observation criteria.

Training observers is highly recommended; training helps instructors focus on desired criteria and learn how to observe effectively.

Departmental observers can use a standard form to delineate observation criteria. If the criteria are identical across observers, observer reliability is enhanced and the observation process is often more manageable. Forms containing fixed alternative items often are more reliable than open-ended questions; however, colleagues can more easily provide detailed information when responding to open-ended questions.

Departments may wish to rotate annually the responsibilities of peer observation among eligible faculty; however, small departments will have difficulty in this regard. Alternatively, academic officers can select several observers from the list of recommended potential observers nominated by the instructor. Observations by more than one colleague are recommended, since all faculty, quite naturally, rely on their own experiences, values, and definitions of effective teaching in making assessments.

All faculty should be informed of the observation process before implementation in order to ensure that all observations are conducted in a similar manner. At least three classroom observations for a given class over a single semester or quarter are recommended to ensure adequate representation; observation evidence often is suspect if only one classroom visit is made. Classroom visits can be both announced and unannounced, depending on local practice and policy. Unannounced visits can result in the evaluator showing up on the day of a film or exam. One strategy is to have the instructor select six class periods for which evaluation visits would be most appropriate.

Peer observations (including more than one visit) can be completed annually, every other year, prior to application for promotion and tenure, or on a regular, ongoing basis. Departments must consider faculty availability and willingness to observe in determining an observation policy.

Each observer can highlight similarities and differences by writing summary reports. Descriptive reports, focusing on agreed-upon goals and behaviors and including specific examples of instructor and student behavior are recommended. The summary is more balanced and fair if it contains both positive and negative observations. Judgments of effectiveness, as well as descriptions of work, provide the most complete portrayal of the instructor’s effectiveness.

OBSERVING VIDEO RECORDS

Faculty can observe their own behaviors by viewing videotape or digital recordings of themselves teaching in the classroom. In viewing their recordings faculty often gain valuable insights into their teaching, but they also experience
a few anxious moments. Faculty tend to focus primarily on their appearance or voice when observing a videotape of themselves. More than once we have heard faculty comment, “I never knew I was so boring.” Faculty who view their recording with colleagues or teaching consultants often can get beyond their appearance and focus on substantive issues. When instructors complete behavioral checklists while viewing their recording they can also more easily focus on teaching behaviors.

Reviewing a videotape is an ideal observation method because it provides a record of the actual transactions and work activities. Including a digital recording (videotape or DVD) in the collection of materials to document teaching effectiveness has several benefits. First, faculty can document their participation in self-analysis and describe their efforts to improve their teaching based on their videotaping experience. Second, they can include the record in their teaching portfolios to illustrate actual samples of their work. Faculty can offer tapes/dvds of themselves “in action,” whether teaching a class or running a lab. A growing number of colleges and universities are encouraging faculty to develop an electronic portfolio of their work, including video records of their teaching.

OUT-OF-CLASS CONTRIBUTIONS TO INSTRUCTIONAL PROGRAMS

Many faculty members make a variety of significant out-of-class contributions to instructional programs through advising of undergraduate and/or graduate students, through training and supervising teaching assistants, through development of course or computer software materials used by other instructors, through departmental or college curriculum development, etc. Following are questions that can be considered when evaluating several types of out-of-classroom activities.

ADVISING

Students and alumni are useful sources of information about an instructor’s effectiveness as an advisor. The opinions of undergraduates may be solicited by questionnaires. (A sample form is shown in Appendix K on page 76.) The forms can be mailed to undergraduates or faculty members can distribute the forms to their advisees. There are five major criteria of effectiveness:

1. **KNOWLEDGE**: Can the advisor use his or her knowledge of the discipline to plan an academic program or to recommend a particular course?

2. **CAMPUS KNOWLEDGE**: Does the advisor provide the student with insight into and guidance about the multitude of academic opportunities available on campus? How well informed is the advisor about campus, college, or departmental policies and procedures?

3. **AVAILABILITY**: Does the advisor post and maintain office hours and encourage follow-up visits as needed?

4. **RAPPORT**: Does the advisor treat students as individuals?

5. **METHODS**: Does the advisor communicate clearly and use conference time efficiently?

TRAINING AND SUPERVISION OF TEACHING ASSISTANTS

Questions to ask when evaluating a faculty member’s contributions to training and supervising teaching assistants:

Did the faculty member facilitate meetings/workshops to prepare TAs for the classroom in the following manner(s):

- Introduction to, and overview of, the course and course content before the semester began?
- Classroom management issues, before and during the semester?
- Instructional activities/components introduced before and during the semester?

Did the faculty member lend guidance and support to TAs with professional and instructional issues and activities relevant to the maintenance of the course, such as the following:

- Behaviors that demonstrated and communicated academic integrity, equitable, and respectful treatment of students regardless of race or sex, and avoidance of capricious grading activities?
• Appointment of a substitute for him-or-herself, or a course coordinator, when the faculty member is off campus?

• Behaviors that demonstrated well-researched and thoughtful activities for course instruction and evaluation?

Did the faculty member collect and respond to input from TAs and students regarding presentation and evaluation of course content?

Was the role that the faculty member selected for the TAs appropriate and realistic given the size of the class, the content to be covered, and the time constraints of the semester?

Did the faculty member serve as a role model of integrity, ethics, and professional character?

CURRICULUM OR COURSE DEVELOPMENT
Has the faculty member served on any departmental, college, or campus curriculum or instructional/faculty development committees?

Has the faculty member worked to revise or develop a new departmental or college curriculum or sequence of courses?

COLLEGIALLY
Does the faculty member discuss issues regarding instructional effectiveness with colleagues?

Is the faculty member interested in how colleagues teach?

Is the faculty member sought by colleagues for advice on instruction?

PARTICIPATION IN THE UNIVERSITY COMMUNITY
Is the faculty member involved in student organizations?

Does the faculty member participate in non-class activities in which students are involved?

Does the faculty member participate in departmental seminars, activities, or projects involving students?

EVIDENCE OF STUDENT LEARNING

Many faculty members consider student achievement as the most important criterion for assessing the competence of an instructor. They believe that the best approach to evaluating teaching effectiveness is to measure how much students have learned from a course. Despite its appeal, thorough evaluation of student achievement seldom has been used for personnel decisions but rather for improvement purposes. However, a little creativity and effort can make an examination of student learning useful for decision making purposes as well.

SUGGESTIONS FOR MEASURING STUDENT LEARNING

We consistently talk about two measures of student learning—classroom exams and performance assessments—and how they can be used to document student learning for both improvement and personnel decisions.

Classroom exams

Classroom exams can be constructed to measure achievement with reference to an a priori established level of performance. These tests, often called mastery exams, measure attainment of specific skills and learning outcomes. A student’s performance is interpreted in terms of the level of mastery of the material as defined by a professor. The use of mastery exams allows colleagues to view both the objectives being tested as well as their levels of student achievement. The following suggestions are offered for using classroom exams to evaluate teaching:

For improvement purposes, frequent informal quizzes can be given as a check on progress for both the student and the instructor. This strategy also affects the study habits of some students, which may be beneficial in itself.

Common final exams in courses rotated across instructors could provide useful comparisons of student achievement across instructors (provided student abilities remain similar from year to year).

Classroom exams can be constructed incorporating items that measure departmentally identified student-learning outcomes. Student success on such items can be used to document the teaching of targeted content and outcomes.
Performance assessment

Performance assessment is also known as alternative and authentic assessment, because it represents an alternative to paper and pencil instruments. Performance assessment tries to include real life experiences in assessment. It is intended to closely “replicate the challenges and standards of performance that typically face writers, businesspeople, scientists, community leaders, or historians” (Wiggins, 1989, pp.703-704). Performance assessment includes a variety of assessment strategies and techniques to measure student achievement. They include open-ended math problems; ratings of musical or artistic performances; critiques of production of plays; evaluations of conduct of scientific experiments; and appraisals of exhibits, demonstrations, and public presentations.

Performance assessment creates partnerships between students and instructors in which standards of performance, criteria of quality, and suggestions for improvement are all part of the process-oriented form of testing and evaluation. It also makes student learning more obvious to peer observers in comparison to multiple-choice classroom exams. Peer observers can see for themselves whether a student has the ability to order a dinner speaking only French or can prepare an appropriate diet for a diabetic. The “authentic” nature of the assessments encourages informed-dialogue between faculty and peer reviewers.

We commonly discuss three forms of performance assessment: student portfolios, journals, and simulations.

**STUDENT PORTFOLIOS**

These are purposeful and systematic collections of the students’ work, which demonstrate student’s efforts, progress, and achievements. Portfolios have been typically collected in art and writing classes but can be used in most courses. Portfolios contain samples of work from different types of assignments. They may include work completed under different conditions, such as essays written in class, out of class, and out of class with one graded revision. They may include drafts of work in progress, such as term papers. Often portfolios represent the best work of a student’s accomplishments and include student self-evaluations and reflections.

Much has been recently written about the use of computers for developing electronic student portfolios or e-portfolios. In their Electronic Learning Portfolio Project, Stanford University describes their “Efolios” as “ubiquitous, portable electronic knowledge bases that are private, personalized, and sharable...which students can use to capture, organize, integrate, and re-use the results of learning experiences encountered throughout their careers.” By collecting a college career of work examples in an e-portfolio they believe students can build a personal log of academic achievement that can be shared with faculty, student peers, and potential employers.

Portfolio assessment is not the same as portfolio construction. Collection of student work does not by itself constitute portfolio assessment because judgments of the quality of the work are still required. Peer reviewers need to be aware of the criteria used by the instructor to judge portfolio quality, but may also wish to develop their own criteria.

**JOURNAL WRITING**

This is another performance assessment measure. Journals require students to think about course content as they make short weekly or daily entries into a diary. Students can be encouraged to write about areas of confusion, things they have learned, or reactions to a lecture or a reading assignment. Instructors can collect the journals on a continual basis and make comments on or answer questions raised in the journal. Journal entries can provide valuable insights into areas the students find confusing. While not necessarily appropriate for use in personnel decisions, journals can help faculty gain insights about their teaching.

**SIMULATION**

This can be constructed for practically any skill or real-life situation. A performance measure is designed to assess the ability of a student in a simulated but lifelike situation, that is, situations in which those tested are ultimately expected to apply their learning. Simulations have a distinct advantage over paper and pencil exams because they focus on the ability of the participant to apply skills and knowledge to real-life situations. They provide a degree of validity not possible with standard paper tests.

Computer simulations have increased in popularity because of tremendous gains in computer capabilities. Two types of simulations are commonly used for assessing student ability—procedural and situational (Alessi and Trollip, 1985). Procedural simulations can be used to test student ability to properly follow a sequence of actions, for example, to operate a calculator, perform a titration, or land an airplane. Situational simulations can be used to test student reactions or choices of behavior given a particular situation. The situations may or may not have a preferred sequence of events but allow the instructor (or peer reviewer) to judge the appropriateness of the students’ responses. Role playing is one type of situational simulation.
CAMPUS RESOURCES
AND OPPORTUNITIES FOR CONTINUING PROFESSIONAL DEVELOPMENT

TEACHING ADVANCEMENT BOARD (TAB)
http://www.provost.uiuc.edu/departments/tab/index.html

TAB is a 12-member committee under the Office of the Provost that promotes and supports excellence and innovation in teaching. TAB’s four roles are to:
1. Evaluate and foster specific programs to improve the quality of teaching.
2. Sponsor forms of recognition for excellence in teaching.
3. Provide support for instructional enhancement.
4. Promote developmental activity in support of teaching.

TAB implements several programs to improve campus teaching, including:

- Provost’s Initiative on Teaching Advancement (PITA)
  Provides funding for recipients to implement new projects in teaching development and assessment programs, implementation of instructional enhancements, and the Scholarship of Teaching and Learning (SoTL).
  http://www.provost.uiuc.edu/departments/tab/pita.html

- Travel and Workshop Grants
  http://www.provost.uiuc.edu/departments/tab/guidelines.html

- Distinguished Teacher/Scholar Program
  Honors and supports faculty members who will enhance campus teaching and learning.
  http://www.provost.uiuc.edu/departments/tab/distcall.html

- Awards for Excellence in Instruction
  Several campus-level awards are given each year in recognition of excellence in undergraduate education, graduate and professional teaching, extramural teaching, advising, and research.
  http://www.provost.uiuc.edu/departments/awards/inst.html

PROFESSIONAL DEVELOPMENT AND COMMUNITIES FOR TEACHING

ANNUAL FACULTY RETREAT ON ACTIVE LEARNING
This retreat is an annual one-day event to which all UIUC faculty are invited to learn more about teaching from a keynote speaker and concurrent sessions featuring our own faculty.
  http://www.cte.uiuc.edu/Did/FacultyRetreat/index.htm

CAMPUS-WIDE WORKSHOPS ON TEACHING AND LEARNING
Each semester the Center for Teaching Excellence (CTE) provides a variety of interactive workshops for faculty and graduate students on promoting excellence in teaching and learning and its evaluation.
  http://www.cte.uiuc.edu/Did/workshops/index.htm

COLLEGE TEACHING ACADEMIES
Many of the colleges and schools have created teaching academies in their support and commitment to teaching. The academies offer a variety of programs for their faculty, teaching staff, and/or graduate students.
  http://www.cte.uiuc.edu/Did/Academies/index.htm

UIUC SoTL COMMUNITY
This group is for anyone interested in the Scholarship of Teaching and Learning (SoTL) who would like to share thoughts and ideas on selected readings and to provide feedback for those who are engaged in SoTL projects.
  http://www.cte.uiuc.edu/Did/SOTL/index.htm

CAMPUS PUBLICATIONS

The UIUC Student Code:
http://www.admin.uiuc.edu/policy/code/

Academic Staff Handbook:
http://www.ahr.uiuc.edu/ahrhandbook/default.htm

Handbook for Graduate Students and Advisors:
http://www.grad.uiuc.edu/gradhandbook/

CENTER FOR TEACHING EXCELLENCE READING SUGGESTIONS

A partial list of books and journals on college and university teaching:
  http://www.cte.uiuc.edu/Did/Resources/IncompleteBib.htm

A suggested list of books and articles on the evaluation of teaching and student ratings:
  http://www.cte.uiuc.edu/dme/ices/reference.htm

Illini Instructor Series
www.cte.uiuc.edu/Did/Resources/index.htm

TOPICS COVERED INCLUDE:
Teaching Large Classes
Working with Teaching Assistants
Preparing a Course Syllabus
Practical Approaches to Dealing with Cheating on Exams
Effectively Using Informal Early Semester Feedback
International Teaching Assistants: Communication Strategies
Motivating Your Students
Active Learning Strategies for Effective Student Learning
Students Learning Together: Collaborative or Cooperative Learning
REFERENCES

# APPENDIXES

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Principles for Good Practice in Undergraduate Education</td>
<td>64</td>
</tr>
<tr>
<td>B. Revision of Bloom’s Taxonomy of Educational Objectives</td>
<td>65</td>
</tr>
<tr>
<td>D. Sample Questions for Colleague Review of Course Materials</td>
<td>68</td>
</tr>
<tr>
<td>E. Sample Evaluation Form for Colleague Review of Course Materials</td>
<td>69</td>
</tr>
<tr>
<td>F. Possible Contents for a Teaching Portfolio</td>
<td>70</td>
</tr>
<tr>
<td>G. Sample Self-Review Form for Instructors</td>
<td>71</td>
</tr>
<tr>
<td>H. Directions for Administering ICES Questionnaires</td>
<td>72</td>
</tr>
<tr>
<td>I. Sample Course Evaluation Focus Group</td>
<td>73</td>
</tr>
<tr>
<td>J. Example of a Portion of a Classroom Observation</td>
<td>74</td>
</tr>
<tr>
<td>K. Sample Question for Evaluating Advising</td>
<td>76</td>
</tr>
</tbody>
</table>
APPENDIX A
PRINCIPLES FOR GOOD PRACTICE
IN UNDERGRADUATE EDUCATION

1. GOOD PRACTICE ENCOURAGES
   STUDENT-FACULTY CONTACT
   Frequent student-faculty contact is
   the most important factor in student
   motivation and involvement. Faculty
   concern helps students to con-
   tinue working through rough times.
   Students’ intellectual and emotional
   commitment to learning is enhanced
   by knowing a few faculty members
   well.

2. GOOD PRACTICE ENCOURAGES
   COOPERATION AMONG STUDENTS
   Learning is enhanced when it is more
   like a team effort than a solo race.
   Good learning, like good work, is col-
   laborative and social, not competitive
   and isolated. Articulating and sharing
   ideas and responding to others’ re-
   actions improves thinking, deepens
   understanding, and expands the po-
   tential for learning.

3. GOOD PRACTICE ENCOURAGES
   ACTIVE LEARNING
   Learning is not a spectator sport.
   Students do not learn much just sit-
   ting in classes listening to teachers,
   memorizing prepackaged informa-
   tion, and spitting out answers. They
   must talk about what they are learn-
   ing, write about it, relate it to past ex-
   periences, and apply it to what they
   feel is important.

4. GOOD PRACTICE GIVES PROMPT
   FEEDBACK
   Knowing what you know and don’t
   know focuses learning. Students
   need appropriate feedback on per-
   formance to benefit from courses.

5. GOOD PRACTICE EMPHASIZES
   TIME ON TASK
   Time plus energy equals learning.
   There is no substitute for time on
   task. Students need help in learning
effective time management. Allocat-
   ing realistic amounts of time means
effective learning for students and
effective teaching for faculty.

6. GOOD PRACTICE COMMUNICATES
   HIGH EXPECTATIONS
   Expect more and you will get it.
   High expectations are important for
   everyone—especially poorly prepared,
those willing to work hard, and the
   bright and well prepared. Expecting
   students to perform well becomes a
   self-fulfilling prophecy when teach-
ers hold high expectations for them-
selves and their students.

7. GOOD PRACTICE RESPECTS
   DIVERSE TALENTS AND WAYS
   OF LEARNING
   There are many roads to learning.
   People bring different talents and
   learning styles to college. Students
   need the opportunity to show off
   their talents and learn in ways that
   work for them. Then they can be
   pushed to learn in new ways that do
   not come so easily.

8. GOOD PRACTICE REFLECTS
   CLEAR ORGANIZATION AND
   SMART PREPARATION
   Paramount in learning is how well
   we structure new knowledge for our
   students. Lessons must be organized
   and clear, with an appropriate level
   of difficulty of content. Clarity and
   cohesiveness are emphasized by the
   well-chosen example, analogy, and
   active learning strategy.

9. GOOD PRACTICE COMMUNICATES
   ENTHUSIASM FOR SUBJECT AND
   TEACHING
   There is no substitute for a profes-
   sional’s eager interest in and love for
   teaching and for their subject. Some
   instructors demonstrate this interest
   outwardly through their classroom
   teaching behaviors, while others
   demonstrate it in the tone of their
   assignments, exams, and teaching-
   learning strategies.

10. GOOD PRACTICE EMPHASIZES
   FAIRNESS
    Ethical behaviors and the creation of
    optimal learning environments are
    integral to the academy’s learning
    mission. Students thrive in situations
    they trust, i.e., instructors who are
    consistent in expectations and grad-
    ing, and uphold academic integrity.

APPENDIX B
REVISION OF BLOOMS TAXONOMY
OF EDUCATIONAL OBJECTIVES

Objectives are what we want our students to learn. A statement of an objective contains a noun (type of knowledge) and a verb (type of cognitive process using the knowledge).

GENERAL FORM
The student will learn to verb noun phrase. Or the student should be able to verb noun phrase.

TYPE OF KNOWLEDGE

FACTUAL KNOWLEDGE
The basic elements students must know to be acquainted with a discipline or solve problems in it

CONCEPTUAL KNOWLEDGE
The interrelationship among the basic elements within a larger structure that enables them to function together

PROCEDURAL KNOWLEDGE
How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods

METACOGNITIVE KNOWLEDGE
Knowledge of cognition in general as well as awareness and knowledge of one’s own cognition

EXAMPLES
The student will learn to distinguish among confederal, federal, and unitary systems of government.

The student will learn to differentiate between rational and irrational numbers.

The student will be able to design an experiment to test a hypothesis.

Technical vocabulary; musical symbols; major natural resources; reliable sources of information; works by an artist; historical events

Syntax classifications; periods of geological time, forms of business ownership; Pythagorean theorem; fundamental laws of physics; theory of evolution; theory of plate tectonics; genetic models; models of government

Skills used to paint a watercolor; skills used to determine a sport’s injury; algorithms for solving quadratic equations; methods of literary criticism; the scientific method; criteria for determining which statistical procedure to use

Knowledge of various mnemonic strategies; knowledge of various organizational strategies; knowledge that elaboration strategies such as summarizing and paraphrasing can result in deeper levels of comprehension; knowledge of one’s level of knowledge in an area; knowledge of one’s motivation for a task

<table>
<thead>
<tr>
<th>COGNITIVE PROCESS</th>
<th>VERBS</th>
<th>SAMPLE QUESTION STEM</th>
<th>POTENTIAL STUDENT ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REMEMBER</strong></td>
<td>remember, recognize, identify, recall, retrieve</td>
<td>What happened after ...?</td>
<td>Make a list showing ...</td>
</tr>
<tr>
<td>Retrieve relevant knowledge from long-term memory</td>
<td></td>
<td>How many ...? What is ...?</td>
<td>Make a time line</td>
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<td></td>
<td>Who was it that ...?</td>
<td>Make a chart showing ...</td>
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<tr>
<td><strong>UNDERSTAND</strong></td>
<td>understand, interpret, clarify, paraphrase, represent, translate, exemplify, illustrate, instantiate, classify, categorize, subsume, summarize, abstract, generalize, infer, conclude, extrapolate, interpolate, predict, compare, contrast, map, match, explain, construct known models</td>
<td>How would you explain ...?</td>
<td>Write a summary of ...</td>
</tr>
<tr>
<td>Construct meaning from instructional messages, including oral, written, and graphic communication</td>
<td></td>
<td>Who do you think ...?</td>
<td>Prepare a flow chart (concept map) of ...</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Why did ...?</td>
<td>Write an explanation of ...</td>
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<td></td>
<td></td>
<td>What would a graph of ... look like?</td>
<td>Make a taxonomy of ...</td>
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<td></td>
<td>Which equation corresponds to the following statement ...?</td>
<td>Draw a map of ...</td>
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<tr>
<td></td>
<td></td>
<td>What are examples of ...?</td>
<td>Draw a graph of ...</td>
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<tr>
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<td></td>
<td>How could you group ...?</td>
<td>Write down possible outcomes of ...</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How are ... similar?</td>
<td>Retell an event in your own words</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What could the outcome of ... be?</td>
<td>Make a physical model of ...</td>
</tr>
<tr>
<td><strong>APPLY</strong></td>
<td>apply, execute, carry out, use, implement</td>
<td>What is the answer to the following problem ...?</td>
<td>Solve a problem</td>
</tr>
<tr>
<td>Carry out or use a procedure in a given situation</td>
<td></td>
<td>How would you solve ...?</td>
<td>Write a response to a case study</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How would you do ...?</td>
<td>Perform a lab experiment</td>
</tr>
<tr>
<td><strong>ANALYZE</strong></td>
<td>analyze, differentiate, discriminate, distinguish, focus, select, organize, integrate, outline, parsing, structure, attribute, deconstruct, find coherence</td>
<td>What was the turning point ...?</td>
<td>Write a biography</td>
</tr>
<tr>
<td>Break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose</td>
<td></td>
<td>How is ... similar to ...?</td>
<td>Make a map showing interrelationships</td>
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<tr>
<td></td>
<td></td>
<td>Why did ... occur?</td>
<td>Write an analysis of ...</td>
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<tr>
<td></td>
<td></td>
<td>What is needed to ...?</td>
<td>Write an essay examining bias in ...</td>
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<tr>
<td></td>
<td></td>
<td>Can you distinguish between ...?</td>
<td>Construct a graph to organize relevant information</td>
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<td></td>
<td>What were some of the motives behind ...?</td>
<td></td>
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<tr>
<td><strong>EVALUATE</strong></td>
<td>evaluate, check, coordinate, detect, monitor, test, critique, judge</td>
<td>Is there a better solution to ...?</td>
<td>Conduct a debate (or a mock trial)</td>
</tr>
<tr>
<td>Make judgments based on criteria or standards</td>
<td></td>
<td>What do you think about ... and why?</td>
<td>Write a critique</td>
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<tr>
<td></td>
<td></td>
<td>Do you think ... is a good thing (choice) and why?</td>
<td>Prepare a case</td>
</tr>
<tr>
<td><strong>CREATE</strong></td>
<td>create, generate, hypothesize, plan, design, produce, construct</td>
<td>What are possible solutions to ...?</td>
<td>Write an opinion piece</td>
</tr>
<tr>
<td>Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure</td>
<td></td>
<td>Can you design a ... to ...?</td>
<td>Design an experiment</td>
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<td></td>
<td>What would happen if ...?</td>
<td>Create a new product</td>
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<tr>
<td></td>
<td></td>
<td>How many ways can you ...?</td>
<td>Plan a marketing campaign</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Create a piece of art</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Design a new building</td>
</tr>
</tbody>
</table>
APPENDIX C
THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974 (FERPA)*

OVERVIEW
The Family Educational Rights and Privacy Act of 1974, commonly known as FERPA, is a federal law that governs educational records. It grants specific rights to students and regulates how institutions must handle educational records, including grades. FERPA gives students rights to see their records and protects against disclosures of certain information without the student’s consent or specific legal authorization.

FREQUENTLY ASKED QUESTIONS ABOUT FERPA

How does FERPA affect faculty and other course instructors?
FERPA affects your actions as an instructor in three main areas: your capacity to discuss a student’s performance with a parent or guardian; the conditions under which you may provide references that discuss a student’s performance; and your actions in posting grades and returning graded work to students.

What do I do when a parent or guardian calls to find out how a student is doing in my class?
Refer the call to the Office of the Dean of Students (333-0050) where staff will obtain or confirm the required documentation (e.g., that the student has given consent to the disclosure or that the student is the parent’s legal dependent), and then assist the parent. You may not discuss a student’s performance in your class with the student’s parent unless you have written permission from the student.

If I receive a request for information about a student from a prospective employer or faculty or staff in a program to which the student has applied for admission, are there restrictions on what I can say?
You may not provide a verbal or written reference for a student that discusses the student’s educational performance unless you have written permission from the student. You can find a sample form for the student to sign at http://www.provost.uiuc.edu/departments/FERPA/form.html.

And what about posting grades?
You cannot post grades by class roster, even with the names blanked out, or leave papers/tests in a box for students to collect. If you comply with the following guidelines, you may post grades without compromising a student’s privacy rights or violating the law:

1. Do ask each student to give you a unique number known only to you and that student.
2. Do sort your list in numerical order.
3. Do not display student scores or grades publicly in association with names, Social Security Numbers, or other personal identifiers.
4. Do not post a copy of your class roster or Final Grade Collection List, even with the names removed. These lists are in alphabetical order, and viewers of the list may be able to infer students’ identities.
5. Do not put papers or lab reports containing student names and grades in publicly accessible places. In particular, do not put papers into a common box where students must go through everyone else’s papers to find their own. Do not pass back papers by circulating an entire set for individuals to pull out their own. No one should have access to the scores or grades of others in the class.

Note:
At the instructor’s discretion, students may request a personal notification of a final grade by providing a stamped self-addressed envelope or asking the instructor to send an INDIVIDUAL email of the final grade to the student’s UIUC email address. The instructor must not send a class list of all grades.

If I have the students’ social security numbers, why can’t I use them when posting grades?
We are moving away from the use of the Social Security Number (SSN), but you may still have access to SSNs on class rosters, final grade collection lists, or on UI Direct screens. However, the SSN is not considered public information and should not be used in any way by instructors.

*FOR MORE INFORMATION, CHECK THE FOLLOWING WEBSITES:
www.provost.uiuc.edu/departments/FERPA/
www.admin.uiuc.edu/policy/code/
www.oar.uiuc.edu/staff/systems/ferpa_trng
www.oar.uiuc.edu/staff/records/FERPA.html
APPENDIX D
SAMPLE QUESTIONS FOR COLLEAGUE
REVIEW OF COURSE MATERIALS

COURSE DESCRIPTION
- Do the instructor’s objectives correlate with the mission of the department’s curriculum?
- Do these objectives complement—rather than needlessly replicate—related courses in the department or in other departments?
- Does this course prepare students for more advanced work in this field?
- Is the treatment of the subject matter consistent with the latest research and thinking in the field?
- Is this material valuable and worth knowing?
- Is the content appropriately challenging for the students?
- Is the course well organized? Are the topics logically sequenced? Does each topic receive adequate attention relative to other topics?
- Do they offer a diversity of up-to-date views?
- Are the reading assignments appropriate in level and length for the course?

ASSIGNMENTS AND HOMEWORK
- Are assignments effectively coordinated with the syllabus and well integrated into the course?
- Do they provide challenging and meaningful experiences for students?
- Do they give students opportunities to apply concepts and demonstrate their understanding of the subject?
- Are they appropriate in frequency and length?

READING LISTS, COURSE READERS, AND TEXTBOOKS
- Are the assigned readings intellectually challenging?
- Are the texts the work of recognized authorities?
- Do the texts represent the best work in the field?
- Are they intellectually challenging?
- Are exam items well written, unambiguous, and not over-cued?
- Are there questions that assess students’ abilities to apply concepts as well as questions that test students’ memory?
- Are exams routinely revised each time the instructor offers the course?

EXAMS AND QUIZZES
- Are exams consistent with the course objectives?
- Do they give students a fair opportunity to demonstrate their abilities?
- Do exams focus on important aspects of the subject matter?
- Do they adequately cover the subject matter?
- Are exams intellectually challenging?

GRADING ASSIGNMENTS AND EXAMS
- Is grading fair and consistent?
- Are the standards for grading clearly communicated to students?
- Are these standards reasonable for this particular course? Are they consistent with department standards?
- Does the instructor write constructive comments on papers and tests?
APPENDIX E
SAMPLE EVALUATION FORM FOR
COLLEAGUE REVIEW OF COURSE MATERIALS

PEER EVALUATION OF TEACHING MATERIALS
Listed below are items concerned with teaching materials. They are categorized into three major areas. For each item, indicate on a five-point scale (1-5, with 5 being highest) the extent to which the materials meet the criteria as represented by each item.

COURSE ORGANIZATION
_____ The syllabus adequately outlines the sequence of topics to be covered.
_____ The stated course objectives are clear.
_____ The outline and sequence of topics are logical.
_____ The difficulty level is appropriate for the enrolled students.
_____ The course integrates recent developments in the field.
_____ Time given to each of the major course topics is appropriate.
_____ The course is responsive to the needs of the enrolled students.

_____ The course is an adequate prerequisite for other courses.
_____ The course objectives are congruent with the department’s curriculum.

READING, PROJECTS, AND LABORATORY ASSIGNMENTS
_____ The reading list (required/recommended) is up-to-date and represents the work of recognized authorities.
_____ Readings are appropriate for the course level.
_____ The texts used in the course are well-selected.
_____ Students are given ample time to complete assignments/take-home exams.
_____ The amount of homework and assignments is appropriate.
_____ The written assignments and projects are carefully chosen to reflect course goals.
_____ A variety of assignments is available to meet individual student needs.

_____ Laboratory work is integrated into the course.
_____ Students are given the course requirements in writing at the beginning of the course.
_____ The assignments are intellectually challenging to the students.

EXAMS AND GRADING
_____ The exam content is representative of the course content and objectives.
_____ The exam items are clear and well written.
_____ The exams are graded in a fair manner.
_____ The grade distribution is appropriate for the course level and type of student enrolled.
_____ The standards used for grading are communicated to the students.
<table>
<thead>
<tr>
<th>MATERIAL FROM ONESELF</th>
<th>MATERIAL FROM OTHERS</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Teaching responsibilities</td>
<td>• Statements from colleagues who observed one’s teaching</td>
<td>• Videotapes of teaching</td>
</tr>
<tr>
<td>• Teaching philosophy statement</td>
<td>or reviewed one’s teaching materials</td>
<td>• Invitations to present a</td>
</tr>
<tr>
<td>• Representative course syllabi</td>
<td>• Student course or teaching evaluation data</td>
<td>paper on teaching one’s</td>
</tr>
<tr>
<td>• Lesson plans, activities, assignments</td>
<td>• Honors or awards</td>
<td>discipline</td>
</tr>
<tr>
<td>• Description of curricular revisions</td>
<td>• Statements from students and/or alumni</td>
<td>• Participation in off-campus</td>
</tr>
<tr>
<td>• Instructional innovations</td>
<td></td>
<td>teaching activities</td>
</tr>
<tr>
<td>• Personal statement of one’s teaching goals</td>
<td></td>
<td>• Contributions to a journal</td>
</tr>
<tr>
<td>• Steps taken to improve teaching</td>
<td></td>
<td>of teaching in one’s discipline</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Evidence of mentoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>colleagues</td>
</tr>
</tbody>
</table>

**PRODUCTS OF TEACHING/STUDENT LEARNING**

- Student scores on pre- and post-course exams
- Examples of graded work or successive drafts of papers with one’s comments
- Record of students who succeed in advanced study
- Student publications/presentations on course-related work
- Testimonials from employers or students about one’s influence on their careers

APPENDIX G
SAMPLE SELF-REVIEW FORM FOR INSTRUCTORS

Department _______________________
Date ______________________________
Instructor __________________________
Number of times this course has been taught _______________________

COURSE LOGISTICS

1. List the course title, course number, section(s), and the number of students enrolled.

2. If the syllabus does not completely describe the course, describe specific features or highlights of the course (e.g., unusual lecture organization or format, aspects of content).

3. Do you have any comments on the assignments, examinations, readings, or special projects listed on the syllabus? What kind of feedback did you give students on their exams and graded materials?

4. Describe any course activities that placed special demands on your time (e.g., field trips, oral examinations, student projects, special preparations).

5. List any special activities that were associated with the supervision of Graduate Student Instructors, honors students, or multi-section courses (e.g., regular meetings with GSIs or honor students).

COURSE GOALS

6. What were your course goals or teaching objectives and why were these goals selected?

7. How well did the course meet these goals or objectives?

STUDENT EVALUATIONS

9. Do you have any comments on the student evaluations of the course? Do you agree or disagree with the student evaluations?

IMPROVEMENT

10. How satisfied were you with this course?

11. What do you think were the strong points of the course? Weak points?

12. What would you change if you taught this course again?

13. What did you find most interesting about this course? Most frustrating?

Adapted from “Sourcebook for Evaluating Teaching,” Office of Educational Development, University of California at Berkeley; and “Instructor Self-Description and Evaluation of Course Form,” Office of Instructional Development, University of California
APPENDIX H
DIRECTIONS FOR ADMINISTERING ICES QUESTIONNAIRES TO STUDENTS

BULLETED INSTRUCTIONS SHOULD BE READ TO STUDENTS

- The purpose of this administration of the “Instructor and Course Evaluation System Questionnaire” is to provide me with evaluative information based on your perceptions of the course. The results will not be sent to me until after final grades are reported. Your complete cooperation is appreciated. (Note to instructor: If you make teaching decisions based on ICES results, tell students so.)

- Only questionnaires marked with pencil can be processed. Be sure that all of your marks are black and that they completely fill the circles.

- For the items on Side 1, only the end points of the responses are labeled. You should consider the five possible responses as a continuum and fill in the one circle that most closely matches your perception.

- Make sure you answer Items 1 and 2 immediately beneath the solid blue line.

- When you have finished Side 1, turn your questionnaire over and respond to the items on the back. (Note to instructor: Use Boxes E and F on Side 2 if you would like additional items. See the last page of the ICES Item Catalog (Essay Item Ideas) for suggestions. For boxes E and F on Side 2, write down the items on the chalkboard or put them on an overhead transparency.)

At this point a student should be selected to collect the questionnaires. Give the student the envelope containing the red Faculty Request Form and any extra questionnaires. Be sure to cross out your name and circle the ICES return address on the envelope. Ask the student to collect the completed questionnaires and put the envelope in a campus mailbox. (U.S. mail deliveries are not accepted.)

Reminder to instructor: Check your responses to Box 7 on the Faculty Request Form. Double check that you have signed your name for data release to a departmental representative.

MAKE SURE THE RED FACULTY REQUEST FORM FOR THIS CLASS IS IN THE ENVELOPE.

PLEASE LEAVE THE ROOM AT THIS POINT

SPECIAL NOTES ABOUT PROCESSING ICES QUESTIONNAIRES

Processing delays can result if the Faculty Request Form is not included with completed questionnaires. Completed questionnaires must be received within three (3) weeks from the last day of class to be eligible for the “Incomplete List of Teachers Ranked as Excellent by Their Students,” or for copies of the results to be sent to your department head.

Direct any questions to Measurement & Evaluation, 247 Armory Building, 244-3846 or ices@uiuc.edu.
1. WHAT DID YOU LIKE BEST ABOUT THIS COURSE?
   • Literature review, very difficult, but beneficial
   • Guest speakers
   • General “how to” information and course structure
   • Students generally liked the Web page

2. WHAT THIS SEMESTER MOST CHALLENGED YOU TO THINK ABOUT WHAT IT MEANS TO BE A RESEARCHER?
   • Literature review

3. WHICH ASSIGNMENTS WERE MOST HELPFUL IN LEARNING THE COURSE MATERIAL?
   • Literature review (almost 100%)
   • Critiques (75%)
   • Abstracts (50%)
   • Journals not very helpful for most of the students

4. HOW USEFUL WERE THE READINGS (TEXTS) FOR THE COURSE?
   • Students commented that there was a great amount of reading for the class
   • Required book was only liked by 30% of students, most found it redundant
   • Supplemental (optional) book was most liked
   • Generally the readings were perceived as “OK”—good as future references

5. IF YOU WERE TEACHING THIS COURSE, WHAT SPECIFIC CHANGES WOULD YOU MAKE?
   • Earlier literature review draft deadline
   • Interest groups more structured, and class time made available for them
   • In-class time for discussion, in groups, of their literature reviews
   • Clearer, more explicit expectations from instructor, especially regarding the lit review
   • More balance between quantitative and qualitative methods
     (about 50% thought it was too qualitative)
APPENDIX J
EXAMPLE OF A PORTION OF A CLASSROOM OBSERVATION*

*Note: A pre-observation dialogue should have already taken place between the observer and instructor in areas such as the purpose of the observation, description of the class and course, and specific aspects of the teaching and learning objectives. Below is an example of a double-entry narrative log for observation notes.

ORGANIZATION

OBSERVER’S COMMENTS

Organized start, good student rapport

Nice atmosphere. Clear about goals for class. Appreciated students' contributions and is good at displacing off-topic statement.

Only male students participate at this time. Evidence that students have read prior to class.

Too much time spent setting up class? Class combines student and instructor choice of direction.

SPECIFIC CLASSROOM EVENTS

1:21 Dr. Smith arrives early and sets out materials to be used, aligns the overhead projector and tests it, and begins to greet students as they arrive. Three students talk with her during this time, two apparently asking for clarification of an assignment and one sharing an article with her. She reacts with great enthusiasm and surprise, conversing with the student about possible mutual acquaintances and experiences. At the bell time, all but three students are present and seated.

1:30 Dr. Smith begins with a joke about something in the morning’s news. She then reviews what had happened in the last class and states the objectives of this class, which she phrases as: to be able to use learning style research in classroom instruction. She asks the students if they would like to state their special interests in this topic, based on their advanced reading.

The first student to respond says that he is skeptical about the ability of Myers-Briggs instruments to accurately describe people. Dr. Smith does not respond directly, but writes on the board, “Accuracy of instruments” as a topic to be dealt with later.

The next student feeds off the previous students’ comment about the Myers-Briggs, talking about a job interview when it was used.

Dr. Smith refocuses the topic by repeating, “What things would you like to talk about today with respect to classroom use?” Several students list ideas, which Smith summarizes and posts as “variety of things being assessed by learning style theorists,” “match between instructional style,” and “association of learning style and cultural background.” Smith says that the discussion will be structured around these topics as well as four that she adds. This process has consumed seven minutes of class time.

Notations of time help track flow of class.

Items for observation suggested below.

Specific details about whom and what.

Notated details that reinforce positive learning environment.

Specific observation such as this provides helpful feedback to the instructor.

Descriptions are objective and based on facts, not judgments or opinions.

Direct quotes give an accurate portrayal of classroom session.

Providing the length of segments/activities can help in time management.

Continue this format of observation and note-taking for duration of class.
SUGGESTED AREAS TO OBSERVE

ORGANIZATION
Class started on time, materials ready
Objectives clearly stated
Previous class materials reviewed/summarized
Topic presented in logical sequence
Lesson paced appropriately
Internal summaries and transitions provided
Class time used efficiently

PRESENTATION
Variety of instructional materials (blackboard, overhead, powerpoint, technology) used
Used modulation in tone and pitch for emphasis and interest
Demonstrated appropriate pace for understanding and note-taking
Presented variety of examples
Used humor effectively
Nonverbal communication is effective
Voice is projected clearly
Provided effective explanations

STUDENT ENGAGEMENT AND ACTIVE LEARNING
Activity was relevant to learning objectives
Activity was well-planned and executed
Students were engaged in activity
Directions clearly given and necessary materials available
Feedback was given by students and instructor
Reflection was a component of the activity
Assessed students mastery of learning objectives

CONTENT KNOWLEDGE AND RELEVANCE
Examples were relevant, appropriate and current
Was able to relate content to students background knowledge
Cited additional references and resources
Presented and encouraged divergent viewpoints
Maintained balance between theory and practice
Demonstrated comments of subject matter
Assignments in and out of class promoted critical thinking and problem-solving skills

TEACHER-STUDENT AND STUDENT-STUDENT RAPPORT
Knew student names
Maintained eye contact with students
Encouraged student questions and discussions
Provided appropriate feedback
Monitored and was aware of student confusion or comprehension
Treated class members fairly
Was aware of student diversity
Used authority appropriately
Maintained classroom environment conducive to learning
Students appeared to feel welcomed and appreciated
Encouraged students to work collaboratively

REFERENCES
Sample observation items from University of Minnesota Center for Teaching and Learning Services http://www1.umn.edu/ohr/teachlearn/peer/instruments.html
APPENDIX K
SAMPLE QUESTIONS FOR EVALUATING ADVISING

INSTRUCTIONS
Please evaluate your faculty advisor according to the following statements. For each item, circle the number that best describes your advisor, using the key below. If the statement does not apply to your advisor, circle “NA.”

NOT AT ALL
DESCRIPTIVE

VERY
DESCRIPTIVE

NOT
APPLICABLE

1 2 3 4 5 NA

MY ADVISOR
1. Puts me at ease.
1 2 3 4 5 NA

2. Makes me feel as if I’m intruding on his or her time.
1 2 3 4 5 NA

3. Understands my questions and concerns.
1 2 3 4 5 NA

4. Is accessible during the term.
1 2 3 4 5 NA

5. Is willing to see me at least one or two times each semester.
1 2 3 4 5 NA

6. Has missed or been late for scheduled appointments.
1 2 3 4 5 NA

7. Doesn’t really spend enough time with me.
1 2 3 4 5 NA

8. Gives me helpful information.
1 2 3 4 5 NA

9. Knows other units on campus that can help solve my problems.
1 2 3 4 5 NA

10. Helps me decide on a major.
1 2 3 4 5 NA

11. Helps me select courses.
1 2 3 4 5 NA

12. Discusses career possibilities with me.
1 2 3 4 5 NA

13. Helps me solve unusual problems.
1 2 3 4 5 NA

14. Seems interested in my academic progress.
1 2 3 4 5 NA

15. Does an excellent job.
1 2 3 4 5 NA

OPEN-ENDED QUESTIONS
16. What kinds of topics did you and your advisor discuss?

17. What are the strengths of this faculty member as an advisor?

18. What are the weaknesses of this faculty member as an advisor?

19. Please make other comments if you wish:

BACKGROUND INFORMATION
20. How were you assigned this advisor?

21. My class standing is:
Freshman Sophomore Junior Senior

22. This term, how many times did you meet with your advisor?
0 1 2 3 4 5 6 or more

23. This term, how many times did you speak with your advisor on the telephone?
0 1 2 3 4 5 6 or more